CITY WATER, LIGHT AND POWER
CITY OF SPRINGFIELD, ILLINOIS
MISTY BUSCHER, MAYOR
DOUG BROWN, CHIEF UTILITY ENGINEER

VIA E-MAIL: dierich.andrea@epa.gov

September 23, 2025

Andrea Dierich
EPA Project Officer
US EPA, Region 5
77 W Jackson Blvd
Chicago, IL 60604

RE: CCR Surface Impoundments
Updated Nature and Extent Report

Dear Ms. Dierich:

Provided herein is the updated Nature and Extent Report for the CCR Surface Impoundments in accordance with paragraph 270 of the Consent Agreement and Final Order (CAFO) effective January 14, 2025 and comments received from EPA on August 21, 2025.

CWLP agreed to provide to EPA a Nature and Extent Report for the Appendix IV constituents exhibiting Statistically Significant Levels identified in the February 13, 2025 Groundwater Protection Standards Report. A Nature and Extent Report was submitted to EPA on June 13, 2025. This updated Nature and Extent Report incorporates the June 13, 2025 by reference and provides supplemental information to address comments from EPA received on August 21, 2025. As the Nature and Extent Report relies on information obtained from the Flow Path Report being submitted separately, the Flow Path Report is included as an appendix for ease of review of the Nature and Extent Report.

Should you have any questions or require additional information, please contact me at 217-757-8610 ext. 1110.

Sincerely,

PJ Becker
Environmental Health and Safety Manager

Certification of City Water, Light and Power

City of Springfield, Office of Public Utilities, d/b/a City Water, Light and Power provides the following certification as required by paragraph 300 of the Consent Agreement and Final Order effective January 14, 2025.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 
Name: PJ Becker
Title: Environmental Health and Safety Manager
Date: 9/23/2025

City Water, Light & Power
Springfield, Illinois

CCR Surface Impoundments – Nature and Extent Report (CAFO, Paragraphs 268 and 270)

June 2025
Revised September 2025

Prepared for:
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1. INTRODUCTION

The original Nature and Extent Report (June 11, 2025) was prepared on behalf of City Water, Light and Power (CWLP) pursuant to Paragraphs 268 and 270 of the Consent Agreement and Final Order (CAFO), effective January 14, 2025 and the requirements of 40 CFR 257.95(g). This revised report augments the initial report with additional information requested by the EPA in communication with CWLP. This report continues to address the Appendix IV constituents exhibiting Statistically Significant Levels (SSLs) identified in the February 13, 2025 Groundwater Protection Standards Report (GWPS Report) for the parameters arsenic (total) at wells RW-3, AP-7, AP-8, and AW-1 and cobalt (total) at wells AP-2 and AP-3.

2. BACKGROUND

CWLP owns and operates two existing coal combustion residuals (CCR) surface impoundments, identified as Lakeside Ash Pond and Dallman Ash Pond. The CWLP CCR surface impoundments are located north and east of the former Lakeside Power Generating Station and Dallman Power Generating Station in the Eastern ½ of Section 12, Township 15 North, Range 5 West, in Springfield, Illinois (see Figure 1). The subject of this submittal, the CCR surface impoundments, are identified as the Lakeside Ash Pond and the Dallman Ash Pond and will be closed.

The former Lakeside Power Generating Station and Dallman Power Generating Station are situated on the northwestern bank of Lake Springfield in Springfield, Illinois. The Lakeside Ash Pond is immediately north of Spaulding Dam at the northern end of Lake Springfield (see Figure 2). The Dallman Ash Pond is immediately northwest of the Lakeside Ash Pond. Placed into service prior to 1958, the Lakeside Ash Pond is primarily a diked embankment with an in situ soil liner. The Lakeside Ash Pond consists of four separate ponds (i.e., three lime softening ponds and a settling pond) totaling approximately 35.0 acres. The Lakeside Ash Pond ceased receiving ash in 2009. The Dallman Ash Pond was placed into service in approximately 1976 and is also a diked embankment with an in situ soil liner. The Dallman Ash Pond is approximately 34.5 acres in area and ceased receiving CCR materials in 2023.

The Lakeside Ash Pond historically received lime sludge from the CWLP Drinking Water Purification Plant and scrubber wastewater treatment plant clarifier blowdown. The Dallman Ash Pond historically received fly ash and bottom ash, which were sluiced with raw lake water from the power generating structures, and industrial facility wastewater treatment plant clarifier blowdown. Settled water from both the Lakeside Ash Pond and Dallman Ash Pond flows into opposite sides of a Clarification Pond for final treatment before being discharged to Sugar Creek at NPDES permitted Outfall 004.

Groundwater adjacent to the impoundments has been monitored under the direction of the Illinois EPA Bureau of Water beginning in 2011 and the US EPA (2016) pursuant to 40 CFR §257.91 –

§257.97. A Groundwater Monitoring Program (GMP) and statistical method appropriate for evaluating groundwater quality changes was prepared, placed into the facility operating record and certifications posted to the facility website October 12, 2017. The GMP was updated April 2018 (certification posted June 7, 2018) when well AW-3 was replaced. The GMP and statistical method were again updated March 2024 (certifications posted March 11, 2024) when wells AP-14, AW-1, and G120 were added to the program. The groundwater protection standards were recalculated, and the sampling procedures document was revised based upon USEPA comments. Most recently, the GMP and statistical method were updated in February 2025 (certifications posted February 21, 2025). Groundwater monitoring performed in accordance with the GMP identified Appendix III parameters at specific wells that exceeded the background concentrations. The exceedances were evaluated pursuant to 40 CFR §257.95. Assessment monitoring results over the period of first quarter 2022 (February 16, 2022) through fourth quarter 2024 (November 11, 2024) identified Appendix IV parameter arsenic exceeding the groundwater protection standard (0.0239 mg/L) at wells RW-3, AP-7, AP-8, and AW1 and Appendix IV parameter cobalt exceeding the groundwater protection standard (0.006 mg/L) at wells AP-2 and AP-3.

A detailed description of groundwater monitoring history for the impoundments is presented in Section 3 below.

3. GROUNDWATER MONITORING PROGRAM

Currently, the surface impoundments are regulated by the USEPA (40 CFR Part 257) and the Illinois EPA (35 Ill. Adm. Code 845). There are two separate groundwater monitoring programs. Data from both regulatory programs have been used in this report and will be differentiated where applicable.

Pursuant to 35 Ill. Adm. Code 845 and 40 CFR §257.91, a GMP was prepared for the CWLP CCR surface impoundments to characterize the groundwater monitoring network of wells, the sampling and analysis methods and procedures, and the Groundwater Protection Standards (GWPS). The GMP also characterizes the activities associated with the assessment of corrective measures, corrective action plan, and implementation of the corrective action plan.

3.1 Historical Groundwater Monitoring Activities

The GMP was initially operated pursuant to §257.94 and consisted of wells AP-1R, AP-2A, AP-3, AP-4, AP-5, and RW-3/AW-3. Under §257.94, constituents listed in Appendix III to 40 CFR Part 257 were monitored on a routine basis. In accordance with §257.95(b), an Assessment Monitoring Program was implemented in February 2018 in response to the statistically significant increase (SSI) over background concentrations for one or more parameters listed in Part 257, Appendix III. In May 2019, as part of the §257.94(e)(2) alternate source investigation, wells AP-6

and AP-7 were installed. Subsequent investigation of the Statistically Significant Increases (SSIs) completed pursuant to §257.95(g)(3)(ii) demonstrated compliance with the GWPS as no Appendix IV constituent concentration exceeded the GWPS. Therefore, assessment monitoring continued pursuant to §257.95(f).

In response to exceedances of GWPS values pursuant to 35 IAC 845.600, seven more wells were installed as part of the Illinois EPA CCR program to augment the monitoring well network and allow the evaluation of exceedances. In February 2021, wells AP-10 and AP-14 were installed along the west side of the impoundments, AP-8 installed along the north side of the CCR ash impoundments and wells AP-9, AP-11, AP-12, and AP-13 were installed west of the creek as facility boundary wells.

In March 2024, six existing wells from the 35 IAC 845 program were added to the 40 CFR 257 groundwater monitoring network pursuant to correspondence with the USEPA. These wells included AP-6, AP-7, AP-8, AP-14, AW-1, and G120.

In May 2024, five additional monitoring wells were advanced in locations across Sugar Creek opposite of the CCR ash impoundments. The subject temporary assessment wells (i.e., T-1, T-2, T-4, T-5, and T-6) were installed at these locations for purposes of an alternate source demonstration and/or determination of the nature and extent of elevated concentrations per 40 CFR 257.95(g)(1)(i) and (iii). The screen intervals were set at the bedrock interface, consistent with the existing downgradient wells. The current monitor well network is shown in Figure 2. Boring logs and well completion reports for the referenced temporary assessment wells are provided in Appendix *A*.

3.2 Monitoring System

In accordance with §257.91 the groundwater monitoring system consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that: (1) accurately represent the quality of background groundwater that has not been affected by the CCR surface impoundment, and (2) accurately represent the quality of groundwater passing the impoundment boundary of the CCR surface impoundment to monitor potential geochemical changes in the uppermost aquifer.

Pursuant to §257.91(b) the number, spacing, and depths of the groundwater monitoring wells have been determined based upon site-specific technical information to meet the rule's performance standard, including the subsurface conditions observed at the site. This includes a characterization of the uppermost aquifer and the confining bedrock layer immediately below the uppermost aquifer.

The groundwater monitoring system consists of wells screening the silt, sand, and gravel at the bedrock interface. Based on the direction of groundwater movement, the northern and western boundaries of the impoundments will be downgradient, and the southern boundaries will be upgradient for both impoundments with the eastern boundaries being upgradient to the Lakeside Ash Pond.

As shown in Figure 2, the current monitor well network includes AP-1R, AP-2A, AP-3, AP-4, AP-5, AP-6, AP-7, AP-8, AP-10, AP-14, RW-3, AW-1, and G120. Two (2) groundwater monitoring wells are representative of background (ambient) groundwater quality conditions of the uppermost aquifer. These wells are identified as AP-4 and AP-5. Background concentrations are chemical concentrations or parameter values that represent naturally-occurring groundwater that has not been affected by the surface impoundment or other facility activities.

Monitoring well AP-4 is located in the southwest corner of the CCR surface impoundments and along the eastern bank of Sugar Creek, immediately north of the Spaulding Dam. Well AP-4 is screened at the surface of the Pennsylvanian shale and basal sand deposits. This well is not upgradient of the subject CCR surface impoundments, but it is located on available CWLP property where it provides representative background groundwater quality pursuant to §257.91(a).

Monitoring well AP-5 is located in a hydraulically upgradient location, southeast of the Lakeside Ash Pond and in a slightly higher topographic location. The well is screened in wet sand and silt seams a few feet above the shale as the borehole samples at the bedrock interface were tight with no indications of formation water. This well monitors the upgradient groundwater quality of the uppermost aquifer at this location.

Eleven groundwater wells allow monitoring of the downgradient groundwater quality conditions in the uppermost aquifer (See Figure 2). The wells are identified as AW-1, RW-3, AP-1R, AP-2A, AP-3, AP-6, AP-7, AP-9, AP-10, AP-14, and G120. The locations and depths of these wells accurately represent the quality of groundwater passing the impoundment boundaries of the CCR units and reasonably make possible the detection of geochemical changes in the uppermost aquifer. Figure 3 identifies the facility boundary wells T-1, T-2, T-4, T-5, T-6, AP-7, AP-9, AP-11, AP-12, and AP-13 installed pursuant to 35 IAC 845.650(d)(1) and/or 40 CFR 257.95(g)(1) to delineate the GWPS exceedances. Temporary assessment wells AP-6 and AP-7 were installed during a July 2019 nature and extent investigation. Temporary assessment wells (i.e., T-1, T-2, T-4, T-5, and T-6) were installed west and north of Sugar Creek as part of the October 28, 2024 ASD to determine the nature and extent of elevated parameter concentrations. The screen intervals of these wells were set at the bedrock interface, consistent with the existing downgradient wells.

Groundwater sampling and analysis over the review period (i.e., first quarter 2022 through fourth quarter 2024) has demonstrated that the CCR surface impoundments have resulted in exceedances of the Appendix IV GWPS for arsenic at wells, AP-8, AW-1, and RW-3 and Appendix IV GWPS exceedances of cobalt at wells AP-2A and AP-3. The vertical and horizontal extent of has been delineated pursuant to §257.95(g)(1).

The detections of arsenic at monitoring well AP-7 are attributed to an alternate source and are not related to the CCR surface impoundments. AP-7 is located north of Sugar Creek, in an area hydrologically separated from the Dallman Ash Pond and other CCR units by a convergent groundwater flow system that directs groundwater from the north and south toward the creek.

Potentiometric surface elevations confirm that groundwater north of Sugar Creek flows southward toward the creek, while groundwater south of the creek, including beneath the Dallman Ash Pond, flows northward. This bidirectional flow pattern establishes Sugar Creek as a discharge zone and a natural hydraulic divide. The absence of hydraulic connectivity between the CCR impoundments and well AP-7 effectively rules out the CCR units as a source of arsenic at this location.

Furthermore, temporary assessment wells T-5 and T-6, located north of AP-7, exhibit potentiometric elevations greater than AP-7, indicating that groundwater and any associated constituents flows from those locations toward AP-7, not from the CCR units located south of the creek. These findings are corroborated by analytical results showing no consistent pattern of arsenic exceedances in wells situated between the Dallman Ash Pond and AP-7.

The spatial distribution of arsenic, combined with groundwater flow direction and the absence of a geochemical plume connecting the impoundments to AP-7, strongly supports the conclusion that the arsenic detected in AP-7 originates from natural geologic variability or other anthropogenic sources unrelated to the CCR surface impoundments. Therefore, no further action under CCR regulatory provisions is warranted at AP-7 based on current data.

3.3 Sampling and Analysis

The GMP includes consistent sampling and analysis procedures to provide accurate representation of groundwater quality (§257.93(a)). The activities include sample collection, preservation and shipment, analytical procedures, chain of custody, and quality assurance and quality control.

Groundwater is sampled for the constituents listed in Appendix III and Appendix IV to Part 257. For groundwater monitoring, these constituents include:

Appendix III to Part 257 Constituents for Detection Monitoring

- Boron
- Calcium
- Chloride
- Fluoride
- pH
- Sulfate
- Total Dissolved Solids

Appendix IV to Part 257 Constituents for Assessment Monitoring

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Chromium
- Cobalt
- Fluoride
- Lead
- Lithium
- Mercury
- Molybdenum
- Selenium
- Thallium
- Radium 226 and 228 combined

In accordance with §257.93(i), all constituents are analyzed as total recoverable metals where samples are not field filtered. All groundwater samples collected pursuant to §257 Subpart D are analyzed by a certified laboratory using Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods, SW-846 (§257.93(b)). Pursuant to §257.93(c), groundwater levels are measured in each groundwater monitoring well immediately prior to purging, and each time groundwater is sampled.

All monitoring wells were sampled in accordance with 40 CFR 257.95(g)(1)(iv) for the characterization of the nature and extent.

4. SITE HYDROGEOLOGY

The uppermost aquifer and underlying confining unit control groundwater movement and the potential for CCR impacted groundwater migration. Detailed hydrogeologic information contained in the Flow Path Report was utilized to characterize the hydrogeology beneath the impoundments and Unit 2 Landfill. The Flow Path Report is provided in the final appendix of this document (Appendix J).

4.1 Uppermost Aquifer

The uppermost aquifer is characterized as the basal sand overlying the shale bedrock. In some locations, the creek fill materials, ranging from silty clays and organic silty clays to silty sands and clayey sands, were found not to be in direct hydraulic communication with the basal sand that directly overlies the bedrock surface. The Patrick report (1993) defined the creek fill material as materials placed into the abandoned creek within the Unit 2 landfill area. In further review of the historical documents, boring logs and cross sections, it was determined that the boring logs completed by Patrick incorrectly identified natural materials in the upper cohesive deposit as fill.

As indicated above, the hydraulic conductivity of the basal sand ranges from 5.6×10^{-4} to 3.6×10^{-2} cm/sec. The groundwater in the basal sand appears to be under confined, semi-confined, or unconfined conditions dependent upon location. The upper limit of the uppermost aquifer is dependent upon the seasonally fluctuating groundwater table. The potentiometric surface of the basal sand varies from 565 feet MSL at upgradient locations, south of the Lakeside Ash Pond, to 525 feet MSL at downgradient locations near Sugar Creek, north of the Dallman Ash Pond. As a result, the saturated thickness is variably dependent upon the location and the seasonal variation in the groundwater table.

Groundwater movement within the uppermost aquifer is controlled by recharge along topographic highs and discharge along topographic lows via gravity. The pre-surface impoundment flow direction in the uppermost aquifer was dominantly horizontal from the adjacent banks toward the natural convergence along Sugar Creek, which formerly drained the site. This was overall from east to west and south to north, perpendicular to Sugar Creek with local deviations. This dominant flow pattern persists under present day conditions but with localized variation introduced by the hydrologic discontinuity created upon construction of the CCR surface impoundments.

Groundwater elevations are collected on a quarterly basis from the CCR surface impoundment groundwater monitoring wells. The groundwater elevations were used to construct potentiometric surface maps based on wells screened in the basal sand (see Appendix B).

Groundwater monitoring well AW-1 exhibited exceedances of the Appendix IV parameter arsenic during the review period (first quarter 2022 through fourth quarter 2024). Well AW-1 is located

along the southeast corner of the Dallman Ash Pond. Groundwater monitoring wells/piezometer R111, G120 and P06D are located east, north and northeast of AW-1, respectively. Well R111 is part of the 40 CFR 257.94 groundwater monitoring program for the CCR landfill. Both well R111 and piezometer P06D are part of the Illinois EPA groundwater monitoring program for the FGDS Development landfill established pursuant to 35 IAC 811.319.

The potentiometric surface elevations at wells AW-1, R111, G120, and P06D are shown in the following table.

Well	2/16/22	6/2/22	8/25/22	11/9/22	1/26/23	4/11/23	7/5/23	10/25/23	2/22/24	5/13/24	8/12/24	11/12/24
AW-1	541.50	541.55	539.31	540.70	544.02	541.05	539.73	537.04	542.55	541.79	538.85	539.88
R111	529.90	529.40	528.20	528.85	526.74	527.74	526.87	525.53	528.06	528.18	526.11	527.16
G120	537.20	536.92	535.11	537.06	536.49	536.81	534.21	533.13	537.11	536.95	534.09	535.02
P06D	524.70	524.70	524.70	528.29	519.78	519.78	518.17	517.41	523.96	523.96	523.96	NM

NM – Not Measured

Potential constituent concentrations are expected to travel via advective flow. Groundwater, movement is west to east/northeast along the east side of the Dallman Ash Pond. The impacts reported for well AW-1 are attributed to the Dallman Ash Pond. These impacts are delineated by the downgradient wells R111, G120, and P06D. As discussed in Section 5.1 below, arsenic concentrations detected in AW-1 have been delineated.

The temporary assessment well AP-7 was installed to determine the extent of elevated concentrations of specific constituents observed at well RW-3. Sampling of AP-7 indicated exceedance of the Groundwater Protection Standard for arsenic. Additional temporary assessment wells T-5 and T-6 were installed to delineate concentrations of arsenic in the vicinity of AP-7. Temporary assessment well T-4 was installed north of Sugar Creek to delineate concentrations of arsenic detected at well AP-8.

The potentiometric surface elevations at wells RW-3, AP-6, AP-7, and AP-8 and temporary assessment wells T-4, T-5 and T-6 are shown in the following table. The surface water elevations for Sugar Creek (USGS Gage 05576250) are also included in the following table.

Well	2/16/22	6/2/22	8/25/22	11/9/22	1/26/23	4/11/23	7/5/23	10/25/23	2/22/24	5/13/24	8/12/24	11/12/24
RW-3	529.64	530.30	529.72	528.71	528.52	529.68	527.43	526.63	529.32	530.55	527.11	526.97
AP-6	530.04	530.06	528.6	NM	528.51	529.03	526.98	526.4	528.61	529.89	526.71	526.65
AP-8	530.79	531.74	529.90	NM	535.10	535.95	533.56	532.23	535.82	536.56	533.33	532.98
Sugar Creek	524.48	525.34	520.3	521.42	523.29	520.25	521.86	520.35	520.18	522.06	520.28	521.34
T-4	NI	NI	NI	NI	NI	NI	NI	NI	NI	536.22	530.28	529.32
AP-7	528.13	528.98	527.81	NM	524.41	527.43	526.57	525.44	526.81	528.02	525.87	525.45
T-6	NI	NI	NI	NI	NI	NI	NI	NI	NI	529.87	528.44	527.30
T-5	NI	NI	NI	NI	NI	NI	NI	NI	NI	535.36	529.96	529.20

Note:
NM – not measured
NI – not installed

The groundwater elevations at well RW-3 are greater than those observed at AP-6, a well located between Sugar Creek and RW-3. The creek elevation is consistently lower than the groundwater elevations adjacent (both sides) to the creek. This indicates groundwater movement is from RW-3 to the north. Potentiometric surfaces in wells T-5 and T-6 are greater than well AP-7, all located north of Sugar Creek. Groundwater movement is from north to south towards the creek. The creek is a convergence point (low point) between wells screened north and south of the creek. Potential constituent concentrations will travel via advective flow. As groundwater, movement is north to south, north of the creek, no influence from the impoundments will be detected north of the creek.

Similarly, to the north end of the Dallman Ash Pond, groundwater east and west of the Dallman Ash pond converges on Sugar Creek. Groundwater monitoring wells AP-2A and AP-3 are located immediately east of Sugar Creek, at the toe of the Dallman Ash Pond embankment. Groundwater monitoring wells AP-11 and AP-12 were installed west of Sugar Creek to delineate concentrations of cobalt. These wells were installed as assessment wells to determine the extent of the impacts observed at wells AP-2A and AP-3. Groundwater monitoring well T-2 was installed further west of AP-11 and AP-12 to allow determination of groundwater flow west of Sugar Creek.

The potentiometric surface elevations at wells AP-2A, AP-3, AP-11 and AP-12 and temporary assessment well T-2 are shown in the following table. The surface water elevations for Sugar Creek (USGS Gage 05576250) are also included in the following table.

Well	2/16/22	6/2/22	8/25/22	11/9/22	1/26/23	4/11/23	7/5/23	10/25/23	2/22/24	5/13/24	8/12/24	11/12/24
AP-2A	529.89	528.17	527.23	NM	529.2	528.86	527.53	527.40	528.88	529.05	527.61	529.56
AP-3	526.98	525.54	524.39	NM	525.93	525.77	524.69	525.31	528.14	526.14	525.30	525.70
Sugar Creek	524.48	525.34	520.3	521.42	523.29	520.25	521.86	520.35	520.18	522.06	520.28	521.34
AP-11	526.89	525.16	522.68	NM	NM	523.90	523.39	522.14	523.68	528.35	522.28	522.67
AP-12	526.52	526.09	523.41	NM	NM	525.74	524.07	522.26	523.35	528.46	522.66	522.78
T-2	NI	NI	NI	NI	NI	NI	NI	NI	NI	530.37	523.87	534.39

Note:
NM – not measured
NI – not installed

Potential constituent concentrations are expected to travel via advective flow. Groundwater, movement is east to west along the east side of Sugar Creek and west to east along the west side of Sugar Creek. No influence from the impoundments will be detected west of the creek. As discussed in Section 5.1 below, arsenic concentrations detected in AP-7 are not the result of influences from the impoundments.

4.2 Lower Confining Unit

The uppermost bedrock at the project site is primarily Pennsylvanian age shale with isolated thin coal layers. The Pennsylvanian shale functions as a lower confining unit due to its low permeability and effective porosity. The lower confining unit represents a natural hydrogeologic barrier (i.e., aquitard) to the vertical movement of groundwater.

In situ hydraulic conductivity test (slug tests) indicate that the hydraulic conductivity for the upper portions of the bedrock range from 1.8×10^{-7} to 1.3×10^{-6} cm/sec (Patrick, 1993). There appears to be good correlation between the rock lithology and the measured values of hydraulic conductivity. The bedrock over most of the site will act as an aquitard and prevent the downward movement of groundwater. Slug tests and boring logs for the two bedrock wells (P-6R and P-7R) are included in Appendix C.

4.3 Surface Water

The nearest surface water bodies are Lake Springfield, located upgradient to the CCR surface impoundments and Sugar Creek located adjacent to the western and northern perimeter of the CCR surface impoundments:

- Lake Springfield
- Sugar Creek

4.3.1 Surface Water Intakes

There are two surface water intakes located near the CCR surface impoundments facility. These intakes are identified as:

- Intake No. 52140 - Lake Springfield 1 Intake
- Intake No. 52141 - South Fork Horse Creek Intake

Both of these intakes are located along Lake Springfield and supply water to the Springfield public water supply (IL1671200). These intakes are upgradient of the CCR surface impoundments and completely disassociated with the impoundments.

4.4 Community Water Supply Wells

A potable water well survey was completed in the vicinity of the Dallman and Lakeside Ash Ponds. The survey was conducted using the Illinois EPA's web-based Geographic Information System (GIS) database[1] in the Source Water Assessment Program (SWAP) for potable water wells downgradient of the CCR impoundments.

[1] (http://illinois-epa.maps.arcgis.com/apps/webappviewer/index.html?id=4d37a05f5ba441f1b30dab54ccb81fc8)

The Illinois EPA's SWAP GIS database system identifies community water supply wells and other potable wells (private, semi-private and non-community water supply wells) include data from the following sources:

- Illinois EPA, Division of Public Water Supplies;
- Illinois State Geological Survey (ISGS);
- Illinois State Water Survey; and
- Illinois Department of Public Health

Based on groundwater elevation data from numerous monitoring wells and piezometers located between and adjacent to the CWLP CCR impoundments, groundwater movement in the vicinity of the CCR impoundments is generally from the south-southeast to the north, approximately paralleling the Sugar Creek basin. The search extended to the first water well encountered hydraulically downgradient of the impoundments, located near Illinois Route 29 at a distance of approximately 3,400 feet.

There is no reason to believe that potable wells exist within 2,500-feet of the CCR impoundments that were not identified as part of this potable water well survey.

5. GROUNDWATER ANALYTICAL RESULTS

Quarterly groundwater sampling and analyses have occurred at CCR Impoundment wells for the parameters identified in Appendix III and Appendix IV to Part 257. The results of first quarter 2022 through fourth quarter 2024 sampling events indicate an exceedance of the GWPSs for the Appendix IV to Part 257 constituent arsenic at wells AW-1, RW-3, AP-7, and AP-8 and cobalt at wells AP-2A and AP-3. A summary table of the exceedances is provided as Table 1. Analytical summary tables are provided in Appendix D. Exceedance parameter trend graphs are provided in Appendix E. Geologic cross-sections are included as Appendix F. Laboratory analytical reports for the last four sampling events for the detection and assessment monitoring wells are provided in Appendix G.

5.1 Arsenic, Total

The groundwater protection standard for arsenic (0.0239 mg/L) exhibited confirmed exceedances at groundwater monitoring wells AW-1, RW-3, AP-7, and AP-8 during the review period (i.e., first quarter 2022 through fourth quarter 2024). Arsenic exceedances at downgradient wells RW-3 and AP-7 have been previously addressed in an October 28, 2024 ASD and are discussed in detail below. Graphs depicting arsenic concentrations at the CCR Impoundment groundwater monitoring well network are provided in Appendix E.

Arsenic occurs naturally in rock, soil, air, and plants. A report entitled, arsenic in Illinois Groundwater[2], was published in January 2002 in cooperation with the Illinois Department of Natural Resources, Illinois Department of Public Health, and Illinois Environmental Protection Agency. The report states that higher concentrations of arsenic are expected to be observed in private groundwater sources of drinking water as opposed to public water supply sources, as it is not filtered to remove natural sedimentation. A subsequent study conducted by the Illinois State Water Survey (Wilson, et al., 2004[3]) stated "arsenic is a minor constituent of some common minerals, and dissolved arsenic concentrations greater than 1 ppb are common in groundwater. In some aquifers and under certain conditions, much greater arsenic concentrations can be found, and concentrations above 10 ppb are not uncommon.

As discussed above, arsenic occurs naturally in rock, soil, air, and plants. The report, arsenic in Illinois Groundwater, states that higher concentrations of arsenic are expected to be observed in private groundwater sources. The elevated arsenic concentrations are attributed to the impact of the shallow outwash/bedrock aquifer. The uppermost bedrock is comprised of Pennsylvanian aged shale of the Spoon Formation. As noted in Panno et al. (1994)[4], redox-conditions and bedrock mineralogy control arsenic concentrations. Panno et al. (1994) identifies the reduction of adsorbed arsenate to arsenite as a possible source of the remobilization of adsorbed arsenic. Based upon the geological information collected to date, there appears to be a bedrock high oriented roughly northwest to southeast, between the northern limb located between T-4 and T-5 and extending southeast toward RW-3. The bedrock along this ridge appears to be the source of the higher total arsenic concentrations. Geologic cross-sections are provided in Appendix F. The ridge can be seen on two east-west cross sections, one immediately north of the impoundments (A-A') and one immediately north of Sugar Creek (M-M'). Cross Section K-K' is a north-south section crossing the creek between well T-5 and a previous assessment well TW3W. The change in bedrock elevation is very apparent, decreasing from approximately 527 feet MSL at previous assessment well GP3 to approximately 513 feet MSL at TW3W.

5.1.1 Well AW-1

Well AW-1 is located along the southeast corner of the Dallman Ash Pond. Nearby downgradient wells include R111 and G120. The concentrations of arsenic at well AW-1 during the review period ranged from 0.129 to 0.208 mg/L, exceeding the groundwater protection standard nine out of the twelve sampling events. The groundwater protection standard for arsenic was not exceeded at wells R111 or G120 during the review period.

[2] *Website:https://www.isws.illinois.edu/groundwater-science/gs-archive/arsenic-information/arsenic-in-illinois-groundwater.*

[3] *Wilson, S. D., Dunneback, B., Askren, K., and Kaiser, B., 2004, Arsenic in Illinois Groundwater: Implications for non-community public water supplies, MTAC TR04-0, Illinois State Water Survey, 40 p.*

[4] *Panno, S.V., et al. "Hydrochemistry of the Mahomet Bedrock Valley Aquifer, East-Central Illinois: indicators of recharge and ground-water flow." Ground Water, vol. 32, no. 4, July-Aug. 1994, pp. 591.*

Geologic cross-sections I-I' and L-L' depict the geologic conditions in the vicinity of AW-1, G120, and R111 (see Appendix F). As depicted in these geologic cross-sections the groundwater monitoring wells are consistently screened across the basal sand and unconsolidated/bedrock interface. The potentiometric surface depicted on cross-sections I-I' and L-L' shows groundwater elevations at wells AW-1, G120, and R111. As depicted on the cross-section groundwater movement is from AW-1 towards G120 and towards R111. As indicated above, the groundwater protection standard for arsenic was not exceeded at wells P06D, R111 or G120 during the review period. These wells help define the downgradient extent of the arsenic detections at well AW-1.

5.1.2 Well RW-3

Well RW-3 is located at the northeast corner of the Dallman Ash Pond situated immediately north of the Dallman Ash Pond embankment and south of Sugar Creek. The concentrations of arsenic at well RW-3 during the review period ranged from 0.0831 to 0.74 mg/L, exceeding the groundwater protection standard all twelve sampling events.

The nature and extent of the arsenic exceedances at well RW-3 is defined by assessment wells AP-6, T-5, and T-6. These wells are located north of and downgradient of well RW-3.

The groundwater protection standard for arsenic was not exceeded at wells AP-6, T-4, T-5, or T-6 during the review period. The exceedances of arsenic at well AP-7 are discussed below.

Geologic cross-section N-N' depicts the geologic conditions along the north and south side of Sugar Creek, from RW-3 through AP-6, and across Sugar Creek to AP-7 (see Appendix F). As depicted in the geologic cross-sections the groundwater monitoring wells are consistently screened across the basal sand and unconsolidated/bedrock interface. The potentiometric surface depicted on cross-section N-N' shows groundwater elevations at these wells and Sugar Creek. As depicted on the cross-section groundwater movement both north and south of Sugar Creek appears to be toward the creek, as expected with a gaining stream.

5.1.3 Well AP-7

Well AP7 was installed to determine the nature and extent of the arsenic detected in well RW-3. The concentrations at well AP-7 ranged from non-detect (<0.025 mg/L) to 0.0947 mg/L during the review period, exceeding the groundwater protection standard nine out of the twelve sampling events.

Temporary assessment wells located north of AP-7 include T-5 and T-6. Only three sampling events have occurred thus far for these temporary assessment wells. Arsenic concentrations at wells T-5 and T-6 ranged from less than the detection limit (0.001 mg/L) to 0.0158 mg/L for the second and third quarters of 2024 and at 0.0016 mg/L for the fourth quarter 2024.

The creek has historically been a point of convergence for the local groundwater system. As depicted in geologic cross-section N-N', groundwater movement at well AP-7 appears to be towards the creek, which is toward the impoundments (see Appendix F). The groundwater quality at well AP-7 is believed representative of conditions north of and unrelated to the CCR site.

5.1.4 Well AP-8

Well AP-8, was installed along the north side of the Dallman Ash Pond to characterize CCR constituent concentrations. The concentrations of arsenic at well AP-8 during the review period ranged from 0.0319 to 0.0513 mg/L, exceeding the groundwater protection standard for seven out of the twelve sampling events. The nature and extent of the arsenic exceedance at well AP-8 is defined by temporary assessment well T-4. Well T-4 was installed north of well AP-8, along the northern bank of Sugar Creek. Only three sampling events have occurred thus far for temporary assessment well T-4. The concentrations of arsenic at well T-4 during the review period ranged from 0.0013 to 0.0055 mg/L.

Geologic cross-section O-O' depicts the geologic conditions along the north and south side of Sugar Creek, near AP-8 and T-4 (see Appendix F). As depicted in the geologic cross-sections the groundwater monitoring wells are consistently screened across the basal sand and unconsolidated/bedrock interface. The potentiometric surface depicted on cross-section O-O' shows groundwater elevations at wells AP-8 and T-4 and Sugar Creek. As depicted on the cross-section groundwater movement, both north and south of Sugar Creek appears to be toward the creek.

5.1.5 Piezometer P06D

Piezometer P06D was redeveloped and sampled for total arsenic the first quarter 2025, resulting in a concentration of 0.0153 mg/L. The piezometer is screened in silty sand directly overlying the bedrock surface. As stated above, arsenic concentrations exceeding the GWPS at AW-1 are delineated by P06D. The piezometer has only been recently sampled two times: second quarter 2021 (0.0269 mg/L), and the first quarter 2025 (0.0153 mg/L). The boring log, well completion report and analytical reports are provided in Appendix H.

5.1.6 Piezometer GP-7

Piezometer GP-7 is located north of the northeast corner of the Dallman Ash Pond, screened in a dark gray silty sand. The piezometer was installed in 2019 to better define the hydrogeologic characteristics in the proximity of well RW-3. The piezometer was sampled and analyzed for total arsenic and field parameters August 8, 2025. The total arsenic concentration result was 0.0072 mg/L, delineating concentrations of arsenic exceeding the GWPS at RW-3. The boring log, well completion report and laboratory report at provided in Appendix I.

5.2 Cobalt, Total

The analytical results for cobalt (0.006 mg/L) exhibit confirmed exceedances of the groundwater protection standard at groundwater monitoring wells AP-2A and AP-3 during the review period (i.e., first quarter 2022 through fourth quarter 2024).

Cobalt in Illinois groundwater is not extensively documented; however, its presence is inferred from geological and anthropogenic sources. According to Hem (1985)[5] naturally occurring concentrations of cobalt are low (<0.1 mg/L) in natural groundwater, likely derived from weathering of Cobalt-rich minerals. Elevated concentrations (>0.05 mg/L) typically indicate anthropogenic inputs. Electric Power Research Institute (EPRI) (2019)[6] states the occurrence of cobalt in CCR leachate ranges from less than the analytical detection limit to 3.1 mg/L with the median concentrations for porewater from different types of CCR at concentrations typically less than 0.004 mg/L.

Graphs depicting cobalt concentrations at the CCR impoundment groundwater monitoring well network are provided in Appendix E.

5.2.1 AP-2A

The concentrations of cobalt at well AP-2A during the review period ranged from 0.0068 to 0.0115 mg/L, exceeding the groundwater protection standard (0.006 mg/L) for all twelve sampling events. At well AP-11, located west of the creek from AP-2A, the cobalt concentrations ranged from non-detect (<0.005 mg/L) to 0.0061 mg/L, exceeding the groundwater protection standard in two of the twelve sampling events.

Well AP-2A is located along the west side of the CCR impoundments and immediately east of Sugar Creek. As part of the evaluation of the extent of cobalt concentration in excess of the GWPS, temporary assessment wells AP-11 and T-2 were installed along the west side of Sugar Creek. Only three sampling events have occurred thus far for temporary assessment well T-2. The groundwater protection standard exceedances for cobalt at well AP-11 occurred during 2022 and 2023. The maximum concentrations detected at AP-11 during this period was 0.011 mg/L. Quarterly cobalt concentrations at AP-11 have been below the detection limit of 0.005 mg/L since October 2023, delineating the GWPS exceedances at AP-2 to the west.

The creek has historically been a point of convergence for the local groundwater system. Geologic cross-sections B-B' and C-C' depict the geologic conditions along the west side and east side of Sugar Creek, respectively (see Appendix F). As depicted in the geologic cross-sections, the groundwater monitoring wells are consistently screened across the basal sand and

[5] *Hem, J. D. - Study and interpretation of the chemical characteristics of natural water. 3.ed: U.S. Geological Survey Water- Supply Paper 2254. 1985. p. 272.*

[6] *Chemical Constituents in Coal Combustion Products: cobalt. EPRI, Palo Alto, CA: 2019. 3002016497.*

unconsolidated/bedrock interface. The potentiometric surface depicted on cross-section P-P' shows groundwater elevations at wells AP-2A and AP-11 and Sugar Creek. As depicted on the cross-section, groundwater movement both east and west of Sugar Creek appears to be toward the creek. The groundwater quality at wells AP-11 and T-2 is representative of conditions west of the CCR site.

5.2.2 AP-3

The concentrations of cobalt at well AP-3 during the review period ranged from non-detect (0.005 mg/L) to 0.0071 mg/L, exceeding the groundwater protection standard in only two of the twelve sampling events. Well AP-3 is located along the west side of the CCR impoundments and immediately east of Sugar Creek. As part of the evaluation of the extent of cobalt concentration in excess of the GWPS, temporary assessment wells AP-12 and T-2 were installed along the west side of Sugar Creek. Well AP-12 is located directly west and across the creek from AP-3. Concentrations ranged from non-detect (<0.005 mg/L) to 0.0236 mg/L, exceeding the groundwater protection standard in five of the twelve sampling events. Therefore, well T-2 was installed west of AP-12 to further evaluate the cobalt concentrations. Of the three sampling events conducted at T-2 during the review period, the May 2024 sampling event yielded a concentration of 0.0075 mg/L. Subsequent quarterly sampling events at T-2 yielded concentrations below the detection limit of 0.005 mg/L, thus delineating the extent of cobalt west of AP-3.

The creek has historically been a point of convergence for the local groundwater system. Geologic cross-sections B-B', C-C', and F-F' depict the geologic conditions in the vicinity of AP-3, AP-12, and T-2 (see Appendix F). As depicted in these geologic cross-sections the groundwater monitoring wells are consistently screened across the basal sand and unconsolidated/bedrock interface. The potentiometric surface depicted on cross-section F-F' shows groundwater elevations at wells AP-3, AP-12, T-2, and Sugar Creek. As depicted on the cross-section groundwater movement both east and west of the creek appears to be toward the creek. The groundwater quality at wells AP-12 and T-2 is believed to be representative of conditions west of the CCR site.

5.3 Indicator Parameters

Detecting groundwater impacts from fly ash and bottom ash requires monitoring specific indicator parameters that reflect the leaching of CCRs and their interaction with groundwater. The best indicators are those that are mobile, persistent, and uniquely associated with CCRs, while also being detectable at low concentrations.

Based on a significant amount of data obtained from the numerous wells located on the periphery of the impoundments, boron has shown to be the best indicator parameter of the CCR constituents for the CWLP CCR ash impoundments. A graph illustrating the boron concentrations for the wells located immediately adjacent and downgradient to the impoundments (AP-1R, AP-3,

AP-4, AP-6, AP-8, AP-10, AP-14, and RW-3) is provided in Appendix E. As shown, wells AP-1R and AP-14 consistently exhibit the highest boron concentrations of the wells. Well AP-3 exhibits the next highest boron concentrations. The northern wells (AP-6 and RW-3) exhibit boron concentrations less than 0.5 mg/L. This indicates that the uppermost aquifer is not significantly influenced by the CCR impoundments on the northern periphery of the impoundments.

6. NATURE AND ESTIMATED QUANTITY OF MATERIAL

40 CFR 257.95(g)(1)(ii) requires data on the nature and estimated quantity of material released, including specific information on the constituents listed in Appendix IV and the levels at which they are present in the material released to be collected.

Information on the constituents listed in Appendix IV and the levels at which they are present in the in-place materials within Lakeside and Dallman Ash Ponds has been collected. In May 2024, four borings were advanced within Lakeside Ash Pond (L1, L3, L4, and L5) and four borings were advanced within Dallman Ash Pond (D1, D2, D3, and D4) for the purpose of obtaining representative samples of in-place solids materials and porewater. Each boring was advanced with hollow stem augers and solids samples were collected via split barrel samplers. Solids samples were submitted for total and TCLP/SPLP analysis of the Appendix IV constituents. Once final depth was reached, a PVC monitoring well was installed in the boring using 10-foot prepacked screens placed immediately above the clay bottom of the impoundments. After development, porewater samples were collected from each monitoring well and submitted for total and dissolved phase analysis of the Appendix IV constituents (see Appendix G). This information along with the volume, porosity and bulk density estimates were used to approximate the quantity of material.

The Dallman Ash Pond has approximately 1,523,073 cubic yards (1,164,000 m^3) and Lakeside Ash Pond has approximately 841,200 cubic yards (643,144 m^3) of in place CCR, a mixture of fly ash and bottom ash. The sluicing process homogenizes particle distribution and the post-settlement stratification, and consolidation decreases the CCR mixture porosity and increases the bulk density.

Studies of sluiced CCR in surface impoundments, which represent mixtures of fly ash and bottom ash, indicate that these materials exhibit porosities generally between 0.47 and 0.65 and dry unit weights ranging from 10.8 to 17.0 kN/m^3. Converting these dry unit weights to bulk densities yields values between approximately 1,100 kg/m^3 and 1,730 kg/m^3. Field data obtained by Tan et al. (2022)[7] from twelve undisturbed impoundment samples show individual sample porosities (θ) from 0.44 to 0.65 and corresponding dry unit weights (γ_n) of 10.8–17.0 kN/m^3, reflecting normally consolidated, sandy-silt-like behavior in situ.

[7] *Tan, Y., Basantis, A., Benson, C. H., & Chen, J. N. (2022). "Hydraulic Properties of Sluiced Coal Combustion Products Disposed in Impoundments." Geo-Congress 2022, 335, 505–517.*

These values are supported by laboratory-simulated impoundment tests (EPRI 2012)[8] reporting bulk densities near 1,000–1,200 kg/m³. For context, individual ash properties reported by IEA Clean Coal Centre (2008)[9] show porosity ranges of 0.40–0.50 for fly ash and 0.25–0.40 for bottom ash, but mixed, sluiced CCR exhibits somewhat higher porosities due to fines content and natural consolidation.

Based on regression analyses presented by Tan et al. (2022), "typical" impoundment-scale hydraulic properties correspond to:

- Typical Porosity: $\theta \approx 0.50$ (50 %), and
- Typical Dry Unit Weight: $\gamma_n \approx 12$ kN/m³ (≈ 1,224 kg/m³)

These values are most representative of impoundment CCRs for when site-specific data are unavailable. In the calculations below, the dry unit weight is assumed to represent the bulk density.

6.1 Antimony

The mass of antimony leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Antimony

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	0.0035	0.0078	0.0141	0.0273	0.0029	0.007	0.0034	0.024	0.0029	0.0273	0.0113
TCLP	mg/L	0.017	0.0237	0.0163	0.0125	0.0178	0.0197	0.0395	0.0376	0.0125	0.0395	0.0230

The porewater volume of the surface impoundment is:

$$V_{porewater} = \text{Total Impoundment Volume} \times \theta$$

$$= 1{,}164{,}000\ m^3 \times 0.50 = 582{,}000\ m^3 = 582{,}000{,}000\ L$$

Using an average concentration (0.0113 mg/L) the total mass of antimony is:

$$\text{Mass of Antimony} = \text{Average Antimony Concentration} \times V_{porewater}$$

$$= 0.0113\ mg/L \times 582{,}000{,}000\ L = 6.58\ kg$$

[8] *Electric Power Research Institute (EPRI). (2012). "Laboratory-Simulated Coal Combustion Product (CCP) Impoundment Tests."*

[9] *IEA Clean Coal Centre. (2008). Management of Coal Combustion Wastes (CCC/231).*

Conservative estimate using the maximum concentration (0.0273 mg/L) is:

= 0.0273 mg/L x 582,000,000 L = 15.9 kg

Using bulk density ($\rho_b = \frac{mass\ of\ ash}{total\ volume}$) the total ash mass in the surface impoundment is:

$M_{ash} = V_{surface\ impoundment} \times \rho_b$

= 1,164,000 m^3 x 1,224 kg/m^3 = 1,424,736,000 kg = 1.42 million metric tons

The average and maximum antimony leaching rate per metric ton of ash is:

Antimony Leached = Total Antimony Mass / Total Ash Mass

= 6.58 kg / 1,424,736 metric tons = 0.00462 g Antimony/metric ton ash

= 15.9 kg / 1,424,736 metric tons = 0.0112 g Antimony/metric ton ash

Dallman Ash Pond - Porewater Results – Antimony, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	J 0.061	J 0.024	0.23	0.0812	0.024	0.23	0.09905
Dissolved	mg/L	7/19/24	0.0025	0.0044	0.0034	0.0021	0.0021	0.0044	0.0031
Total	mg/L	7/19/24	0.0026	0.0058	0.0047	0.0059	0.0026	0.0059	0.00475

Note:
J - Analyte detected below quantitation limits

Using average porewater data for antimony, dissolved, the total mass is:

Mass of Antimony = Average Antimony Concentration x $V_{porewater}$

= 0.0031 mg/L x 582,000,000 L = 1.8 kg

Conservative estimate using the maximum concentration (0.0059 mg/L) is:

= 0.0044 mg/L x 582,000,000 L = 2.56 kg

The average and maximum antimony leaching rate per metric ton of ash is:

= 1.8 kg / 1,424,736 metric tons = 0.00127 g Antimony/metric ton ash

= 2.56 kg / 1,424,736 metric tons = 0.00180 g Antimony/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Antimony

Parameter	SPLP	Porewater
Average Antimony Concentration	0.0113 mg/L	0.0031 mg/L
Total Antimony Mass	6.58 kg	1.80 kg

The concentrations of antimony, dissolved, in the porewater sample are approximately 73% lower compared to SPLP results (0.0031mg/L vs. 0.0113 mg/L). The total antimony mass in porewater is 1.8-2.56 kg, significantly lower than SPLP-derived estimates (6.58-15.9 kg).

The significant difference between SPLP-derived antimony estimates (6.58-15.9 kg) and actual porewater measurements (1.8-2.56 kg) stems from fundamental contrasts between laboratory leaching tests and in-situ geochemical conditions. The SPLP test's acidic environment (pH 4.2) aggressively mobilizes antimony by dissolving weakly bound fractions and oxidizing Sb(III) to highly soluble Sb(V) (antimonate). This creates a "worst-case" leaching scenario that overestimates field conditions.

In contrast, the alkaline, reducing environment within the ash pond (pH ~8-12) promotes antimony retention through two key mechanisms: First, reducing conditions stabilize antimony as Sb(III) (antimonite), which strongly adsorbs to abundant iron oxide surfaces in the ash. Second, the high pH enhances Sb(III) adsorption onto mineral phases while simultaneously limiting mineral dissolution. These processes collectively suppress antimony solubility in the actual porewater, resulting in 73% lower dissolved concentrations than SPLP predictions.

Regarding mobility, antimony's behavior under current pond conditions is relatively constrained. The dominant Sb(III) species exhibits low mobility due to its affinity for iron oxides and the advection-dominated flow regime. However, this could change if environmental conditions shift: Oxidation during pond decommissioning could convert Sb(III) to mobile Sb(V), while acidic groundwater intrusion could dissolve sorbed fractions. The primary transport risk remains advective movement of Sb(V) rather than diffusion, given the low concentration gradients observed. Monitoring redox transitions and maintaining alkaline conditions are thus critical for long-term management.

Lakeside Ash Pond - SPLP/TCLP Results – Antimony

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	0.0114	0.0012	0.0054	0.0037	J 0.0009	0.0067	0.0025	0.0009	0.0114	0.0045
TCLP	mg/L	0.0019	0.0064	0.0066	0.0024	0.0012	0.0072	0.0017	0.0012	0.0072	0.0039

The porewater volume of the surface impoundment is:

= 643,144 m^3 x 0.50 = 351,572 m^3 = 351,572,000 L

Using an average concentration (0.0045 mg/L) the total mass of antimony is:

= 0.0045 mg/L x 351,572,000 L = 1.58 kg

Conservative estimate using the maximum concentration (0.0114 mg/L) is:

= 0.0114 mg/L x 351,572,000 L = 4.01 kg

Using bulk density, the total ash mass in the surface impoundment is:

= 351,572 m^3 x 1,224 kg/m^3 = 430,324,128 kg = 0.430 million metric tons

The average and maximum antimony leaching rate per metric ton of ash is:

= 1.58 kg / 430,324 metric tons = 0.00367 g Antimony/metric ton ash

= 4.01 kg / 430,324 metric tons = 0.00932 g Antimony/metric ton ash

Lakeside Ash Pond - Porewater Results – Antimony, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	BJ 0.027	B 0.0655	0.002	<B 0.1	0.002	0.1	0.0486
Dissolved	mg/L	7/19/24	< 0.001	J 0.001	0.0025	0.0014	0.001	0.0025	0.00148
Total	mg/L	7/19/24	0.0011	J 0.0008	0.0051	J 0.0009	0.0008	0.0051	0.00198

Note:
B - Analyte detected in associated Method Blank
J - Analyte detected below quantitation limits

Using average porewater data for antimony, dissolved, the total mass is:

= 0.00148 mg/L x 351,572,000 L = 0.520 kg

Conservative estimate using the maximum concentration (0.0025 mg/L) is:

= 0.0025 mg/L x 351,572,000 L = 0.879 kg

The average and maximum antimony leaching rate per metric ton of ash is:

= 0.520 kg / 430,324 metric tons = 0.00121 g Antimony/metric ton ash

= 0.879 kg / 430,324 metric tons = 0.00204 g Antimony/metric ton ash

Comparison of the average porewater result with the average SPLP estimate:

Lakeside Ash Pond - Results Comparison – Antimony

Parameter	SPLP	Porewater
Average Antimony Concentration	0.0045 mg/L	0.00148 mg/L
Total Antimony Mass	1.58 kg	0.520 kg

The concentrations of antimony, dissolved, in the porewater sample are approximately 67% lower compared to SPLP results (0.00148 mg/L vs. 0.0045 mg/L). The total antimony mass in porewater is 0.52-0.879 kg, significantly lower than SPLP-derived estimates (1.58-4.01 kg).

Similar to the Dallman Ash Pond, the significant differences between SPLP-derived and porewater antimony concentrations in Lakeside Ash Pond reflect fundamental distinctions between leaching potential (SPLP) and in-situ equilibrium (porewater), controlled by site-specific geochemistry. See discussion above.

6.2 Arsenic

The mass of arsenic leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Arsenic

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	< 0.01	0.0471	< 0.01	0.039	< 0.01	0.0173	< 0.01	0.0114	0.01	0.0471	0.0194
TCLP	mg/L	< 0.01	0.0528	0.0505	0.345	< 0.01	0.0155	< 0.01	0.0242	0.01	0.345	0.0648

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.0194 mg/L) the total mass of arsenic is:

= 0.0194 mg/L x 582,000,000 L = 11.3 kg

Conservative estimate using the maximum concentration (0.0471 mg/L) is:

= 0.0471 mg/L x 582,000,000 L = 27.4 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum arsenic leaching rate per metric ton of ash is:

= 11.3 kg / 1,424,736 metric tons = 0.00793 g Arsenic/metric ton ash

= 27.4 kg / 1,424,736 metric tons = 0.0192 g Arsenic/metric ton ash

Dallman Ash Pond - Porewater Results – Arsenic, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	1.17	0.279	2.33	0.378	0.279	2.33	1.04
Dissolved	mg/L	7/19/24	0.0829	0.111	0.0797	0.0231	0.0231	0.111	0.0742
Total	mg/L	7/19/24	0.171	0.16	0.104	0.0629	0.0629	0.171	0.124

Using average porewater data for arsenic, dissolved, the total mass is:

= 0.124 mg/L x 582,000,000 L = 43.2 kg

Conservative estimate using the maximum concentrations (0.171 mg/L) is:

= 0.171 mg/L x 582,000,000 L = 64.6 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum arsenic leaching rate per metric ton of ash is:

= 43.2 kg / 1,424,736 metric tons = 0.0303 g Arsenic/metric ton ash

= 64.6 kg / 1,424,736 metric tons = 0.0453 g Arsenic/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Arsenic

Parameter	SPLP	Porewater
Average Arsenic Concentration	0.0194 mg/L	0.0742 mg/L
Total Arsenic Mass	11.3 kg	43.2 kg

The concentrations of arsenic in the SPLP sample are approximately 74% lower compared to porewater results (0.0194 mg/L vs. 0.0742mg/L). The total arsenic mass in porewater is 43.2-64.6 kg, significantly higher than SPLP-derived estimates (11.3-27.4 kg). This reversal of the typical pattern (where SPLP often over predicts leaching) occurs due to arsenic's unique geochemical behavior under alkaline, reducing conditions within the ash pond.

Arsenic may be more mobile under oxidizing and alkaline conditions (common in porewater) but less mobile under acidic SPLP conditions. The higher arsenic concentrations in porewater suggest site conditions (i.e., high pH or reducing conditions) favor arsenic mobility, which SPLP does not characterize well.

Under alkaline oxidizing conditions typical of CCR porewater, arsenic is present primarily as arsenate (AsO_4^{3-}), a negatively charged oxyanion. Arsenate is poorly sorbed under high pH conditions, especially when competing anions (e.g., phosphate, sulfate) are present, allowing it to remain dissolved and mobile.

The observed difference in arsenic concentrations between porewater and SPLP leachate can be attributed to key differences in geochemical conditions, test methodology, and material interaction timeframes.

Field conditions in saturated ash impoundments often become anaerobic (reducing conditions) over time. Under reducing conditions, arsenic associated with iron oxides released into solution as ferric iron (Fe^{3+}) is reduced to ferrous iron (Fe^{2+}), dissolving iron hydroxide minerals and mobilizing arsenic, particularly arsenite (As^{3+}). SPLP, in contrast, is an aerobic laboratory procedure and does not simulate this reductive dissolution process.

Porewater in CCR surface impoundments commonly exhibits elevated pH (>8) (i.e., alkaline conditions), due to the presence of alkaline ash components. At higher pH, arsenate (As^{5+}) sorption to mineral surfaces (e.g., iron oxides or aluminosilicates) is reduced, increasing arsenic mobility. SPLP extraction fluid is mildly acidic (pH 4.2–4.8), favoring stronger sorption of arsenic and thus lower leachate concentrations.

Porewater represents long-term equilibrium conditions that allow for extended interaction between the ash and pore fluids. Over time, arsenic may desorb from solid phases or be released from the dissolution of arsenic-bearing minerals. SPLP is a short-duration test (18 hours) that does not fully capture these long-term processes.

The SPLP procedure uses a 20:1 liquid-to-solid ratio, which dilutes the leachate and may underestimate field concentrations. In contrast, porewater samples are collected under in-situ moisture conditions, often resulting in higher solute concentrations.

Porewater may contain competing anions such as phosphate, bicarbonate, or silicate, which can displace arsenic from mineral sorption sites. These constituents are typically absent or at low concentrations in SPLP extraction fluid, further limiting their ability to replicate in-situ arsenic mobility.

The higher arsenic concentration observed in porewater relative to SPLP leachate is consistent with the expected influence of site-specific geochemical conditions, including reducing redox states, alkaline pH, extended interaction time, and the presence of competing ions. These factors enhance arsenic mobility under field conditions and are not fully replicated by the SPLP test method.

Regarding mobility, arsenic's behavior is highly sensitive to two site conditions. The mobility peaks in alkaline environments (current pond conditions) and reducing conditions maintain mobile As-III. These factors currently promote arsenic mobility within the impoundment. However, advection remains the dominant transport mechanism given the low concentration gradients.

Lakeside Ash Pond - SPLP/TCLP Results – Arsenic

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	0.0276	< 0.01	0.0195	< 0.01	< 0.01	0.0331	< 0.01	0.01	0.0331	0.0172
TCLP	mg/L	< 0.01	< 0.01	0.0279	0.0337	< 0.01	0.0276	< 0.01	0.01	0.0337	0.0185

The porewater volume of the surface impoundment is 351,572,000 L. Using an average concentration (0.0172 mg/L) the total mass of arsenic is:

= 0.0172 mg/L x 351,572,000 L = 6.05 kg

Conservative estimate using the maximum concentration (0.0331 mg/L) is:

= 0.0331 mg/L x 351,572,000 L = 11.6 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum arsenic leaching rate per metric ton of ash is:

= 6.05 kg / 430,324 metric tons = 0.0141 g Arsenic/ metric ton ash

= 11.6 kg / 430,324 metric tons = 0.0270 g Arsenic/metric ton ash

Lakeside Ash Pond - Porewater Results – Arsenic, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.717	2.43	0.0512	2.58	0.0512	2.58	1.44
Dissolved	mg/L	7/19/24	0.0076	0.0142	0.185	0.0217	0.0076	0.185	0.0571
Total	mg/L	7/19/24	0.0139	0.0328	0.453	0.0473	0.0139	0.453	0.137

Using average porewater data for arsenic, dissolved, the total mass is:

= 0.0571 mg/L x 351,572,000 L = 20.1 kg

Conservative estimate using the maximum concentration (0.185 mg/L) is:

= 0.185 mg/L x 351,572,000 L = 65.0 kg

Based upon the total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum arsenic leaching rate per metric ton of ash is:

= 20.1 kg / 430,324 metric tons = 0.0467 g Arsenic/metric ton ash

= 65.0 kg / 430,324 metric tons = 0.151 g Arsenic/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Arsenic

Parameter	SPLP	Porewater
Average Arsenic Concentration	0.0172 mg/L	0.0571 mg/L
Total Arsenic Mass	6.05 kg	20.1 kg

The concentrations of arsenic in the SPLP sample are approximately 70% lower compared to porewater results (0.0172 mg/L vs. 0.0571 mg/L). The total arsenic mass in porewater is 20.1-65.0 kg, significantly higher than SPLP-derived estimates (6.05-11.6 kg). These results are similar to the Dallman Ash Pond SPLP and porewater analytical results. See discussion above.

6.3 Barium

The mass of barium leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Barium

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	< 0.045	< 0.045	J 0.021	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	0.021	0.045	0.042
TCLP	mg/L	0.358	0.514	0.556	0.352	0.492	0.373	0.238	0.287	0.238	0.556	0.396

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.042 mg/L) the total mass of barium is:

= 0.042 mg/L x 582,000,000 L = 24.4 kg

Conservative estimate using the maximum concentration (0.045 mg/L) is:

= 0.045 mg/L x 582,000,000 L = 26.2 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum barium leaching rate per metric ton of ash is:

= 24.4 kg / 1,424,736 metric tons = 0.0171 g Barium/metric ton ash

= 26.2 kg / 1,424,736 metric tons = 0.0184 g Barium/metric ton ash

Dallman Ash Pond - Porewater Results – Barium, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	2.48	1.13	3.51	0.975	0.975	3.51	2.02
Dissolved	mg/L	7/19/24	0.0541	0.0376	0.0676	0.0843	0.0376	0.0843	0.0609
Total	mg/L	7/19/24	0.118	0.0997	0.0823	0.186	0.0823	0.186	0.122

Using average porewater data for barium, dissolved, the total mass is:

= 0.0609 mg/L x 582,000,000 L = 35.4 kg

Conservative estimate using the maximum concentrations (0.0843mg/L) is:

= 0.0843 mg/L x 582,000,000 L = 49.1 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum barium leaching rate per metric ton of ash is:

= 35.4 kg / 1,424,736 metric tons = 0.0249 g Barium/metric ton ash

= 49.1 kg / 1,424,736 metric tons = 0.0344 g Barium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Barium

Parameter	SPLP	Porewater
Average Barium Concentration	0.042 mg/L	0.0609 mg/L
Total Barium Mass	24.4 kg	35.4 kg

The concentrations of barium in the SPLP sample are approximately 31% lower compared to porewater results (0.042 mg/L vs. 0.0609 mg/L). The total barium mass in porewater is 35.4-49.1 kg, significantly higher than SPLP-derived estimates (24.4-26.2 kg).

The higher barium concentrations in Dallman Ash Pond's porewater compared to SPLP results arise from geochemical interactions specific to alkaline CCR environments and methodological limitations of leaching tests. Three factors drive this discrepancy.

The SPLP's acidic leachant (pH 4.2 ± 0.5) contains elevated sulfate (SO_4^{2-}) from simulated rainwater. This promotes barite ($BaSO_4$) precipitation, sequestering dissolved barium during testing—a process absent in the sulfate-limited, alkaline porewater (pH 8–12).

Natural bicarbonate (HCO_3^-) in the pond porewater complexes Ba^{2+}, increasing solubility. In contrast, SPLP's low-pH environment lacks sufficient alkalinity to offset barite formation.

High calcium (Ca^{2+}) and magnesium (Mg^{2+}) in CCR porewater compete with Ba^{2+} for sorption sites, further elevating dissolved concentrations unaccounted for in SPLP's simplified chemistry.

Barium mobility is primarily controlled by sulfate availability and pH. In the ash pond's low-sulfate, alkaline setting, barium remains relatively mobile as dissolved Ba^{2+} or bicarbonate complexes. However, its migration downgradient may self-limit if sulfate-rich groundwater is encountered, triggering barite precipitation. Advection governs transport given the pond's sandy-silt hydrology, but the risk of barium spreading is constrained by its strong affinity for sulfate unlike more mobile CCR constituents (e.g., boron).

The porewater's 35.4–49.1 kg Ba mass (vs. SPLP's 24.4–26.2 kg) confirms SPLP under predicts barium solubility in alkaline impoundments. Site-specific porewater data better reflects actual leaching risk, though long-term stability depends on preventing sulfate influx or acidic shifts that could immobilize or remobilize barium, respectively.

Lakeside Ash Pond - SPLP/TCLP Results – Barium

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.045	J 0.026	J 0.028	J 0.0076	0.185 0.0571	0.0596	J 0.023	**0.0076**	**0.0596**	**0.0352**
TCLP	mg/L	0.345	0.172	0.635	0.0139	0.453 0.137	0.574	1.24	0.0139	1.24	0.445

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Using an average concentration (0.0352 mg/L) the total mass of barium is:

= 0.0352 mg/L x 351,572,000 L = 12.4 kg

Conservative estimate using the maximum concentration (0.0331 mg/L) is:

= 0.0596 mg/L x 351,572,000 L = 21.0 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum barium leaching rate per metric ton of ash is:

= 12.4 kg / 430,324 metric tons = 0.0288 g Barium/metric ton ash

= 21.0 kg / 430,324 metric tons = 0.0488 g Barium/metric ton ash

Lakeside Ash Pond - Porewater Results – Barium, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	3.48	1.49	0.308	1.6	0.308	3.48	1.72
Dissolved	mg/L	7/19/24	0.13	0.0912	0.101	0.0523	0.0523	0.13	0.0936
Total	mg/L	7/19/24	0.161	0.128	0.497	0.0877	0.0877	0.497	0.218

Using average porewater data for barium, dissolved, the total mass is:

= 0.0936 mg/L x 351,572,000 L = 32.9 kg

Conservative estimate using the maximum concentration (0.13 mg/L) is:

= 0.13 mg/L x 351,572,000 L = 45.7 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum barium leaching rate per metric ton of ash is:

= 32.9 kg / 430,324 metric tons = 0.0765 g Barium/metric ton ash

= 45.7 kg / 430,324 metric tons = 0.106 g Barium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Barium

Parameter	SPLP	Porewater
Average Barium Concentration	0.0352 mg/L	0.0936 mg/L
Total Barium Mass	12.4 kg	32.9 kg

The concentrations of barium in the SPLP sample are approximately 62% lower compared to porewater results (0.0352 mg/L vs. 0.0936 mg/L). The total barium mass in porewater is 32.9-45.7 kg, significantly higher than SPLP-derived estimates (12.4-21 kg). These results are similar to the Dallman Ash Pond SPLP and porewater analytical results. See discussion above.

6.4 Beryllium

The mass of beryllium leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Beryllium

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	< 0.001	J 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0002	0.001	0.0009
TCLP	mg/L	0.0145	0.0085	0.0231	J 0.0002	0.0114	0.0113	0.0056	0.0012	0.0002	0.0231	0.00948

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.0009 mg/L) the total mass of beryllium is:

= 0.0009 mg/L x 582,000,000 L = 0.524 kg

Conservative estimate using the maximum concentration (0.001 mg/L) is:

= 0.001 mg/L x 582,000,000 L = 0.582 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum beryllium leaching rate per metric ton of ash is:

= 0.524 kg / 1,424,736 metric tons = 0.000368 g Beryllium/metric ton ash

= 0.582 kg / 1,424,736 metric tons = 0.000409 g Beryllium/metric ton ash

Dallman Ash Pond - Porewater Results – Beryllium, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	0.254	0.064	0.439	0.0674	0.064	0.439	0.206
Dissolved	mg/L	7/19/24	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0005	0.0005	0.0005
Total	mg/L	7/19/24	0.002	0.0035	0.001	0.0056	0.001	0.0056	0.00303

The dissolved boron concentrations were reported as non-detect (<0.0005 mg/L) for all sampling events. Using the dissolved beryllium non-detect value, the total mass is:

= 0.0005 mg/L x 582,000,000 L = 0.291 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum beryllium leaching rate per metric ton of ash is:

= 0.291 kg / 1,424,736 metric tons = 0.000204 g Beryllium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Beryllium

Parameter	SPLP	Porewater
Average Beryllium Concentration	0.0009 mg/L	0.0005 mg/L
Total Beryllium Mass	0.524 kg	0.291 kg

The concentrations of beryllium in the porewater sample are approximately 44% lower compared to SPLP results (0.0005 mg/L vs 0.0009 mg/L). The total beryllium mass in SPLP-derived estimates (0.524-0.582 kg) is higher than determined for porewater (0.291 kg).

The slightly higher SPLP-derived mass (0.524 kg vs. 0.291 kg) stems from its aggressive extraction of weakly adsorbed beryllium (Be) fractions, but the absolute difference remains small (<0.3 kg total). Both methods confirm beryllium poses minimal groundwater risk due to its extreme attenuation, consistent with its rarity as a contaminant of concern at CCR sites.

The minimal Be concentrations in both Dallman Ash Pond porewater and SPLP leachate reflect its strong geochemical immobilization, though subtle differences arise from testing conditions. Three factors explain the near-identical mass estimates.

Beryllium exhibits lowest solubility near pH 6–8. The ash pond's alkaline porewater (pH 8–12) promotes hydrolysis to insoluble $Be(OH)_2$ or $Be(OH)_3^-$, while SPLP's acidic environment (pH 4.2) slightly enhances dissolution via Be^{2+} formation, though still limited by adsorption.

Be sorbs strongly to Al/Fe/Mn oxides, clay minerals, and organic matter in ash. At high pH, it forms stable surface complexes (e.g., ≡FeO–$BeOH^+$), reducing dissolved concentrations. SPLP's low pH partially disrupts this, explaining its marginally higher detection limit but still negligible release.

Be likely exists as refractory mineral phases (e.g., bertrandite) or substituted in silicate matrices, resisting dissolution in both natural and acidic conditions.

Beryllium is inherently immobile in CCR environments due to adsorption affinity (high K_d > 10^3 L/kg), low solubility in alkaline systems, and limited redox sensitivity. Its migration is restricted to short distances via advection, with precipitation or adsorption likely trapping it near source zones. No significant plume formation is expected.

Lakeside Ash Pond - SPLP/TCLP Results – Beryllium

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	0.001
TCLP	mg/L	J 0.0007	0.0015	< 0.001	0.0054	< 0.001	0.0049	< 0.001	0.0007	0.0054	0.00221

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Beryllium concentrations were non-detect (<0.001 mg/L) for all SPLP samples. Using detection limit value (0.001 mg/L) the total mass of beryllium is:

= 0.001 mg/L x 351,572,000 L = 0.352 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the beryllium leaching rate per metric ton of ash is:

= 0.352 kg / 430,324 metric tons = 0.000818 g Beryllium/metric ton ash

Lakeside Ash Pond - Porewater Results – Beryllium, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.0542	0.102	0.0024	0.0911	0.0024	0.102	0.0624
Dissolved	mg/L	7/19/24	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0005	0.0005	0.0005
Total	mg/L	7/19/24	J 0.0003	J 0.0004	0.0045	0.0005	0.0003	0.0045	0.00143

Note:
J - Analyte detected below quantitation limits

The dissolved boron concentrations were reported as non-detect (<0.0005 mg/L) for all sampling events. Using the dissolved beryllium non-detect value, the total mass is:

= 0.0005 mg/L x 351,572,000 L = 0.176 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum beryllium leaching rate per metric ton of ash is:

= 0.176 kg / 430,324 metric tons = 0.000408 g Beryllium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Beryllium

Parameter	SPLP	Porewater
Average Beryllium Concentration	0.001 mg/L	0.0005 mg/L
Total Beryllium Mass	0.352 kg	0.176 kg

The non-detect concentrations of beryllium in the porewater sample are approximately 50% lower compared to porewater results (0.0005 mg/L vs 0.001 mg/L). The total beryllium mass in SPLP samples (0.352 kg), is higher than porewater derived estimates (0.176 kg). These results are similar to the Dallman Ash Pond SPLP and porewater analytical results. See discussion above.

6.5 Cadmium

The mass of cadmium leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Cadmium

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.002	0.002	0.002
TCLP	mg/L	0.0293	0.0706	0.0638	< 0.002	0.0302	0.0475	0.0422	0.0063	0.002	0.0706	0.0365

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.002 mg/L) the total mass of cadmium is:

= 0.002 mg/L x 582,000,000 L = 1.16 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average cadmium leaching rate per metric ton of ash is:

= 1.16 kg / 1,424,736 metric tons = 0.000814 g Cadmium/metric ton ash

Dallman Ash Pond - Porewater Results – Cadmium, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	**mg/L**	4/29/24	0.222	0.0541	0.492	J 0.068	0.0541	0.492	0.209
Dissolved	**mg/L**	7/19/24	< 0.002	< 0.002	< 0.002	< 0.002	0.002	0.002	0.002
Total	**mg/L**	7/19/24	J 0.0016	J 0.0014	< 0.002	0.0035	0.0014	0.0035	0.00213

Note:
J - Analyte detected below quantitation limits

Cadmium concentrations were non-detect (<0.002 mg/L) for all samples. Using detection limit value (0.002 mg/L) the total mass of cadmium is:

= 0.002 mg/L x 582,000,000 L = 1.16 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum cadmium leaching rate per metric ton of ash is:

= 1.16 kg / 1,424,736 metric tons = 0.000817 g Cadmium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Cadmium

Parameter	SPLP	Porewater
Average Cadmium Concentration	0.002 mg/L	0.002 mg/L
Total Cadmium Mass	1.16 kg	1.16 kg

The concentrations of cadmium in the SPLP sample are in agreement with porewater results (0.002 mg/L vs. 0.002 mg/L). The total cadmium mass in porewater is 1.16 kg the same as the SPLP-derived estimate (1.16 kg).

The agreement between SPLP and porewater cadmium results in Dallman Ash Pond—both below detection (<0.002 mg/L) with identical mass estimates stems from cadmium's geochemical behavior in coal ash systems. Cadmium solubility is primarily controlled by pH-dependent adsorption and precipitation. In SPLP's acidic environment (pH 4.2), cadmium might be expected to mobilize as Cd^{2+}, but its strong affinity for iron oxides, clay minerals, and organic matter in ash promotes retention. Conversely, the alkaline porewater (pH 8–12) favors cadmium precipitation as insoluble carbonates (e.g., $CdCO_3$) or hydroxides, while also enhancing adsorption onto mineral surfaces. These opposing mechanisms, low-pH adsorption versus high-pH precipitation, converge to limit solubility across both environments.

Cadmium mobility is further suppressed by its tendency to form stable complexes with sulfides (e.g., CdS) under reducing conditions, which likely exist in submerged ash. The low concentrations indicate minimal dissolved cadmium, reflecting effective attenuation regardless of testing conditions. In groundwater, cadmium's mobility would be constrained by three key factors: (1) pH extremes that trigger precipitation/adsorption, (2) the presence of sorbents (Fe/Al oxides, carbonates), and (3) sulfide availability that immobilizes it as insoluble precipitates. This results in limited transport potential, confining cadmium plumes to narrow zones near sources unless acidic or low-sulfide conditions prevail. The consistency between SPLP and porewater data confirms cadmium's low leaching risk in this setting.

Lakeside Ash Pond - SPLP/TCLP Results – Cadmium

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.002	0.002	0.002
TCLP	mg/L	0.0045	0.0045	0.0154	0.0397	< 0.002	0.149	0.0022	0.002	0.149	0.0310

The porewater volume of the surface impoundment is 351,572,000 L. Using an average concentration (0.002 mg/L) the total mass of cadmium is:

= 0.002 mg/L x 351,572,000 L = 0.703 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average cadmium leaching rate per metric ton of ash is:

= 0.703 kg / 430,324 metric tons = 0.00163 g Cadmium/metric ton ash

Lakeside Ash Pond - Porewater Results – Cadmium, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.0776	0.26	0.0019	0.296	0.0019	0.296	0.159
Dissolved	mg/L	7/19/24	< 0.002	< 0.002	< 0.002	< 0.002	0.002	0.002	0.002
Total	mg/L	7/19/24	< 0.002	< 0.002	0.0097	< 0.002	0.002	0.0097	0.00393

Cadmium concentrations were non-detect (<0.002 mg/L) for all samples. Using the detection limit value (0.002 mg/L) the total mass of cadmium is:

= 0.002 mg/L x 351,572,000 L = 0.703 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum cadmium leaching rate per metric ton of ash is:

= 0.703 kg / 430,324 metric tons = 0.00163 g Cadmium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Cadmium

Parameter	SPLP	Porewater
Average Cadmium Concentration	0.002 mg/L	0.002 mg/L
Total Cadmium Mass	0.703 kg	0.703 kg

Similar to the Dallman Ash Pond results, the concentrations of cadmium in the SPLP sample are the same for porewater results (0.002 mg/L vs. 0.002 mg/L). The total cadmium mass in porewater

is 0.703 kg, the same as the SPLP-derived estimate (0.703 kg). These results are similar to the Dallman Ash Pond SPLP and porewater analytical results. See discussion above.

6.6 Chromium

The mass of chromium leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Chromium

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	J 0.0049	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.0049	0.01	0.00936
TCLP	mg/L	0.105	0.0707	0.116	< 0.01	0.0692	0.0438	0.0151	< 0.01	0.01	0.116	0.0550

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.00936 mg/L) the total mass of chromium is:

= 0.00936 mg/L x 582,000,000 L = 5.45 kg

Conservative estimate using the maximum concentration (0.01 mg/L) is:

= 0.01 mg/L x 582,000,000 L = 5.82 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum chromium leaching rate per metric ton of ash is:

= 5.45 kg / 1,424,736 metric tons = 0.00383 g Chromium/metric ton ash

= 5.82 kg / 1,424,736 metric tons = 0.00408 g Chromium/metric ton ash

Dallman Ash Pond - Porewater Results – Chromium, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	3.91	0.902	6.25	1.03	0.902	6.25	3.02
Dissolved	mg/L	7/19/24	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.005	0.005
Total	mg/L	7/19/24	0.0277	0.0426	0.0121	0.0645	0.0121	0.0645	0.0367

Chromium concentrations were non-detect (<0.005 mg/L) for all samples. Using detection limit value (0.005 mg/L) the total mass of chromium is:

= 0.005 mg/L x 582,000,000 L = 2.91 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum chromium leaching rate per metric ton of ash is:

= 2.91 kg / 1,424,736 metric tons = 0.00204 g Chromium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Chromium

Parameter	SPLP	Porewater
Average Chromium Concentration	0.00936 mg/L	0.005 mg/L
Total Chromium Mass	5.45 kg	2.91 kg

The concentrations of chromium in the porewater sample are approximately 47% lower compared to SPLP results (0.005 mg/L vs. 00936 mg/L). The total chromium mass in SPLP-derived estimates (5.45-5.82 kg) is greater than the porewater-derived estimate (2.91 kg).

The lower chromium concentrations in Dallman Ash Pond's porewater compared to SPLP results reflect redox and pH-controlled geochemical processes unique to in situ conditions. SPLP's acidic, oxygenated environment (pH 4.2) promotes chromium mobilization as soluble Cr(VI) (chromate, $HCrO_4^-$), while the pond's alkaline and reducing conditions (pH 8–12; low Eh) reduce Cr(VI) to Cr(III). This reduction triggers precipitation as insoluble Cr(III) hydroxides [$Cr(OH)_3$] or coprecipitation with iron oxides, sharply limiting dissolved chromium in porewater. Adsorption of Cr(III) onto clay minerals and organic matter further suppresses mobility under alkaline conditions.

Chromium's mobility is governed by three interdependent factors. These are: 1) Cr(VI) is highly mobile; Cr(III) is immobile; 2) alkaline conditions favor Cr(III) precipitation but can remobilize Cr(VI) as oxyanions; and 3) iron oxides and clays permanently sequester Cr(III).

In groundwater, chromium's nature and extent would depend on redox stability. If reducing conditions persist, migration would be minimal (< meters). However, oxidation during pond dewatering or acidic recharge could convert Cr(III) to mobile Cr(VI), potentially forming elongated plumes. The SPLP overestimates current risk (5.45–5.82 kg vs. porewater's 2.91 kg) because it ignores the pond's natural attenuation capacity. Long-term monitoring of Eh/pH is essential to detect shifts that could liberate Cr(VI).

Lakeside Ash Pond - SPLP/TCLP Results – Chromium

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	0.01	0.01
TCLP	mg/L	< 0.01	< 0.01	< 0.01	0.0185	< 0.01	J 0.0082	< 0.01	0.0082	0.0185	0.0110

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Chromium concentrations were non-detect (<0.01 mg/L) for all SPLP samples. Using detection limit value (0.01 mg/L) the total mass of chromium is:

= 0.01 mg/L x 351,572,000 L = 3.52 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the chromium leaching rate per metric ton of ash is:

= 3.52 kg / 430,324 metric tons = 0.00818 g Chromium/metric ton ash

Lakeside Ash Pond - Porewater Results – Chromium, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.993	2.08	0.0632	1.81	0.0632	2.08	1.24
Dissolved	mg/L	7/19/24	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.005	0.005
Total	mg/L	7/19/24	0.0053	0.0068	0.0773	0.0078	0.0053	0.0773	0.0243

Chromium concentrations were non-detect (<0.005 mg/L) for all samples. Using detection limit value (0.005 mg/L) the total mass of chromium is:

= 0.005 mg/L x 351,572,000 L = 1.76 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum chromium leaching rate per metric ton of ash is:

= 1.76 kg / 430,324 metric tons = 0.00409 g Chromium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Chromium

Parameter	SPLP	Porewater
Average Chromium Concentration	0.01 mg/L	0.005 mg/L
Total Chromium Mass	3.52 kg	1.76 kg

Similar to the Dallman Ash Pond results, the concentrations of chromium in the porewater sample are approximately 50% lower compared to SPLP results (0.005 mg/L vs 0.01 mg/L). The total chromium mass in the SPLP sample is 3.52 kg/L, greater than the porewater-derived estimate (1.76 kg). These results are similar to the Dallman Ash Pond SPLP and porewater analytical results. See discussion above.

6.7 Cobalt

The mass of cobalt leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Cobalt

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	0.006	0.006	0.006
TCLP	mg/L	0.0145	0.0116	0.0182	0.013	0.0118	J 0.0054	0.0107	0.0089	0.0054	0.0182	0.0118

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.006 mg/L) the total mass of cobalt is:

= 0.006 mg/L x 582,000,000 L = 3.49 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average cobalt leaching rate per metric ton of ash is:

= 3.49 kg / 1,424,736 metric tons = 0. 00245 g Cobalt/metric ton ash

Dallman Ash Pond - Porewater Results – Cobalt, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	0.241	0.0579	0.323	J 0.061	0.0579	0.323	0.170
Dissolved	mg/L	7/19/24	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.005	0.005
Total	mg/L	7/19/24	J 0.0029	J 0.0029	< 0.005	0.0062	0.0029	0.0062	0.00425

Note:
J - Analyte detected below quantitation limits

Cobalt concentrations were non-detect (<0.005 mg/L) for all samples. Using detection limit value (0.005 mg/L) the total mass of dissolved cobalt is:

= 0.005 mg/L x 582,000,000 L = 2.91 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum cobalt leaching rate per metric ton of ash is:

= 2.91 kg / 1,424,736 metric tons = 0.00204 g Cobalt/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Cobalt

Parameter	SPLP	Porewater
Average Cobalt Concentration	0.006 mg/L	0.005 mg/L
Total Cobalt Mass	3.49 kg	2.91 kg

The concentrations of cobalt, dissolved, in the porewater results are approximately 17% lower compared to SPLP samples (0.005 mg/L vs. 0.006 mg/L). The total cobalt mass in porewater is 2.91 kg, and the SPLP-derived estimate is 3.49 kg.

The close alignment between cobalt concentrations in Dallman Ash Pond's porewater and SPLP leachate reflects cobalt's consistent geochemical behavior across pH and redox gradients. Unlike redox-sensitive metals (e.g., Cr, As), cobalt solubility is primarily governed by pH-controlled precipitation and adsorption. In SPLP's acidic environment (pH 4.2), cobalt remains largely immobilized through adsorption onto Fe/Mn oxides and clay minerals. Conversely, in the pond's alkaline porewater (pH 8–12), cobalt precipitates as insoluble hydroxides ($Co(OH)_2$) or carbonates ($CoCO_3$), while also binding strongly to mineral surfaces. These parallel retention mechanisms, adsorption in acid, precipitation in alkali, converge to limit dissolved cobalt in both settings.

Cobalt mobility in groundwater is constrained by three key factors: 1) high K_d values (>500 L/kg) on Fe/Mn oxides, particularly in neutral-alkaline conditions; 2) precipitation as secondary minerals reduces dissolved concentrations; and 3) formation of immobile CoS in reducing zones.

These characteristics restrict cobalt plumes to short migration distances (<10–50 m typically), with sharp concentration declining downgradient. The minor mass difference likely stems from SPLP's partial dissolution of weakly adsorbed cobalt pools absent in porewater equilibrium. Overall, the agreement confirms cobalt's low leaching risk in CCR impoundments regardless of testing methodology, though slightly higher SPLP values appropriately represent a conservative leaching scenario for regulatory purposes.

Lakeside Ash Pond - SPLP/TCLP Results – Cobalt

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	0.006	0.006	0.006
TCLP	mg/L	J 0.0054	J 0.0033	0.0065	0.0161	0.0077	0.0218	J 0.0043	0.0033	0.0218	0.0093

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Cobalt concentrations were non-detect (<0.006 mg/L) for all SPLP samples. Using detection limit value (0.006 mg/L) the total mass of cobalt is:

= 0.006 mg/L x 351,572,000 L = 2.11 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the cobalt leaching rate per metric ton of ash is:

= 2.11 kg / 430,324 metric tons = 0.00490 g Cobalt/metric ton ash

Lakeside Ash Pond - Porewater Results – Cobalt, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.154	0.336	0.0213	0.296	0.0213	0.336	0.202
Dissolved	mg/L	7/19/24	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.005	0.005
Total	mg/L	7/19/24	< 0.005	< 0.005	0.0194	< 0.005	0.005	0.0194	0.0086

Dissolved cobalt concentrations were non-detect (<0.005 mg/L) for all samples. Using detection limit value (0.005 mg/L) the total mass of dissolved cobalt is:

= 0.005 mg/L x 351,572,000 L = 1.76 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum barium leaching rate per metric ton of ash is:

= 1.76 kg / 430,324 metric tons = 0.00409 g Barium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Cobalt

Parameter	SPLP	Porewater
Average Cobalt Concentration	0.006 mg/L	0.005 mg/L
Total Cobalt Mass	2.11 kg	1.76 kg

The concentrations of cobalt in porewater are approximately 17% lower compared to SPLP derived results (0.005 mg/L vs. 0.006 mg/L). The total cobalt mass in SPLP-derived estimates is 2.11 kg, is slightly higher than porewater estimates (1.76 kg). These results are similar to the Dallman Ash Pond SPLP and porewater analytical results. See discussion above.

6.8 Fluoride

The mass of chromium leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the "Shake Extraction" and porewater analytical results.

The soil samples were analyzed for dissolved fluoride using ASTM D3987 (SW-846 Method 9036) "Shake Extraction." This method represents a water-based leaching scenario designed to simulate the dissolution of soluble constituents when solid materials come into contact with natural freshwater under mild agitation.

Dallman Ash Pond – Shake Extraction Results – Fluoride

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
Shake Extraction	mg/L	0.13	0.19	0.2	J 0.37	J 0.08	0.11	J 0.06	0.14	0.06	0.37	0.16

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.16 mg/L) the total mass of fluoride is:

= 0.16 mg/L x 582,000,000 L = 93.1kg

Conservative estimate using the maximum concentration (0.37 mg/L) is:

= 0.37 mg/L x 582,000,000 L = 215 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum fluoride leaching rate per metric ton of ash is:

= 93.1 kg / 1,424,736 metric tons = 0.0653 g Fluoride/metric ton ash

= 215 kg / 1,424,736 metric tons = 0.151 g Fluoride/metric ton ash

Dallman Ash Pond - Porewater Results – Fluoride, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	0.32	0.21	0.33	0.43	0.21	0.43	0.3225
Dissolved	mg/L	7/19/24	J 0.06	J 0.09	0.12	J 0.09	0.06	0.12	0.09
Total	mg/L	7/19/24	J 0.07	J 0.1	0.12	0.12	0.07	0.12	0.103

Note:
J - Analyte detected below quantitation limits

Using average porewater data for fluoride, dissolved, the total mass is:

= 0.09 mg/L x 582,000,000 L = 52.4 kg

Conservative estimate using the maximum concentrations (0.12 mg/L) is:

= 0.12 mg/L x 582,000,000 L = 69.8 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum fluoride leaching rate per metric ton of ash is:

= 52.4 kg / 1,424,736 metric tons = 0.0368 g Fluoride/metric ton ash

= 69.8 kg / 1,424,736 metric tons = 0.0490 g Fluoride/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Fluoride

Parameter	SPLP	Porewater
Average Fluoride Concentration	0.16 mg/L	0.09 mg/L
Total Fluoride Mass	93.1 kg	52.4 kg

The concentrations of fluoride, dissolved, in the porewater sample are approximately 44% lower compared to shake extraction samples (0.16 mg/L vs. 0.09 mg/L). The total fluoride mass in shake extraction results is 93.1-215 kg, significantly higher than porewater derived estimates (52.4-69.8 kg).

The lower fluoride concentrations in Dallman Ash Pond's porewater compared to shake extraction results (0.16 mg/L) arise from methodological and geochemical factors. Shake extraction's aggressive agitation and acidic pH (typically pH ~4–5) dissolve weakly bound fluoride from mineral phases like fluorapatite [$Ca_5(PO_4)_3F$] or adsorb onto aluminum/iron oxides, amplifying release. In contrast, the alkaline porewater (pH 8–12) enhances fluoride adsorption onto positively charged Fe/Al-oxide surfaces and promotes precipitation as CaF_2 (fluorite), suppressing dissolved concentrations.

Fluoride mobility in groundwater is governed by three key characteristics: 1) mobility peaks in acidic conditions (pH < 6) where OH^- competition is minimal; 2) higher Ca^{2+} promotes CaF_2 precipitation, immobilizing fluoride; and 3) fluorite controls long-term release, with dissolution favored by low Ca^{2+}/high CO_3^{2-}.

In this setting, alkaline porewater and abundant calcium in ash limit fluoride mobility, confining plumes near source zones. The shake extraction overestimates mass (93–215 kg vs. porewater's 53–70 kg) because it disrupts natural equilibrium, dissolving pools not readily available under field conditions. Actual groundwater impacts would depend on downgradient pH and calcium levels, with advection dominating transport but attenuation likely within short distances due to adsorption/precipitation.

Lakeside Ash Pond – Shake Extraction Results – Fluoride

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	0.37	0.21	0.2	0.2	0.42	0.36	J 0.08	0.08	0.42	0.263

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Fluoride concentrations ranged from a trace amount of 0.08 mg/L to 0.42 mg/L. Using an average concentration (0.263 mg/L) the total mass of fluoride is:

= 0.263 mg/L x 351,572,000 L = 92.5 kg

Conservative estimate using the maximum concentration (0.42 mg/L) is:

= 0.42 mg/L x 351,572,000 L = 148 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the fluoride leaching rate per metric ton of ash is:

= 92.5 kg / 430,324 metric tons = 0.215 g Fluoride/metric ton ash

= 148 kg / 430,324 metric tons = 0.344 g Fluoride/metric ton ash

Lakeside Ash Pond - Porewater Results – Fluoride, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.5	1.07	1.19	1.32	0.5	1.32	1.02
Dissolved	mg/L	7/19/24	0.1	0.35	0.62	0.37	0.1	0.62	0.36
Total	mg/L	7/19/24	0.11	0.36	0.64	0.38	0.11	0.64	0.373

Using average porewater data for fluoride, dissolved, the total mass is:

= 0.36 mg/L x 351,572,000 L = 127 kg

Conservative estimate using the maximum concentration (0.62 mg/L) is:

= 0.62 mg/L x 351,572,000 L = 218 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum fluoride leaching rate per metric ton of ash is:

= 127 kg / 430,324 metric tons = 0.294 g Fluoride/metric ton ash

= 218 kg / 430,324 metric tons = 0.507 g Fluoride/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Fluoride

Parameter	SPLP	Porewater
Average Fluoride Concentration	0.263 mg/L	0.36 mg/L
Total Fluoride Mass	92.5 kg	127 kg

The concentrations of fluoride in the shake extraction sample are approximately 27% lower compared to porewater results (0.263 mg/L vs. 0.36 mg/L). The total fluoride mass in porewater is 127-218 kg, higher than shake extraction derived estimates (92.5-148 kg).

The higher fluoride concentrations in Lakeside Ash Pond's porewater compared to shake extraction results reflect pH-driven geochemical processes that suppress fluoride release in acidic leaching tests but enhance solubility in alkaline field conditions. Shake extraction's low-pH environment (typically pH 4–5) promotes fluoride adsorption onto positively charged mineral surfaces (e.g., Al-/Fe-oxides) and may trigger precipitation as CaF_2 if calcium is abundant in the leachant. Conversely, the pond's alkaline porewater (pH 8–12) generates negatively charged mineral surfaces that repel fluoride anions, while high bicarbonate concentrations compete for adsorption sites, collectively increasing dissolved fluoride.

Fluoride mobility is primarily controlled by three factors: 1) pH, which reverses adsorption behavior (immobile in acid, mobile in alkali); 2) calcium availability, where high Ca^{2+} induces fluorite precipitation; and 3) competing anions (e.g., HCO_3^-, SO_4^{2-}) that displace adsorbed fluoride.

In groundwater, fluoride plumes may extend farther in alkaline, low-calcium settings but will attenuate rapidly if downgradient conditions favor adsorption (pH < 6) or precipitation (high Ca^{2+}). The shake extraction underestimates mass (92.5–148 kg vs. porewater's 127–218 kg) because its artificial chemistry immobilizes fluoride through mechanisms not representative of in-situ alkalinity. This highlights the importance of porewater data for predicting actual contaminant flux, particularly where pH deviates from neutral.

6.9 Lead

The mass of lead leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Lead

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	0.0075	0.0075	0.0075
TCLP	mg/L	< 0.0075	0.0102	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	0.0075	0.0102	0.00784

The porewater volume of the surface impoundment is 582,000,000 L. Using the non-detect value (0.0075 mg/L) the total mass of lead is:

= 0.0075 mg/L x 582,000,000 L = 4.37 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum lead leaching rate per metric ton of ash is:

= 4.37 kg / 1,424,736 metric tons = 0.000307 g Lead/metric ton ash

Dallman Ash Pond - Porewater Results – Lead, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	1.04	0.199	1.46	0.266	0.199	1.46	0.741
Dissolved	mg/L	7/19/24	< 0.0075	< 0.0075	< 0.0075	< 0.0075	0.0075	0.0075	0.0075
Total	mg/L	7/19/24	0.0415	0.0135	J 0.0046	0.0262	0.0046	0.0415	0.0215

Note:
J - Analyte detected below quantitation limits

Using average porewater data for lead, dissolved, (0.0075) the total mass is:

= 0.0075 mg/L x 582,000,000 L = 4.37 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum lead leaching rate per metric ton of ash is:

= 4.37 kg / 1,424,736 metric tons = 0.00306 g Lead/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Lead

Parameter	SPLP	Porewater
Average Lead Concentration	0.0075 mg/L	0.0075 mg/L
Total Lead Mass	4.37 kg	4.37 kg

The concentrations of lead in the SPLP sample are the same calculated to the porewater results (0.0075 mg/L vs. 0.0075 mg/L). The total lead mass in porewater is 4.37 kg, is the same for the SPLP-derived estimates (4.37 kg).

The identical lead concentrations (0.0075 mg/L) and total mass (4.37 kg) in both SPLP and porewater samples from Dallman Ash Pond result from lead's unique geochemical behavior, which minimizes solubility across a wide range of conditions. In SPLP's acidic environment (pH 4.2), lead precipitates as insoluble anglesite ($PbSO_4$) due to sulfate in the leachant, while in the pond's alkaline porewater (pH 8–12), it forms stable cerussite ($PbCO_3$) or hydroxides. Additionally, lead adsorbs strongly to iron/aluminum oxides and clay minerals in ash regardless of pH, with distribution coefficients (K_d) typically >10^4 L/kg. These parallel immobilization mechanisms—precipitation and adsorption—suppress dissolution equally in both test methods.

Lead's mobility in groundwater is inherently low due to three key characteristics: 1) sulfate or carbonate availability triggers near-instantaneous mineral formation; 2) strong surface bonding persists across pH gradients; and 3) lead lacks soluble oxidized species, unlike chromium or arsenic.

Consequently, lead plumes rarely extend beyond local zones (<50 m) unless exposed to unusually acidic, low-sulfate, or low-carbonate groundwater. The SPLP-porewater agreement confirms that standardized leaching tests reliably predict lead's low environmental mobility in coal ash impoundments. However, long-term stability depends on maintaining geochemical conditions that favor precipitation—particularly avoiding acidic groundwater intrusion that could dissolve mineral phases.

Lakeside Ash Pond - SPLP/TCLP Results – Lead

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	0.0075	0.0075	0.0075
TCLP	mg/L	< 0.0075	< 0.0075	< 0.0075	0.0247	< 0.0075	< 0.0075	< 0.0075	0.0075	0.0247	0.00996

The porewater volume of the surface impoundment is 351,572,000 L. Lead concentrations were non-detect (<0.0075 mg/L) for all SPLP samples. Using detection limit value (0.0075 mg/L) the total mass of lead is:

= 0.0075 mg/L x 351,572,000 L = 2.64 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the lead leaching rate per metric ton of ash is:

= 2.64 kg / 430,324 metric tons = 0.00613 g Lead/metric ton ash

Lakeside Ash Pond - Porewater Results – Lead, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	B 0.655	B 3.4	0.0526	2.78	0.0526	3.4	1.72
Dissolved	mg/L	7/19/24	< 0.0075	< 0.0075	< 0.0075	< 0.0075	0.0075	0.0075	0.0075
Total	mg/L	7/19/24	< 0.0075	< 0.0075	0.16	J 0.0043	0.0043	0.16	0.0448

Note:
B - Analyte detected in associated Method Blank

The dissolved lead concentrations were reported as non-detect (<0.0075 mg/L) for all sampling events. Using the average porewater data for lead, dissolved (0.0075), the total mass is:

= 0.0075 mg/L x 351,572,000 L = 2.64 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum lead leaching rate per metric ton of ash is:

= 2.64 kg / 430,324 metric tons = 0.00613 g Lead/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Lead

Parameter	SPLP	Porewater
Average Lead Concentration	0.0075 mg/L	0.0075 mg/L
Total Lead Mass	2.64 kg	2.64 kg

Similar to the Dallman Ash Pond results, the concentrations of lead in the SPLP sample are similar to porewater results (0.0075 mg/L vs. 0.0075 mg/L). The total lead mass in porewater is 2.64 kg, the same as the SPLP-derived estimates (2.64 kg). See discussion above.

6.10 Lithium

The mass of lithium leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Lithium

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	0.0033	0.0112	0.0078	0.0065	0.0033	0.0034	0.0075	0.0059	0.0033	0.0112	0.00611
TCLP	mg/L	0.0112	0.0367	0.0228	0.0707	0.0131	0.01	0.0192	0.0374	0.01	0.0707	0.0276

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.00611 mg/L) the total mass of lithium is:

= 0.00611 mg/L x 582,000,000 L = 3.56 kg

Conservative estimate using the maximum concentration (0.0112 mg/L) is:

= 0.0112 mg/L x 582,000,000 L = 6.52 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum lithium leaching rate per metric ton of ash is:

= 3.56 kg / 1,424,736 metric tons = 0.00250 g Lithium/metric ton ash

= 6.52 kg / 1,424,736 metric tons = 0.00458 g Lithium/metric ton ash

Dallman Ash Pond - Porewater Results – Lithium, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	0.428	0.154	0.571	0.228	0.154	0.571	0.345
Dissolved	mg/L	7/19/24	0.207	0.0963	0.117	0.261	0.0963	0.261	0.170
Total	mg/L	7/19/24	0.273	0.11	0.11	0.298	0.11	0.298	0.198

Using average porewater data for lithium, dissolved, the total mass is:

= 0.17 mg/L x 582,000,000 L = 98.9 kg

Conservative estimate using the maximum concentrations (0.298 mg/L) is:

= 0.261 mg/L x 582,000,000 L = 152 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum lithium leaching rate per metric ton of ash is:

= 98.9 kg / 1,424,736 metric tons = 0.0694 g Lithium/metric ton ash

= 152 kg / 1,424,736 metric tons = 0.107 g Lithium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Lithium

Parameter	SPLP	Porewater
Average Lithium Concentration	0.00611 mg/L	0.170 mg/L
Total Lithium Mass	3.56 kg	98.9 kg

The concentrations of lithium in the SPLP sample are approximately 96% lower compared to porewater results (0.00611 mg/L vs. 0.170 mg/L). The total lithium mass in porewater is 98.9-152 kg, significantly higher than SPLP-derived estimates (3.56-6.52 kg).

The substantial difference in lithium concentrations with porewater results stems from lithium's unique geochemistry in coal ash environments and methodological limitations of leaching tests. The key drivers of the discrepancy are pH-dependent mobilization, mineral dissolution and absence of precipitation controls.

SPLP's acidic leachant (pH 4.2) promotes ion exchange of Li^+ onto clay minerals and metal oxides in ash, temporarily sequestering it. Alkaline porewater (pH 8–12) enhances Li^+ solubility due to repulsive electrostatic forces on negatively charged mineral surfaces, and competition with Na^+/K^+ (abundant in ash porewater) for sorption sites.

Lithium is often hosted in soluble glassy phases of fly ash. Alkaline conditions gradually dissolve these phases, releasing Li^+ into porewater, a process not replicated in short-duration SPLP tests.

Unlike metals (e.g., Pb, Ba), lithium lacks insoluble precipitates, allowing it to accumulate in solution under favorable pH.

Lithium's mobility in groundwater is exceptionally high due to: 1) minimal adsorption (low K_d ~1–10 L/kg); 2) no redox sensitivity or hydrolysis; and 3) high solubility across all pH ranges.

Once released, lithium behaves conservatively (similar to chloride), migrating with advective flow and forming extensive plumes. Its actual extent depends solely on hydraulic residence time and dilution, not chemical attenuation.

SPLP's acidic, low-ionic-strength chemistry fails to replicate the alkaline, ion-rich porewater that liberates lithium. The test thus grossly underestimates in-situ leaching potential. Porewater data is essential to identify lithium as a high-mobility contaminant in CCR impoundments.

Lakeside Ash Pond - SPLP/TCLP Results – Lithium

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.003	J 0.003	J 0.0015	J 0.003	< 0.003	J 0.0027	0.0033	0.0015	0.0033	0.00279
TCLP	mg/L	0.0036	0.0087	0.0053	0.0061	0.0034	0.0153	0.0183	0.0034	0.0183	0.00867

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Using an average concentration (0.00279 mg/L) the total mass of lithium is:

= 0.00279 mg/L x 351,572,000 L = 0.981 kg

Conservative estimate using the maximum concentration (0.0033 mg/L) is:

= 0.0033 mg/L x 351,572,000 L = 1.16 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum lithium leaching rate per metric ton of ash is:

= 0.981 kg / 430,324 metric tons = 0.00228 g Lithium/metric ton ash

= 1.16 kg / 430,324 metric tons = 0.00270 g Lithium/metric ton ash

Lakeside Ash Pond - Porewater Results – Lithium, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.172	0.621	0.0288	0.613	0.0288	0.621	0.359
Dissolved	mg/L	7/19/24	0.0408	0.0553	0.0071	0.144	0.0071	0.144	0.0618
Total	mg/L	7/19/24	0.0562	0.0899	0.0522	0.217	0.0522	0.217	0.104

Using average porewater data for lithium, dissolved, the total mass is:

= 0.0618 mg/L x 351,572,000 L = 21.7 kg

Conservative estimate using the maximum concentration (0.144 mg/L) is:

= 0.144 mg/L x 351,572,000 L = 50.6 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum lithium leaching rate per metric ton of ash is:

= 21.7 kg / 430,324 metric tons = 0.0505 g Barium/metric ton ash

= 50.6 kg / 430,324 metric tons = 0.118 g Barium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Lithium

Parameter	SPLP	Porewater
Average Lithium Concentration	0.00279 mg/L	0.0618 mg/L
Total Lithium Mass	0.981 kg	21.7 kg

Similar to the Dallman Ash Pond results, the concentrations of lithium in the SPLP sample are approximately 88% lower compared to porewater results (0.00279 mg/L vs. 0.0618 mg/L). The total lithium mass in porewater is 21.7-50.6 kg, significantly higher than SPLP-derived estimates (0.981-1.16 kg). See discussion above.

6.11 Mercury

The mass of mercury leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Mercury

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	0.0002	0.0002
TCLP	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.00029	< 0.0002	0.0002	0.00029	0.000211

The porewater volume of the surface impoundment is 582,000,000 L. Mercury concentrations were non-detect (<0.0002 mg/L) for all SPLP samples. Using detection limit value (0.0002 mg/L) the total mass of mercury is:

= 0.0002 mg/L x 582,000,000 L = 0.116 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the mercury leaching rate per metric ton of ash is:

= 0.116 kg / 1,424,736 metric tons = 0.0000814 g Mercury/metric ton ash

Dallman Ash Pond - Porewater Results – Mercury, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	0.00562	0.00046	H 0.00685	0.00717	0.00046	0.00717	0.005025
Dissolved	mg/L	7/19/24	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	0.0002	0.0002
Total	mg/L	7/19/24	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	0.0002	0.0002

Mercury concentrations were non-detect (<0.0002 mg/L) for all dissolved mercury porewater samples. Using the detection limit value (0.0002 mg/L) the total mass of mercury is:

= 0.0002 mg/L x 582,000,000 L = 0.116 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum mercury leaching rate per metric ton of ash is:

= 0.116 kg / 1,424,736 metric tons = 0.0000814 g Mercury/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Mercury

Parameter	SPLP	Porewater
Maximum Mercury Concentration	0.0002 mg/L	0.0002 mg/L
Total Mercury Mass	0.116 kg	0.116 kg

The concentrations of mercury for both the SPLP and porewater samples were non-detect (<0.0002 mg/L). The total mercury mass is estimated to be 0.116 kg.

The non-detect mercury results in both SPLP and porewater samples from Dallman Ash Pond reflect mercury's extreme immobility in coal ash environments. Three geochemical factors drive this behavior: 1) mercury readily volatilizes during coal combustion, leaving minimal soluble Hg^{2+} in ash; 2) residual mercury adsorbs irreversibly to carbon particles or sulfides in ash, forming insoluble complexes (e.g., HgS, Hg^0); and 3) submerged, reducing conditions in the pond favor precipitation as cinnabar (HgS) or amalgamation with other metals.

Mercury's mobility is inherently low due to high affinity for organic/sulfide phases (log K_d<5), volatility limiting aqueous residence, and reduction to insoluble Hg^0 under anoxia.

Consequently, mercury rarely migrates beyond ash deposits, posing negligible groundwater risk. The non-detects in both methods confirm that standardized leaching tests and porewater sampling align for mercury, unlike mobile constituents (e.g., Li, As), due to its near-total sequestration. Any long-term release would require oxidation or sulfide dissolution, which is unlikely in stable impoundments.

Lakeside Ash Pond - SPLP/TCLP Results – Mercury

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	0.0002	0.0002
TCLP	mg/L	< 0.0002	< 0.0002	0.00028	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	0.00028	0.000211

Note:
H - Holding times exceeded

The porewater volume of the surface impoundment is 351,572,000 L. Using an average concentration (0.0002 mg/L) the total mass of mercury is:

= 0.0002 mg/L x 351,572,000 L = 0.0703 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average mercury leaching rate per metric ton of ash is:

= 0.0703 kg / 430,324 metric tons = 0.000163 g Mercury/metric ton ash

Lakeside Ash Pond - Porewater Results – Mercury, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.00198	0.00926	0.0005	0.00559	0.0005	0.00926	0.004333
Dissolved	mg/L	7/19/24	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	0.0002	0.0002
Total	mg/L	7/19/24	< 0.0002	< 0.0002	0.0003	< 0.0002	0.0002	0.0003	0.000225

Mercury concentrations were non-detect (<0.0002 mg/L) for all dissolved mercury porewater samples. Using the detection limit value (0.0002 mg/L) the total mass of mercury is:

= 0.0002 mg/L x 351,572,000 L = 0.0703 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum mercury leaching rate per metric ton of ash is:

= 0.0703 kg / 430,324 metric tons = 0.000163 g Mercury/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Mercury

Parameter	SPLP	Porewater
Average Mercury Concentration	0.0002 mg/L	0.0002 mg/L
Total Mercury Mass	0.0703 kg	0.0703 kg

The concentrations of mercury in the SPLP sample are the same as the porewater results (0.0002 mg/L vs. 0.0002 mg/L). The total mercury mass in porewater and SPLP samples is 0.0703 kg. These results are similar to the Dallman Ash Pond SPLP and porewater analytical results. See discussion above.

6.12 Molybdenum

The mass of molybdenum leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Molybdenum

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	0.216	0.144	0.155	5.21	0.0138	0.0355	0.0495	0.134	0.0138	5.21	0.745
TCLP	mg/L	0.0402	0.0554	0.0571	1.27	0.0375	0.0415	0.105	0.179	0.0375	1.27	0.223

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.745 mg/L) the total mass of molybdenum is:

= 0.745 mg/L x 582,000,000 L = 434 kg

Conservative estimate using the maximum concentration (5.21 mg/L) is:

= 5.21 mg/L x 582,000,000 L = 3,030 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum molybdenum leaching rate per metric ton of ash is:

= 434 kg / 1,424,736 metric tons = 0.305 g Molybdenum/metric ton ash

= 3,030 kg / 1,424,736 metric tons = 2.13 g Molybdenum/metric ton ash

Dallman Ash Pond - Porewater Results – Molybdenum, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	15.7	8.04	2.61	2.3	2.3	15.7	7.16
Dissolved	mg/L	7/19/24	10.4	6.58	2.78	3.61	2.78	10.4	5.84
Total	mg/L	7/19/24	11.7	7.04	2.89	3.77	2.89	11.7	6.35

Using average porewater data for molybdenum, dissolved, the total mass is:

= 5.84 mg/L x 582,000,000 L = 3,399 kg

Conservative estimate using the maximum concentrations (10.4 mg/L) is:

= 5.84 mg/L x 582,000,000 L = 6,053 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum molybdenum leaching rate per metric ton of ash is:

= 3,399 kg / 1,424,736 metric tons = 2.39 g Molybdenum/metric ton ash

= 6,053 kg / 1,424,736 metric tons = 4.25 g Molybdenum/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Molybdenum

Parameter	SPLP	Porewater
Average Molybdenum Concentration	0.745 mg/L	5.84 mg/L
Total Molybdenum Mass	434 kg	3,399 kg

The concentrations of molybdenum in the SPLP sample are approximately 87% lower compared to porewater results (0.745 mg/L vs. 5.84 mg/L). The total molybdenum mass in porewater is 3,399-6,053 kg, significantly higher than SPLP-derived estimates (434-3,030 kg).

The stark difference in molybdenum concentrations stems from molybdenum's unique pH-dependent geochemistry and the contrasting conditions of the tests.

SPLP's acidic environment (pH 4.2) triggers molybdenum adsorption onto iron/aluminum oxides and clay minerals, where it forms strong inner-sphere complexes (e.g., ≡Fe–MoO_4^+). This immobilizes dissolved molybdenum. Conversely, the alkaline porewater (pH 8–12) in the ash pond generates negatively charged mineral surfaces that repel molybdate anions (MoO_4^{2-}), while high pH also dissolves Mo-bearing phases (e.g., powellite, $CaMoO_4$), enhancing solubility.

Molybdenum's mobility is exceptionally high in alkaline settings due to: 1) as an oxyanion, it resists adsorption at high pH; 2) few insoluble phases form in typical groundwater; and 3) Mo(VI) dominates across most Eh conditions.

Once released, molybdenum migrates conservatively with groundwater flow, forming extensive plumes with minimal attenuation—unlike cationic metals (e.g., Pb, Cd) that adsorb or precipitate.

SPLP's low-pH chemistry artificially immobilizes molybdenum through adsorption mechanisms irrelevant to the actual alkaline impoundment. Porewater data thus reveals the true leaching potential, confirming molybdenum as a high-priority contaminant in CCR sites. Its long-term mobility depends solely on pH stability; acidification could reduce flux, but alkaline plumes may migrate kilometers downgradient.

Lakeside Ash Pond - SPLP/TCLP Results – Molybdenum

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	0.0145	< 0.01	0.0111	0.0169	< 0.01	J 0.0076	0.0904	0.0076	0.0904	0.0229
TCLP	mg/L	< 0.01	0.0118	0.0307	< 0.01	< 0.01	J 0.0081	0.0375	0.0081	0.0375	0.0169

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Using an average concentration (0.0229 mg/L) the total mass of molybdenum is:

= 0.0229 mg/L x 351,572,000 L = 8.05 kg

Conservative estimate using the maximum concentration (0.0904 mg/L) is:

= 0.0904 mg/L x 351,572,000 L = 31.8 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum molybdenum leaching rate per metric ton of ash is:

= 8.05 kg / 430,324 metric tons = 0.0187 g Molybdenum/metric ton ash

= 31.8 kg / 430,324 metric tons = 0.0739 g Molybdenum/metric ton ash

Lakeside Ash Pond - Porewater Results – Molybdenum, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.161	0.218	0.0218	0.282	0.0218	0.282	0.171
Dissolved	mg/L	7/19/24	0.0903	0.0571	< 0.01	0.366	0.01	0.366	0.131
Total	mg/L	7/19/24	0.0942	0.0611	0.01	0.378	0.01	0.378	0.136

Using average porewater data for molybdenum, dissolved, the total mass is:

= 0.131 mg/L x 351,572,000 L = 46.1 kg

Conservative estimate using the maximum concentration (0.378 mg/L) is:

= 0.366 mg/L x 351,572,000 L = 129 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum molybdenum leaching rate per metric ton of ash is:

= 46.1 kg / 430,324 metric tons = 0.107 g Molybdenum/metric ton ash

= 129 kg / 430,324 metric tons = 0.299 g Molybdenum/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Molybdenum

Parameter	SPLP	Porewater
Average Molybdenum Concentration	0.0229 mg/L	0.131 mg/L
Total Molybdenum Mass	8.05 kg	46.1 kg

Similar to the Dallman Ash Pond results, the concentrations of molybdenum in the SPLP sample are approximately 83% lower compared to porewater results (0.0229 mg/L vs. 0.131 mg/L). The total molybdenum mass in porewater is 46.1-129 kg, significantly higher than SPLP-derived estimates (8.05-31.8 kg). See discussion above.

6.13 Selenium

The mass of selenium leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Selenium

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	J 0.03	J 0.021	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	J 0.021	0.021	0.05	0.0403
TCLP	mg/L	J 0.017	J 0.037	J 0.017	< 0.05	< 0.05	J 0.03	< 0.05	J 0.022	0.017	0.05	0.0341

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.0403 mg/L) the total mass of selenium is:

= 0.0403 mg/L x 582,000,000 L = 23.5 kg

Conservative estimate using the maximum concentration (0.05 mg/L) is:

= 0.05 mg/L x 582,000,000 L = 29.1 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum selenium leaching rate per metric ton of ash is:

= 23.5 kg / 1,424,736 metric tons = 0.0165 g Selenium/metric ton ash

= 29.1 kg / 1,424,736 metric tons = 0.0204 g Selenium/metric ton ash

Dallman Ash Pond - Porewater Results – Selenium, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	J 0.1	< 0.05	J 0.13	J 0.09	0.05	0.13	0.0925
Dissolved	mg/L	7/19/24	J 0.032	J 0.036	< 0.04	0.143	0.032	0.143	0.0628
Total	mg/L	7/19/24	J 0.036	J 0.024	J 0.028	0.158	0.024	0.158	0.0615

Note:
J - Analyte detected below quantitation limits

Using average porewater data for selenium, dissolved, the total mass is:

= 0.0628 mg/L x 582,000,000 L = 36.5 kg

Conservative estimate using the maximum concentrations (0.143 mg/L) is:

= 0.143 mg/L x 582,000,000 L = 83.2 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum selenium leaching rate per metric ton of ash is:

= 36.5 kg / 1,424,736 metric tons = 0.0257 g Selenium/metric ton ash

= 83.2 kg / 1,424,736 metric tons = 0.0584 g Selenium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Selenium

Parameter	SPLP	Porewater
Average Selenium Concentration	0.0403 mg/L	0.0628 mg/L
Total Selenium Mass	23.5 kg	36.5 kg

The concentrations of selenium in the SPLP sample are approximately 36% lower compared to porewater results (0.0403 mg/L vs. 0.0628 mg/L). The total selenium mass in porewater is 36.5-83.2 kg, significantly higher than SPLP-derived estimates (23.5-29.1 kg).

The higher selenium concentrations in Dallman Ash Pond's porewater compared to SPLP results with porewater mass estimates significantly exceeding SPLP-derived values result from selenium's redox-driven geochemistry and the contrasting conditions between field and lab environments. In SPLP's acidic (pH 4.2), oxygenated setting, selenium adsorbs strongly to iron oxides as immobile selenite [Se(IV)]. Conversely, the pond's alkaline (pH 8–12) reducing conditions stabilize mobile selenite [Se(IV)] while suppressing further reduction to insoluble elemental selenium [Se(0)]. This partial reduction traps selenium in its soluble Se(IV) form, enhancing porewater concentrations.

Selenium mobility hinges on three factors: 1) oxic conditions favor mobile selenate [Se(VI)]; reducing environments stabilize Se(IV) or Se(0); 2) alkaline conditions diminish adsorption of Se(IV) onto mineral surfaces; 3) sulfate and bicarbonate in porewater displace adsorbed selenium.

In groundwater, selenium's extent is determined by redox gradients. If reducing conditions persist, Se(IV) migrates moderately via advection but may attenuate where full reduction to Se(0) occurs. Oxidation during pond closure could convert Se(IV) to highly mobile Se(VI), forming extensive plumes. SPLP underestimates in-situ selenium because its acidic, oxic chemistry immobilizes selenium through adsorption irrelevant to the pond's actual reducing, alkaline environment. Porewater data thus better reflects current leaching risk, though long-term stability depends on maintaining reducing conditions to limit Se(VI) generation.

Lakeside Ash Pond - SPLP/TCLP Results – Selenium

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	J 0.019	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.019	0.05	0.0456
TCLP	mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	0.05	0.05

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Using an average concentration (0.0456 mg/L) the total mass of selenium is:

= 0.0456 mg/L x 351,572,000 L = 16.0 kg

Conservative estimate using the maximum concentration (0.05 mg/L) is:

= 0.05 mg/L x 351,572,000 L = 17.6 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum selenium leaching rate per metric ton of ash is:

= 16.0 kg / 430,324 metric tons = 0.0372 g Selenium/metric ton ash

= 17.6 kg / 430,324 metric tons = 0.0409 g Selenium/metric ton ash

Lakeside Ash Pond - Porewater Results – Selenium, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	0.0906	0.158	0.0066	0.205	0.0066	0.205	0.115
Dissolved	mg/L	7/19/24	< 0.04	J 0.022	0.0456	J 0.034	0.022	0.0456	0.0354
Total	mg/L	7/19/24	J 0.026	J 0.027	0.0428	J 0.028	0.026	0.0428	0.0310

Note:
J - Analyte detected below quantitation limits

Using average porewater data for selenium, dissolved, the total mass is:

= 0.0354 mg/L x 351,572,000 L = 12.4 kg

Conservative estimate using the maximum concentration (0.0456 mg/L) is:

= 0.0456 mg/L x 351,572,000 L = 16.0 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum selenium leaching rate per metric ton of ash is:

= 12.4 kg / 430,324 metric tons = 0.0289 g Selenium/metric ton ash

= 16.0 kg / 430,324 metric tons = 0.0373 g Selenium/metric ton ash

Comparison of the conservative porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Selenium

Parameter	SPLP	Porewater
Average Selenium Concentration	0.0456 mg/L	0.0354 mg/L
Total Selenium Mass	16.0 kg	12.4 kg

The concentrations of selenium, dissolved, in the porewater sample are approximately 22% lower compared to SPLP results (0.0354 mg/L vs. 0.0456 mg/L). The total selenium mass in porewater is 12.4-16.0 kg, is slightly lower than SPLP-derived estimates (16.0-17.6 kg).

Selenium is a redox-sensitive anion-forming element commonly associated with coal combustion residues and is known for its potential environmental mobility and ecological effects.

The SPLP result for the Lakeside Ash Pond was unexpectedly higher than porewater, suggesting the acidic SPLP leachate (pH ~4.2–4.8) may promote desorption or dissolution of selenium from ash surfaces that are otherwise more stable under neutral pH porewater conditions. The SPLP test environment is more oxidizing, favoring formation and release of selenate, the more mobile selenium species. The SPLP test may extract selenium that is not readily soluble under in-situ conditions but becomes mobilized under artificial laboratory conditions.

The selenium SPLP mass estimates for the Lakeside Ash Pond are only modestly greater, suggesting that field porewater concentrations reflect a reasonably representative long-term leaching scenario. SPLP overestimates mobility for selenium under certain conditions by not accounting for redox-controlled sorption or retention processes present in the field.

Given that the total selenium mass estimates differ by less than a factor of two, both datasets may be considered complementary for characterizing selenium mobility, with field conditions providing the more environmentally relevant perspective.

6.14 Thallium

The mass of thallium leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the SPLP and porewater analytical results.

Dallman Ash Pond - SPLP/TCLP Results – Thallium

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
SPLP	mg/L	< 0.002	J 0.001	< 0.002	J 0.0015	< 0.002	J 0.0017	J 0.0017	J 0.0013	0.001	0.002	0.00165
TCLP	mg/L	0.0229	0.0268	0.0257	J 0.0018	0.0252	0.0185	0.0225	0.0243	0.0018	0.0268	0.0210

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 582,000,000 L. Using an average concentration (0.165 mg/L) the total mass of thallium is:

= 0.00165 mg/L x 582,000,000 L = 0.960 kg

Conservative estimate using the maximum concentration (0.002 mg/L) is:

= 0.002 mg/L x 582,000,000 L = 1.16 kg

Based upon a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum thallium leaching rate per metric ton of ash is:

= 0.960kg / 1,424,736 metric tons = 0.000674 g Thallium/metric ton ash

= 1.16 kg / 1,424,736 metric tons = 0.000814 g Thallium/metric ton ash

Dallman Ash Pond - Porewater Results – Thallium, total and dissolved

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
Total	mg/L	4/29/24	J 0.13	J 0.049	0.274	J 0.066	0.049	0.274	0.130
Dissolved	mg/L	7/19/24	< 0.002	< 0.002	0.0021	J 0.0017	0.0017	0.0021	0.00195
Total	mg/L	7/19/24	0.0035	0.0044	0.003	0.0071	0.003	0.0071	0.0045

Note:
J - Analyte detected below quantitation limits

Using average porewater data for thallium, dissolved, the total mass is:

= 0.00195 mg/L x 582,000,000 L = 1.13 kg

Conservative estimate using the maximum concentrations (0.0021 mg/L) is:

= 0.0021 mg/L x 582,000,000 L = 1.22 kg

Using a total ash mass in the surface impoundment of 1,424,736,000 kg (1.42 million metric tons), the average and maximum thallium leaching rate per metric ton of ash is:

= 1.13 kg / 1,424,736 metric tons = 0.000797 g Thallium/metric ton ash

= 1.22 kg / 1,424,736 metric tons = 0.000858 g Thallium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Dallman Ash Pond - Results Comparison – Thallium

Parameter	SPLP	Porewater
Average Thallium Concentration	0.00165 mg/L	0.00195 mg/L
Total Thallium Mass	0.960 kg	1.13 kg

The concentrations of thallium in the SPLP sample are approximately 15% lower compared to porewater results (0.00165 mg/L vs. 0.00195 mg/L). The total thallium mass in porewater is 1.13-1.22 kg, somewhat higher than SPLP-derived estimates (0.960-1.16 kg).

The modestly higher thallium concentrations in Dallman Ash Pond's porewater compared to SPLP results arise from thallium's unique cationic geochemistry and subtle pH-dependent interactions. In SPLP's acidic environment (pH 4.2), thallium (Tl^+) competes with abundant H^+ ions for sorption sites on clay minerals and metal oxides, partially suppressing dissolution. Conversely, the alkaline porewater (pH 8–12) contains high concentrations of Na^+ and K^+ (common in coal ash leachates), which displace weakly adsorbed Tl^+ from exchange sites via ion competition, enhancing its solubility. This ion exchange effect, absent in SPLP's low-ionic-strength leachant, drives the small but consistent increase in porewater concentrations.

Thallium mobility in groundwater is governed by three key characteristics: 1) Tl^+ adsorbs moderately to clay/oxide surfaces (K_d ~10–100 L/kg), but is readily displaced by K^+/Na^+; 2) unlike metals like lead, thallium lacks highly insoluble phases; and 3) Tl(I) dominates in most conditions, though oxidation to Tl(III) can occur in Mn-rich settings.

These traits allow thallium to migrate farther than strongly sorbed metals (e.g., lead) but not as conservatively as anions (e.g., molybdenum). Plumes typically extend 100–500 meters downgradient, attenuated gradually by adsorption. The SPLP slightly under predicts in-situ mobility because it fails to replicate the ion-rich porewater that liberates Tl^+ via competition. While the mass difference is small (~15%), porewater data better reflects actual flux, particularly in alkaline CCR impoundments where cation competition is pronounced. Long-term risks depend on downgradient potassium/sodium levels and pH stability.

Lakeside Ash Pond - SPLP/TCLP Results – Thallium

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	J 0.0011	< 0.002	J 0.0019	0.0011	0.002	0.00186
TCLP	mg/L	0.0023	0.0041	0.0086	0.006	J 0.0015	0.0199	0.0021	0.0015	0.0199	0.00636

Note:
J - Analyte detected below quantitation limits

The porewater volume of the surface impoundment is 351,572,000 L. Using an average concentration (0.00186 mg/L) the total mass of thallium is:

= 0.00186 mg/L x 351,572,000 L = 0.654 kg

Conservative estimate using the maximum concentration (0.002 mg/L) is:

= 0.002 mg/L x 351,572,000 L = 0.703 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum thallium leaching rate per metric ton of ash is:

= 0.654 kg / 430,324 metric tons = 0.00152 g Thallium/metric ton ash

= 0.703 kg / 430,324 metric tons = 0.00163 g Thallium/metric ton ash

Lakeside Ash Pond - Porewater Results – Thallium, total and dissolved

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Total	mg/L	4/29/24	< 0.04	0.0433	J 0.0012	< 0.1	0.0012	0.1	0.0461
Dissolved	mg/L	7/19/24	< 0.002	< 0.002	< 0.002	0.0023	0.002	0.0023	0.00208
Total	mg/L	7/19/24	J 0.001	< 0.002	0.0055	0.0036	0.001	0.0055	0.00303

Note:
J - Analyte detected below quantitation limits

Using average porewater data for thallium, dissolved, the total mass is:

= 0.00208 mg/L x 351,572,000 L = 0.731 kg

Conservative estimate using the maximum concentration (0.0023 mg/L) is:

= 0.0023 mg/L x 351,572,000 L = 0.809 kg

Based upon a total ash mass in the surface impoundment of 430,324,128 kg (0.430 million metric tons), the average and maximum thallium leaching rate per metric ton of ash is:

= 0.731 kg / 430,324 metric tons = 0.00170 g Thallium/metric ton ash

= 0.809 kg / 430,324 metric tons = 0.00188 g Thallium/metric ton ash

Comparison of the porewater results with the SPLP estimate:

Lakeside Ash Pond - Results Comparison – Thallium

Parameter	SPLP	Porewater
Average Thallium Concentration	0.00186 mg/L	0.00208 mg/L
Total Thallium Mass	0.654 kg	0.731 kg

Similar to the Dallman Ash Pond, the concentrations of thallium in the Lakeside Ash Pond SPLP sample are approximately 11% lower compared to porewater results (0.00186 mg/L vs. 0.00208 mg/L). The total thallium mass in porewater is 0.731-0.809 kg, higher than SPLP-derived estimates (0.654-0.703 kg). See discussion above.

6.15 Radium 226 and 228 combined

The mass of radium 226 and radium 228 combined leachable from fly ash and bottom ash in a CCR surface impoundment was estimated from the solids and porewater analytical results.

The radium 226 and radium 228 CCR solids samples were analyzed using SW-846 Method 9315 and SW-846 Method 9320. Method 9315 is used to determine the concentrations of radium-226 (Ra-226) and radium-228 (Ra-228) in solid and aqueous environmental samples (e.g., soil, sediment, sludge, ash, and groundwater). Method 9320 is used to measure the concentration of radium-226 (Ra-226) in water samples (specifically drinking water, groundwater, and surface water).

The radium 226 and radium 228 CCR porewater samples were analyzed using EPA 903.0 and EPA 904.0, respectively.

Dallman Ash Pond - Results – Radium 226 and 228 combined

Method	Units	D1 19.5-21.5	D1 36.5-38.5	D2 19.5-21.5	D2 33.5-35.5	D3 4.5-6.5	D3 14.5-29.5	D4 19.5-21.5	D4 29.5-31.5	Min	Max	Avg
9315/9320	pCi/g	< 2	< 2	< 2	< 2	< 2		< 2	< 2	2	2	2

The total mass of combined Radium-226 and Radium-228 in the surface impoundment is based on the given concentration in the ash solids. Given a radium-226 and radium-228 combined concentration of 2 pCi/g (in ash), and a total ash mass of 1,424,736,000 kg (1.42 million metric tons), the total radioactivity (pCi) is:

Total activity = Concentration x Mass of Ash

Total activity = 2000 pCi/kg x 1,424,736,000 kg = 2,849,472,000,000 pCi

Converting activity to mass (using Ra-226 specific activity = 1 Ci/g = 3.7 x 10^{10} pCi/g):

Mass = 2,849,472,000,000 / 3.7 x 10^{10} pCi/g = 0.0770 kg

The total combined mass of Radium-226 and Radium-228 in the ash is approximately 0.0770 kg. This assumes the entire 2 pCi/g is due to Ra-226 or an average radionuclide with similar specific activity. If Ra-228, with a much shorter half-life, were dominant, the mass would be even smaller.

Dallman Ash Pond - Porewater Results – Radium 226 and 228 combined

Method	Units	Date	D1	D2	D3	D4	Min	Max	Avg
9320	pci/L	4/29/24	< 1.43	6.81	< 2.5	< 3.34	1.43	6.81	3.52

The total mass of combined radium 226 and radium 228 in porewater is calculated using the total activity for the average combined concentration and the total activity:

Total activity = Concentration x Volume

Total activity = 3.52 pCi/L x 582,000,000 L = 2,048,640,000 pCi

For the maximum concentration (6.81 pCi/L) the total activity is:

Total activity = 6.81 pCi/L x 582,000,000 L = 3,963,420,000 pCi

Converting activity to mass (using Ra-226 equivalence):

Mass = 2,048,640,000 pCi / 3.7 x 1010 pCi/g = 0.0000554 kg

And for the maximum concentration:

Mass = 3,963,420,000 pCi / 3.7 x 10^{10} pCi/g = 0.000107 kg

The total combined mass of Radium-226 and Radium-228 in the ash is approximately 0.0000554 to 0.000107 kg. This assumes the specific activity of Ra-226; if Ra-228 dominates (which has a much higher specific activity due to its shorter half-life), the actual mass would be smaller.

Dallman Ash Pond - Results Comparison – Radium 226 and 228 combined

Parameter	SPLP	Porewater
Average Radium 226 and 228 combined Concentration	2 pCi/g	3.52 pCi/L
Total Radium 226 and 228 combined Mass	0.0770 kg	0.0000554 kg

The concentrations of radium 226 and 228 combined, in the SPLP and porewater samples are given in different units (pCi/kg and pCi/L, respectively). The total radium 226 and 228 combined mass in porewater is 0.0000554 kg, is significantly less than the SPLP-derived estimate (0.0770 kg).

The observed discrepancy in the total mass of radium-226 (Ra-226) and radium-228 (Ra-228) between the coal combustion residual (CCR) solids (fly ash and bottom ash) and the associated porewater reflects important geochemical and risk-based differences. These differences are

influenced by the mobility of radium in CCR environments and have direct implications for human health risk assessments. Solids Analysis (SW-846 Methods 9315 & 9320) shows significantly higher total mass of Ra-226 and Ra-228. Porewater Analysis (EPA Methods 903.0 & 904.0) shows much lower total radium mass. Based upon the evaluation, approximately 99% of total radium mass is retained in the solid phase.

The likely causes of the discrepancy include factors which limit radium mobility such as sorption and incorporation into solid matrix. Radium strongly adsorbs to iron and manganese oxides, aluminosilicates, and other mineral phases present in fly ash and bottom ash. In some cases, radium may be co-precipitated or structurally incorporated into solid phases (e.g., barium sulfate or carbonate minerals).

The geochemical conditions of CCR porewater that may contribute to this discrepancy include high pH typical of CCR porewater (>8.5–11). High pH promotes low radium solubility due to formation of insoluble hydroxides or competition with Ca^{2+}, Ba^{2+}, and Sr^{2+} for exchange sites. Also, the redox environment and the absence of strong complexing agents also reduce Ra mobility.

Low partitioning to aqueous phase may also contribute to the discrepancy. The distribution coefficient (Kd) for radium in CCR environments is often high, meaning only a small fraction partitions to water.

Therefore, despite high solid-phase concentrations, porewater concentrations may remain low unless geochemical conditions shift.

Porewater concentrations are more representative of risk. Human exposure risk from CCR sites (particularly for groundwater users) is generally driven by dissolved-phase transport of contaminants—what can leach and migrate into drinking water supplies.

The solid-phase inventory is useful for understanding the long-term potential for release (i.e., source strength), but does not represent an immediate risk unless radium becomes mobilized.

The large mass of Ra-226 and Ra-228 in CCR solids demonstrates a substantial source term, but the very low porewater concentrations indicate limited current mobility under site conditions. From a risk assessment perspective, porewater concentrations are the more relevant and protective measure of human health risk, particularly for groundwater contamination pathways.

Lakeside Ash Pond – Results – Radium 226 and 228 combined

Method	Units	L1 14.5-21.5	L1 24.5-31.5	L3 19.5-21.5	L3 29.5-32.7	L4 10-15.3	L5 19.5-21.5	L5 32.5-35.2	Min	Max	Avg
SPLP	pCi/g	< 2	< 2	< 2	< 2	< 2	< 3.31	< 3.55	2	3.55	2.41

Given a radium-226 and radium-228 combined average concentration of 2.41 pCi/g (in ash), and a total ash mass of 430,324,128 kg (0.430 million metric tons), the total radioactivity (pCi) is:

Total activity = 2,410 pCi/kg x 430,324,128 kg = 1,037,081,148,000 pCi

For the maximum combined radium 226 and radium 228 concentration (3.55 pCi/kg), the total activity is:

Total activity = 3,550 pCi/kg x 430,324,128 kg = 1,527,650,654,000 pCi

The mass calculation assumes an average effective specific activity for radium-226:

Mass = 1,037,081,148,000 pCi / 3.7 x 10^{10} pCi/g = 0.0280 kg

And for the maximum combined radium-226 and radium-228 concentration (3.55 pCi/kg), the mass is:

Mass = 1,527,650,654,000 pCi / 3.7 x 10^{10} pCi/g = 0.0413 kg

The total combined mass of Radium-226 and Radium-228 in the ash is approximately 0.0280 kg to 0.0413 kg. This assumes the entire combined mass of radium-226 and radium-228 is due to Ra-226 or an average radionuclide with similar specific activity. If Ra-228, with a much shorter half-life, were dominant, the mass would be even smaller.

Lakeside Ash Pond - Porewater Results – Radium 226 and 228 combined

Method	Units	Date	L1	L3	L4	L5	Min	Max	Avg
Porewater	pci/L	4/29/24	< 1.25	2.5	1.05	17.7	1.05	17.7	5.64

The total mass of combined radium 226 and radium 228 in porewater is calculated using the total activity for the average combined concentration and the total activity:

Total activity = 5.64 pCi/L x 351,572,000 L = 1,982,866,080 pCi

For the maximum combined radium 226 and radium 228 concentration (17.7 pCi/L), the total activity is:

Total activity = 17.7 pCi/L x 351,572,000 L = 6,222,824,400 pCi

Since the activity is combined, the combined mass is calculated assuming an average effective specific activity for radium-226:

Mass = 1,982,866,080 pCi / 3.7 x 1010 pCi/g = 0.0000536 kg

And for the maximum combined radium-226 and radium-228 concentration, the mass is:

Mass = 6,222,824,400 pCi / 3.7 x 10^{10} pCi/g = 0.000168 kg

The total combined mass of Radium-226 and Radium-228 in the ash is approximately 0.0000536 kg to 0.000168 kg. This assumes the specific activity of Ra-226; if Ra-228 dominates (which has a much higher specific activity due to its shorter half-life), the actual mass would be smaller.

Lakeside Ash Pond - Results Comparison – Radium 226 and 228 combined

Parameter	SPLP	Porewater
Average Radium 226 and 228 combined Concentration	2.41 pCi/kg	5.64 pCi/L
Total Radium 226 and 228 combined Mass	0.0280 kg	0.0000536 kg

The concentrations of radium 226 and 228 combined, in the solids and porewater analytical results are given in different units (pCi/kg and pCi/L, respectively) and cannot be directly compared. The total radium 226 and 228 combined mass in porewater is 0.0000536-0.000168 kg, and significantly less than that calculated for the solids derived estimate (0.0280-0.0413 kg). See discussion above.

7. MASS OF ARSENIC AND COBALT IN THE BASAL SAND PLUME

The quantity of total arsenic and total cobalt in the basal sand plume is calculated as the dissolved mass within the specified plume area where concentrations exceed the groundwater protection standard (total arsenic = 0.0239 mg/L and total cobalt = 0.006 mg/L). This uses the following formula for dissolved contaminants in groundwater:

Mass (M) = Plume area (A) x Aquifer thickness (b) x Total Porosity (n) x Average plume concentration (C)

Given:

Plume area (A) = area of the plume where concentrations exceed the groundwater protection standard; 8 consecutive quarters of groundwater analytical data was collated for the parameters total arsenic and total cobalt (see Table 2 and Table 3, respectively). This data was used to calculate the averages for total arsenic and total cobalt concentrations. The average values were

used to generate plume maps for total arsenic and total cobalt (See Figure 3 and Figure 4, respectively). Using the design and geological data, the areas of each plume were determined;

- for total arsenic > 0.0239 mg/L = 241,780 ft² = 22,462 m² (see Figure 3);
- for total cobalt > 0.006 mg/L = 192,776 ft² = 17,909 m² (see Figure 4).

Aquifer thickness (b) = 4.3 feet or 1.31 m; (average based on basal sand range of 0–16.9 feet from site data; an average values is assumed as a conservative estimate for the plume-bearing zone, as the unit is not consistent but is the primary migration pathway).

Total Porosity (n) = 0.437; for the basal sand, the total porosity is based on the saturation water content of sand (0.437)(Rawls et al., 1982).

Average plume concentration (C) = Average concentration of contaminant of concern within the plume area;

- for total arsenic = 0.136 mg/L = 0.136 g/m³ (see Figure 3); Average of values at wells AP8 (0.0426 mg/L) and well RW3 (0.229 mg/L) within arsenic plume area
- for total cobalt = 0.00801 mg/L = 0.00801 g/m³ (see Figure 4); Average of values at wells AP2A (0.00976 mg/L) and AP3 (0.00626 mg/L) within cobalt plume area.

Total Arsenic Mass

Pore volume = A × b × n = 22,462 m² × 1.31 m × 0.437 = 12,859 m³

Total mass = 12,859 m³ × 0.136 g/m³ = 1746 g = 1.746 kg

For the excess mass above the standard (using C_{excess} = 0.136 – 0.0239 = 0.112 mg/L = 0.112 g/m³):

Excess mass = 12,859 m³ × 0.112 g/m³ = 1,439 g = 1.439 kg

Using the average concentration, the approximate mass of total arsenic in the plume area that exceeds the groundwater protection standard (0.0239 mg/L) is 1.439 kg.

Total Cobalt Mass

Pore volume = A × b × n = 17,909 m² × 1.31 m × 0.437 = 10,253 m³

Total mass = 10,253 m³ × 0.00801 g/m³ = 82 g = 0.082 kg

For the excess mass above the standard (using C_{excess} = 0.00801 - 0.006 = 0.002 mg/L = 0.002 g/m³):

Excess mass = 17,909 m³ × 0.002 g/m³ = 21 g = 0.021 kg.

Using the average concentration, the approximate mass of total cobalt in the plume area that exceeds the groundwater protection standard (0.006 mg/L) is 0.021 kg.

8. CONCLUSIONS

Based upon an evaluation of the analytical data from the review period (first quarter 2022 through fourth quarter 2024) there were exceedances of the groundwater protection standards for arsenic at wells AW-1, RW-3, AP-7, and AP-8 and cobalt at wells AP-2A and AP-3. While the source of the arsenic and cobalt exceedances at wells adjacent to the CCR surface impoundments is likely due to leaching of the CCR, the spatial distribution of the impacts at wells north and west of Sugar Creek indicates the source is more likely attributed to other natural and/or anthropogenic sources.

The nature and extent of arsenic exceedances along the north side of the Dallman Ash Pond at wells AW-1, RW-3, AP-7, and AP-8 have been characterized. Advection appears to be the primary transport mechanism due to sustained groundwater flow, while diffusion is negligible because large, dilute plumes generate weak concentration gradients. At well AW-1, the limits of arsenic exceedances are delineated by the arsenic concentrations at G120, P06D, and R111. The arsenic exceedances at RW-3 are delineated by well AP-6. At well AP-7, the arsenic exceedances appear to be the result of natural spatial variability or influences from other sources north of the impoundments. Bedrock contours and potentiometric surface data indicate groundwater converges on Sugar Creek with groundwater flow to the south, north of Sugar Creek and groundwater flow to the north, south of Sugar Creek. At well AP-8 the nature and extent of the arsenic exceedances are defined by well T-4. The wells (i.e., T-4, T-5, T-6, and AP-7) utilized in the evaluation of arsenic are all north of Sugar Creek, Wells AP-6 and RW-3 are located south of Sugar Creek.

Along the west side of the Dallman Ash Pond, the nature and extent of the cobalt exceedances at AP-2A and AP-3 are characterized by the cobalt concentrations at wells located west of Sugar Creek (i.e., AP-11, AP-12, and T-2). The cobalt exceedances at wells AP-2A and AP-3 may be related to the CCR surface impoundments; however, the concentrations of cobalt at wells AP-11, AP-12, and T-2 appears to be related to natural spatial variability or influences from other sources west of the impoundments. Bedrock contours and potentiometric surface data indicate groundwater converges on Sugar Creek with groundwater flow to the east, west of Sugar Creek and groundwater flow to the west, east of Sugar Creek.

Evaluation of porewater and synthetic precipitation leaching procedure (SPLP) analytical results provides important insight into the environmental mobility of arsenic and cobalt in the ash ponds. In the Dallman Ash Pond, the average arsenic concentration in porewater (0.124 mg/L) is approximately 84% higher than the SPLP concentration (0.0194 mg/L). Correspondingly, the estimated total arsenic mass in porewater (72.2–99.5 kg) is substantially greater than SPLP-derived estimates (11.3–27.4 kg). In the Lakeside Ash Pond, the average arsenic concentration in porewater (0.137 mg/L) is approximately 87% higher than in SPLP samples (0.0172 mg/L), and the estimated arsenic mass in porewater (48.2–159 kg) similarly exceeds SPLP-derived estimates (6.05–11.6 kg). These findings suggest that site-specific porewater conditions—characterized by elevated pH and potentially reducing environments—enhance arsenic solubility and mobility, conditions not replicated under SPLP's acidic leaching environment. As a result, SPLP may under predict the mass and leachability of arsenic from CCR under field-relevant conditions.

In the Dallman Ash Pond, the average porewater cobalt concentrations (0.00425 mg/L) are about 29% lower than SPLP results (0.006 mg/L), yielding comparable mass estimates (2.47–3.61 kg for porewater vs. 3.49 kg SPLP-derived). In the Lakeside Ash Pond, porewater cobalt concentrations (0.0086 mg/L) are approximately 30% higher than SPLP concentrations (0.006 mg/L), with estimated mass in porewater (3.02–6.82 kg) slightly exceeding SPLP-derived estimates (2.11 kg). The modest but notable differences between porewater and SPLP cobalt data highlight some influence of site geochemical conditions, though cobalt appears to be less sensitive to pH-driven mobilization than arsenic.

Taken together, the significantly higher arsenic concentrations and mass estimates in CCR porewater compared to SPLP data indicate that arsenic is mobilized under field conditions present within the ash ponds and that these conditions are not well captured by laboratory leaching tests. This supports the conclusion that arsenic observed in groundwater at wells adjacent to the impoundments is likely at least partially attributable to leaching from CCR materials.

In contrast, cobalt exhibits smaller differences between porewater and SPLP results, suggesting that while leaching may occur, it may be less dependent on the site-specific geochemical conditions. Nonetheless, given the presence of statistically significant exceedances near the impoundments and measurable cobalt mass in porewater, CCR leaching remains a plausible source for observed cobalt concentrations in groundwater near the ash ponds.

Accordingly, the combined assessment of groundwater exceedances, hydrogeologic conditions, and constituent leaching behavior supports the conclusion that leachate originating from CCR units is a likely contributor to the observed arsenic and cobalt concentrations in certain downgradient wells. The quantities of total arsenic (~1.44 kg excess) and total cobalt (~0.021 kg excess) released from the Dallman and Lakeside Ash Ponds into the basal sand are small relative to leachable masses in the impoundments (~63-130 kg arsenic; ~4.7 kg cobalt), reflecting effective containment by low-permeability cohesive deposits and semi-confined conditions.

Releases are limited to localized plumes in the basal sand, driven by downward gradients but attenuated by adsorption and low hydraulic conductivities. No releases to the shallow sand occur due to its discontinuity, vertical separation, and lack of pathways. Overall, the site hydrogeology minimizes off-site migration, with radium and other constituents similarly retained; ongoing monitoring and closure activities (e.g., dewatering) will further reduce risks by eliminating hydraulic heads. Continued assessment monitoring and corrective measures evaluation under 40 CFR § 257.95 are warranted to ensure protection of groundwater resources and inform closure strategy implementation.

The assessment of corrective measures per 40 CFR 257.95(g)(1) for the Appendix IV constituents identified as exhibiting Statistically Significant Levels (SSLs) identified in the February 13, 2025 Groundwater Protection Standards Report (GWPS Report) has been completed. The nature and extent of the Appendix IV exceedances are not expected to affect the proposed closure of the CCR surface impoundments (i.e., the selected remedy).

This report has provided a discussion of relevant site conditions necessary to characterize the nature and extent of the Appendix IV exceedances and any conditions that may affect the proposed closure of the CCR surface impoundments. Characterization of the release includes:

- A groundwater monitoring well network that adequately characterizes groundwater flow and the Appendix IV exceedances; and,
- A summary of analytical results for Appendix IV constituents and comparison to the established groundwater protection standards.

Assessment monitoring shall continue as specified in the Groundwater Monitoring Program.

9. ENGINEERING CERTIFICATION

The owner or operator of a coal combustion residual unit must obtain a certification from a qualified professional engineer that the Nature and Extent Report has been completed pursuant to 40 C.F.R. § 257.95(g)(3)(ii) and Paragraphs 268 and 270 of the Consent Agreement and Final Order.

The engineering certification for the groundwater monitoring system follows.

QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION

I, Karl W. Finke, a qualified professional engineer in good standing in the State of Illinois, certify that the information in this report is presented pursuant to 40 CFR 257.95(g)(3)(ii) and Paragraphs 268 and 270 of the Consent Agreement and Final Order, is accurate as of the date of my signature below. The content of this report is not to be used for other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Signature: _____



Illinois P.E. No: 062-068571

Date: September 22, 2025

License Expiration: November 30, 2025

TABLES

Table 1: Groundwater Analytical Summary Data
Table 2: Total Arsenic Summary Table
Table 3: Total Cobalt Summary Table

TABLE 1:
Groundwater Analytical Summary Data

Table 1
City Water, Light and Power
CWLP CCR Surface Impoundments
2022 - 2024 Summary of Exceedances

Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
Appendix III																		
AP-1	Boron, total	mg/L	0.14973			**0.14973**	22.3	23.1	22.1	21.4	23.2	21.2	22.5	21.7	23.5	22.7	22.9	23.6
AP-2	Boron, total	mg/L	0.14973			**0.14973**	4.68	4.25	4.32	4.08	3.94	3.7	3.73	3.23	3.38	3.43	3.1	3.52
AP-3	Boron, total	mg/L	0.14973			**0.14973**	15.8	14.7	14.8	14.6	14.5	14.3	14	15.2	14.8	14.5	14.6	14.9
AP-6	Boron, total	mg/L	0.14973			**0.14973**	0.247	0.275	0.0716	0.166	0.13	0.174	0.0753	0.214	0.171	0.238	0.25	0.248
AP-7	Boron, total	mg/L	0.14973			**0.14973**	0.381	0.339	0.204	0.26	0.18	0.391	0.141	0.331	0.173	0.0978	0.244	0.332
AP-10	Boron, total	mg/L	0.14973			**0.14973**		3.58	3.52	3.35	3.32	3.76	3.81	3.6	3.71	3.92	3.9	3.95
AP-11	Boron, total	mg/L	0.14973			**0.14973**	0.276	0.271	0.0533	0.261	0.282	0.241	0.24	0.256	0.232	0.0555	0.211	0.261
AP-13	Boron, total	mg/L	0.14973			**0.14973**	0.0403	0.0375	0.268	0.044	0.0485	0.0328	0.0235	0.0386	0.0356	0.0343	0.0357	< 0.02
AP-14	Boron, total	mg/L	0.14973			**0.14973**	23.1	23.3	21.8	21.3	21.3	23	22.6	22.1	21.6	22.3	20	21
AW-1	Boron, total	mg/L	0.14973			**0.14973**		8.24	7.78			8.39		8.66	8.24	9.44	9.19	8.91
RW-3	Boron, total	mg/L	0.14973			**0.14973**	0.179	0.196	0.177	0.192	0.175	0.186	0.0595	0.117	0.116	0.154	0.122	0.137
R111	Boron, total	mg/L	0.14973			**0.14973**	4.19		0.104			4.64	3.89	0.102	< 0.02	0.901	3.5	4.19
G120	Boron, total	mg/L	0.14973			**0.14973**		6.19	5.85			6.92		7.15	7.12	7.43	7.71	7.5
T-1	Boron, total	mg/L	0.14973			**0.14973**										0.227	0.141	0.15
T-2	Boron, total	mg/L	0.14973			**0.14973**										0.189	0.0718	0.0507
T-6	Boron, total	mg/L	0.14973			**0.14973**										0.201	0.214	0.21
AP-1	Calcium, total	mg/L	181.6			**181.6**	245	243	239	242	230	242	285	229	250	248	244	237
AP-2	Calcium, total	mg/L	181.6			**181.6**	265	236	241	248	217	210	244	204	210	194	206	222
AP-3	Calcium, total	mg/L	181.6			**181.6**	150	152	157	160	161	168	189	181	177	176	175	185
AP-11	Calcium, total	mg/L	181.6			**181.6**	127	149	102	141	169	145	118	134	150	217	126	124
AP-12	Calcium, total	mg/L	181.6			**181.6**	201	287	266	260	265	269	271	268	228	240	258	203
AP-14	Calcium, total	mg/L	181.6			**181.6**	225	215	217	236	209	233	235	278	263	245	237	253
AW-1	Calcium, total	mg/L	181.6			**181.6**		195				191		197	203	200	186	193
G120	Calcium, total	mg/L	181.6			**181.6**		263				274		257	265	259	240	263
T-1	Calcium, total	mg/L	181.6			**181.6**										105	183	172
T-2	Calcium, total	mg/L	181.6			**181.6**										150	218	211
AP-1	Chloride, total	mg/L	12.3			**12.3**	55	59	44	61	58	60	36	53	54	29	59	52.1
AP-2	Chloride, total	mg/L	12.3			**12.3**	36	35	34	34	36	37	54	40	39	36	39	35.1
AP-3	Chloride, total	mg/L	12.3			**12.3**	42	42	47	55	60	59	51	57	54	53	55.9	59.5
AP-4	Chloride, total	mg/L	12.3			**12.3**	12	16	13	14	14	14	13	14	13	13	15	12.3
AP-6	Chloride, total	mg/L	12.3			**12.3**	35	38	25	31	27	31	28	33	30	33	37	34.5
AP-7	Chloride, total	mg/L	12.3			**12.3**	64	66	36	58	45	70	39	60	42	43	50	62.1
AP-8	Chloride, total	mg/L	12.3			**12.3**	26	28	27	26	26	26	25	25	24	26	35	23.2
AP-9	Chloride, total	mg/L	12.3			**12.3**	24	64	30	27	36	60	28	26	25	39	29	23.6
AP-10	Chloride, total	mg/L	12.3			**12.3**		29	28	28	27	28	28	27	27	27	30	25.7
AP-11	Chloride, total	mg/L	12.3			**12.3**	83	119	29	105	140	123	79	90	122	429	90	91
AP-12	Chloride, total	mg/L	12.3			**12.3**	113	162	143	147	140	142	139	124	115	121	136	120
AP-13	Chloride, total	mg/L	12.3			**12.3**	35	27	103	26	29	26	26	27	27	26	27	25.8
AP-14	Chloride, total	mg/L	12.3			**12.3**	49	52	59	65	59	71	73	89	82	83	92	94
AW-1	Chloride, total	mg/L	12.3			**12.3**		40				41		40	40	40	41	37.3
RW-3	Chloride, total	mg/L	12.3			**12.3**	29	31	31	30	29	32	28	31	27	28	29	25.1
R111	Chloride, total	mg/L	12.3			**12.3**	202		25			219		< 4	6	22	185	202
G120	Chloride, total	mg/L	12.3			**12.3**		40				40		40	39	39	41	37.4
T-1	Chloride, total	mg/L	12.3			**12.3**										49	259	233
T-2	Chloride, total	mg/L	12.3			**12.3**										173	447	509

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

Table 1
City Water, Light and Power
CWLP CCR Surface Impoundments
2022 - 2024 Summary of Exceedances

Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
T-6	Chloride, total	mg/L	12.3			**12.3**										21	24	19.4
AP-1	pH	s.u.	6.7 - 7.87			**7.87**	6.57	6.58	6.65	6.68	6.6	6.52	6.51	6.71	6.51	6.31	6.7	6.54
AP-2	pH	s.u.	6.7 - 7.87			**7.87**	6.43	6.43	6.45	6.52	6.46	6.44	6.4	6.57	6.41	6.21	6.58	6.41
AP-3	pH	s.u.	6.7 - 7.87			**7.87**	6.6	6.58	6.6	6.65	6.58	6.64	6.53	6.69	6.55	6.36	6.2	6.48
AP-9	pH	s.u.	6.7 - 7.87			**7.87**	7.47	6.63	6.92	6.83	6.85	6.69	6.88	6.81	6.82	6.75	6.89	6.8
AP-10	pH	s.u.	6.7 - 7.87			**7.87**		6.69	6.7	6.76	6.58	6.68	6.57	6.82	6.65	6.54	6.53	6.73
AP-11	pH	s.u.	6.7 - 7.87			**7.87**	6.57	6.51	6.61	6.64	6.42	6.45	6.64	6.6	6.45	6.75	6.44	6.66
AP-12	pH	s.u.	6.7 - 7.87			**7.87**	6.53	6.44	6.56	6.6	6.47	6.43	6.57	6.62	6.53	6.52	6.43	6.59
AP-13	pH	s.u.	6.7 - 7.87			**7.87**	6.71	6.59	6.76	6.79	6.62	6.54	6.66	6.74	6.73	6.7	6.59	6.67
AP-14	pH	s.u.	6.7 - 7.87			**7.87**	6.93	6.95	6.94	7.05	6.69	6.97	6.93	7.06	6.93	6.95	6.76	6.93
AW-1	pH	s.u.	6.7 - 7.87			**7.87**	6.67	6.66	6.64	6.83	6.54	6.47	6.51	6.54	6.55	6.58	6.58	6.56
RW-3	pH	s.u.	6.7 - 7.87			**7.87**	7.27	7.2	7.11	7.21	6.15	7.06	7.13	7.31	7.1	6.7	7.23	7.13
R111	pH	s.u.	6.7 - 7.87			**7.87**	5.96	6.86	6.92	6.81	7.69	6.97	6.91	6.42	6.14	6.01	6.84	5.96
G120	pH	s.u.	6.7 - 7.87			**7.87**	6.77	6.73	6.7	6.7	6.62	6.54	6.79	6.78	6.47	6.65	6.81	6.55
T-1	pH	s.u.	6.7 - 7.87			**7.87**										6.57	6.51	6.57
T-2	pH	s.u.	6.7 - 7.87			**7.87**										6.51	6.37	6.54
T-4	pH	s.u.	6.7 - 7.87			**7.87**										6.31	6.68	6.65
T-5	pH	s.u.	6.7 - 7.87			**7.87**										6.62	6.86	6.82
T-6	pH	s.u.	6.7 - 7.87			**7.87**										6.56	6.77	6.97
AP-1	Sulfate, total	mg/L	55.5			**55.5**	732	791	753	777	56.8	768	443	740	790	805	836	849
AP-2	Sulfate, total	mg/L	55.5			**55.5**	583	532	545	643	485	462	795	380	393	411	417	440
AP-3	Sulfate, total	mg/L	55.5			**55.5**	410	408	384	444	461	483	467	495	512	493	554	558
AP-5	Sulfate, total	mg/L	55.5			**55.5**	57	35	66	36	37	44	43	45	50	43	63	59.2
AP-9	Sulfate, total	mg/L	55.5			**55.5**	23	57	27	28	38	64	24	23	23	22	25	17.7
AP-10	Sulfate, total	mg/L	55.5			**55.5**		86	87	96	96	100	100	91	96	100	108	89.4
AP-11	Sulfate, total	mg/L	55.5			**55.5**	67	88	120	89	105	89	65	81	89	134	77	63.4
AP-12	Sulfate, total	mg/L	55.5			**55.5**	402	678	607	691	641	659	632	563	460	499	612	457
AP-13	Sulfate, total	mg/L	55.5			**55.5**	134	135	64	142	133	146	139	151	118	140	135	121
AP-14	Sulfate, total	mg/L	55.5			**55.5**	670	681	639	736	699	707	714	806	679	740	821	909
AW-1	Sulfate, total	mg/L	55.5			**55.5**		344				399		384	369	401	406	388
G120	Sulfate, total	mg/L	55.5			**55.5**		464				500		555	503	535	534	565
T-1	Sulfate, total	mg/L	55.5			**55.5**										36	236	224
T-2	Sulfate, total	mg/L	55.5			**55.5**										135	181	142
T-4	Sulfate, total	mg/L	55.5			**55.5**										87	100	104
AP-1	Total Dissolved Solids	mg/L	609.21			**609.21**	1490	1550	1550	1540	7.4	1540	1190	1360	1400	1490	1530	1640
AP-2	Total Dissolved Solids	mg/L	609.21			**609.21**	1310	1270	1360	1310	1180	1100	1600	1020	1020	1040	1110	1160
AP-3	Total Dissolved Solids	mg/L	609.21			**609.21**	882	942	1030	920	1040	984	990	1080	935	1040	1170	1160
AP-9	Total Dissolved Solids	mg/L	609.21			**609.21**	224	618	565	595	586	638	515	524	530	535	558	740
AP-10	Total Dissolved Solids	mg/L	609.21			**609.21**		752	755	730	778	756	725	732	745	720	796	790
AP-11	Total Dissolved Solids	mg/L	609.21			**609.21**	606	778	550	625	820	726	670	640	665	1780	596	686
AP-12	Total Dissolved Solids	mg/L	609.21			**609.21**	998	1600	1540	1440	1440	1580	1640	1320	1290	1620	1670	1300
AP-13	Total Dissolved Solids	mg/L	609.21			**609.21**	486	530	690	525	495	538	530	465	500	910	560	655
AP-14	Total Dissolved Solids	mg/L	609.21			**609.21**	1240	1340	1390	1380	1280	1330	1480	1440	1510	1480	1610	1840
AW-1	Total Dissolved Solids	mg/L	609.21			**609.21**	1080	1060	1090	1100	1150			1220	1120	1010	1190	1100
RW-3	Total Dissolved Solids	mg/L	609.21			**609.21**	1030	428	428	425	420		290	340	335	345	344	470
R111	Total Dissolved Solids	mg/L	609.21			**609.21**	875	135	805	118	110			68	78	525	832	875

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

Table 1
City Water, Light and Power
CWLP CCR Surface Impoundments
2022 - 2024 Summary of Exceedances

Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
G120	Total Dissolved Solids	mg/L	609.21			**609.21**	1360	1440	1420	1400	1450			1390	1320	1320	1450	1430
T-1	Total Dissolved Solids	mg/L	609.21			**609.21**										700	1020	1060
T-2	Total Dissolved Solids	mg/L	609.21			**609.21**										1060	1430	1580
T-4	Total Dissolved Solids	mg/L	609.21			**609.21**										255	382	695
Appendix IV																		
AP-4	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	0.0306	< 0.025	0.0309	0.027	< 0.025	0.025	0.0239	0.0225	0.0375	0.0229	0.0207	0.0246
AP-7	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	0.0468	0.0376	< 0.025	< 0.025	0.0462	0.0412	0.075	0.0555	0.0395	0.0438	0.0947
AP-8	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	0.0319	0.0352	0.0377	0.034	0.0336	0.0348	0.0513	0.0395	0.0426	0.0461	0.0414	0.0386
AW-1	Arsenic, total	mg/L	0.0239	0.01		**0.0239**		0.148	0.192			0.152		0.208	0.16	0.153	0.129	0.168
RW-3	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	0.178	0.109	0.11	0.142	0.169	0.185	0.0831	0.74	0.306	0.188	0.107	0.214
AW-1	Barium, total	mg/L	0.51918	2		**2**		0.64				0.622		1.96	2.02	1.48	0.602	0.446
AP-2	Cobalt, total	mg/L	0.0052		0.006	**0.006**	0.0102	0.0089	0.0115	0.0111	0.0091	0.0102	0.0085	0.0091	0.0068	0.0102	0.0073	0.0085
AP-3	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	0.0054	< 0.005	0.0054	< 0.005	0.0051	< 0.005	0.0065	0.0071	< 0.005
AP-11	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	0.005	0.0061	0.011	< 0.005	0.0055	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-12	Cobalt, total	mg/L	0.0052		0.006	**0.006**	0.0143	0.0077	0.0219	0.007	< 0.005	< 0.005	< 0.005	0.0236	< 0.005	0.0054	< 0.005	< 0.005
AP-13	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	0.0215	0.021	< 0.005	< 0.005	< 0.005	0.0127	< 0.005	< 0.005	< 0.005	< 0.005
T-1	Cobalt, total	mg/L	0.0052		0.006	**0.006**										< 0.005	0.0063	< 0.005
T-2	Cobalt, total	mg/L	0.0052		0.006	**0.006**										0.0075	< 0.005	< 0.005
AP-12	Lead, total	mg/L	0.0075		0.015	**0.015**	0.0225	< 0.015	0.0228	< 0.015	< 0.015	< 0.015	< 0.015	0.0161	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-13	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	0.0163	0.0177	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-14	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	0.0189	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

TABLE 2:
Total Arsenic Summary Table

Table 2: Total Arsenic Summary Table

Well ID	Parameter	Units	GWPS	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4	2025-Q1	2025-Q2	2025-Q3	Average
AP-1	Arsenic, total	mg/L	0.0239	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
AP-10	Arsenic, total	mg/L	0.0239	< 0.001	0.0011	< 0.001	< 0.001	0.0011	< 0.001	0.0015	0.0012	0.00111
AP-11	Arsenic, total	mg/L	0.0239	< 0.001	< 0.001	0.0037	< 0.001	< 0.001	0.0015	< 0.001	< 0.001	0.00140
AP-12	Arsenic, total	mg/L	0.0239	0.0149	0.0013	0.0038	0.0015	< 0.001	< 0.001	< 0.001	< 0.001	0.00319
AP-13	Arsenic, total	mg/L	0.0239	0.0075	0.0028	0.0032	0.0029	0.0038	< 0.001	0.0032	0.002	0.00330
AP-14	Arsenic, total	mg/L	0.0239	0.0036	0.0039	0.0019	0.0016	0.0022		0.0017	0.0011	0.00229
AP-2	Arsenic, total	mg/L	0.0239	0.002	0.0027	0.002	0.0031	0.0016	0.0022	0.0013	0.0014	0.00204
AP-3	Arsenic, total	mg/L	0.0239	0.0182	0.0101	0.0021	0.008	0.0182	0.0137	0.0103	0.016	0.0121
AP-4	Arsenic, total	mg/L	0.0239	0.0225	0.0375	0.0229	0.0207	0.0246	0.021	0.0223	0.0248	0.0245
AP-5	Arsenic, total	mg/L	0.0239	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.00100
AP-6	Arsenic, total	mg/L	0.0239	0.0183	0.0068	0.0121	0.0074	0.0108	0.012	0.0037	0.0068	0.00974
AP-7	Arsenic, total	mg/L	0.0239	0.075	0.0555	0.0395	0.0438	0.0947	0.0248	0.0289	0.0289	0.0489
AP-8	Arsenic, total	mg/L	0.0239	0.0395	0.0426	0.0461	0.0414	0.0386	0.0487	0.0446	0.0389	0.0426
AP-9	Arsenic, total	mg/L	0.0239	0.0062	0.0037	0.0024	0.0028	0.0019	0.0023	0.0014	0.0013	0.00275
AW-1	Arsenic, total	mg/L	0.0239	0.208	0.16	0.153	0.129	0.168	0.146	0.0016	0.0098	0.122
AW-2	Arsenic, total	mg/L	0.0239	0.0266	0.0235	0.0175	0.018	0.013	0.0017	0.0166	0.011	0.0160
G110	Arsenic, total	mg/L	0.0239	0.0053	0.0057	0.0058	0.0046	0.0058	0.0044	0.0047		0.00519
G112	Arsenic, total	mg/L	0.0239	0.0021	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001		0.00116
G113	Arsenic, total	mg/L	0.0239	< 0.001	0.0029	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001		0.00127
G120	Arsenic, total	mg/L	0.0239	0.0162	0.0116	0.0121	0.0104	0.0119	0.0113	0.0114	0.0115	0.0121
G121	Arsenic, total	mg/L	0.0239	0.0221	0.0173	0.0146	0.0084	0.016	0.0169	0.018	0.0044	0.0147
G122	Arsenic, total	mg/L	0.0239	0.0046	0.0028	0.0035	0.0019	0.0029	0.001	0.0027	0.0029	0.00279
GP7	Arsenic, total	mg/L	0.0239								0.0072	0.00720
P03D	Arsenic, total	mg/L	0.0239								0.0017	0.00170
P04D	Arsenic, total	mg/L	0.0239								0.0027	0.00270
P07D	Arsenic, total	mg/L	0.0239				0.0394	0.036	0.0276	0.0324	0.0255	0.0322
P103	Arsenic, total	mg/L	0.0239								0.0018	0.00180
P104	Arsenic, total	mg/L	0.0239								0.0055	0.00550
R101	Arsenic, total	mg/L	0.0239	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0021	< 0.001	0.00114
R111	Arsenic, total	mg/L	0.0239	0.0019	0.0015	0.0175	0.0166	0.0185	0.0156	0.0215		0.0133
RW-3	Arsenic, total	mg/L	0.0239	0.74	0.306	0.188	0.107	0.214	0.0961	0.0808	0.103	0.229
T-1	Arsenic, total	mg/L	0.0239			< 0.001	0.0048	0.0019	0.0023	< 0.001	0.0016	0.00210
T-2	Arsenic, total	mg/L	0.0239			0.0023	0.0053	0.006	0.0073	0.0056	0.0068	0.00555
T-4	Arsenic, total	mg/L	0.0239			0.0013	0.0055	0.0055	0.0049	0.0039	0.0038	0.00415
T-5	Arsenic, total	mg/L	0.0239			< 0.001	< 0.001	0.0016	< 0.001	< 0.001	0.0014	0.00117
T-6	Arsenic, total	mg/L	0.0239			0.0076	0.0108	0.0158	0.0037	0.0195	0.0086	0.0110

TABLE 3:
Total Cobalt Summary Table

Table 3: Total Cobalt Summary Table

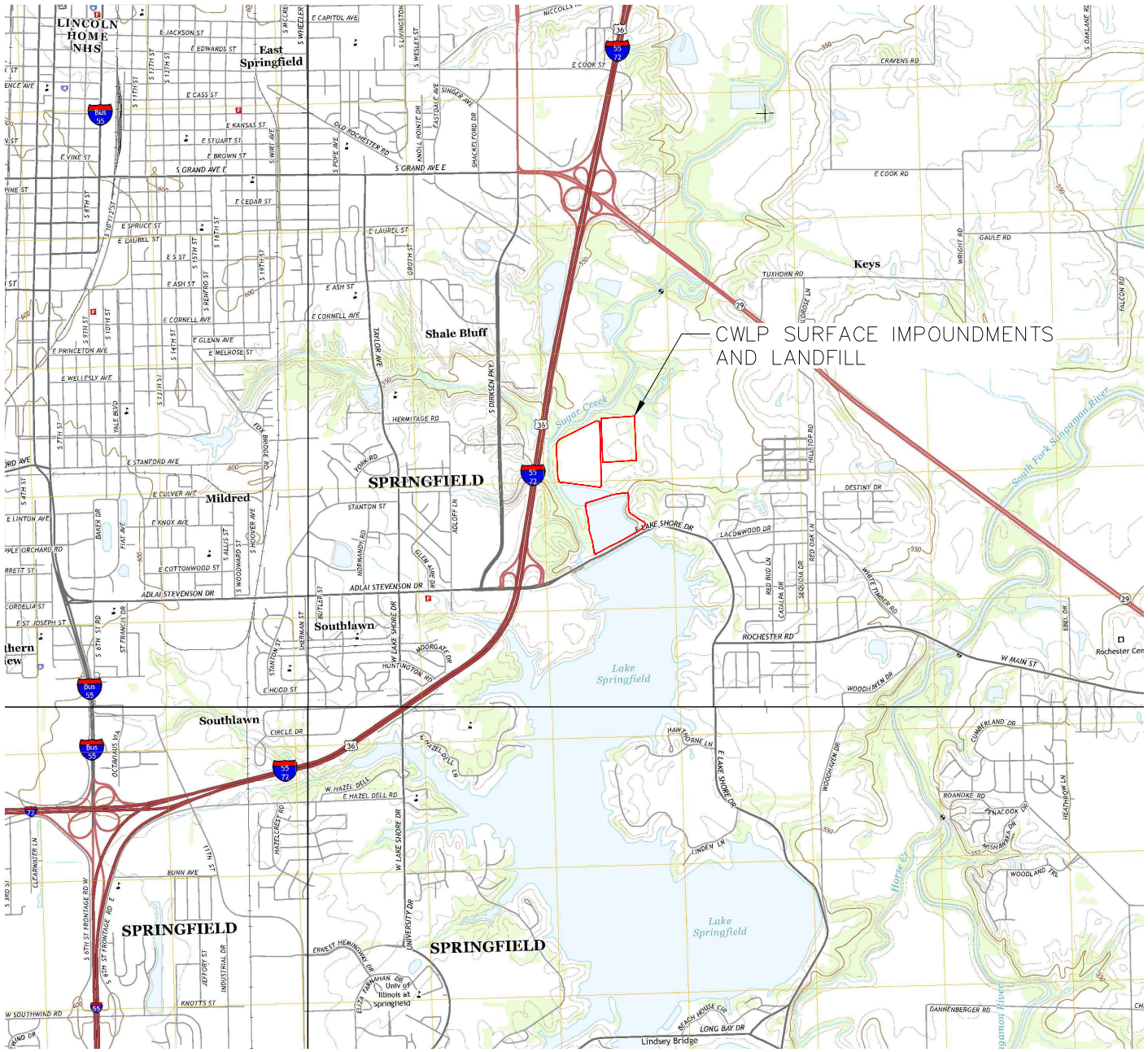
Well ID	Parameter	Units	GWPS	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4	2025-Q1	2025-Q2	2025-Q3	Average
AP-1	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
AP-10	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
AP-11	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
AP-12	Cobalt, total	mg/L	0.0052	0.0236	< 0.005	0.0054	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00738
AP-13	Cobalt, total	mg/L	0.0052	0.0127	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00596
AP-14	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		< 0.005	< 0.005	0.005
AP-2	Cobalt, total	mg/L	0.0052	0.0091	0.0068	0.0102	0.0073	0.0085	0.014	0.0095	0.0127	0.00976
AP-3	Cobalt, total	mg/L	0.0052	0.0051	< 0.005	0.0065	0.0071	< 0.005	0.0057	0.0081	0.0076	0.00626
AP-4	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0083	0.0075	0.00573
AP-5	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
AP-6	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
AP-7	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
AP-8	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
AP-9	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
AW-1	Cobalt, total	mg/L	0.0052	< 0.005	0.0055	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00506
AW-2	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
G110	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		0.005
G112	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		0.005
G113	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		0.005
G120	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0058	< 0.005	0.00510
G121	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
G122	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
P07D	Cobalt, total	mg/L	0.0052				< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
R101	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0088	< 0.005	0.00548
R111	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005		0.005
RW-3	Cobalt, total	mg/L	0.0052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
T-1	Cobalt, total	mg/L	0.0052			< 0.005	0.0063	< 0.005	< 0.005	0.0055	0.0063	0.00552
T-2	Cobalt, total	mg/L	0.0052			0.0075	< 0.005	< 0.005	< 0.005	< 0.005	0.0062	0.00562
T-4	Cobalt, total	mg/L	0.0052			< 0.005	0.005	< 0.005	0.0052	< 0.005	< 0.005	0.00503
T-5	Cobalt, total	mg/L	0.0052			< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005
T-6	Cobalt, total	mg/L	0.0052			< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005

FIGURES

Figure 1: Site Location
Figure 2: Site Features with Current Monitor Well Network
Figure 3: Extent of Total Arsenic Exceedances
Figure 4: Extent of Total Cobalt Exceedances

FIGURE 1:
Site Location

J:\S\Springfield CWLP\CWLP Ash Pond\DWG\2025\Site Map.dwg Tab: Layout1



NOTE:
BACKGROUND IMAGE COURTESY OF
UNITED STATES GEOLOGICAL SURVEY.

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: KWF | DESIGNED BY: KWF | DRAWN BY: BCK

SITE LOCATION

PLANS PREPARED FOR
CITY, WATER, LIGHT & POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:
FIG. 1

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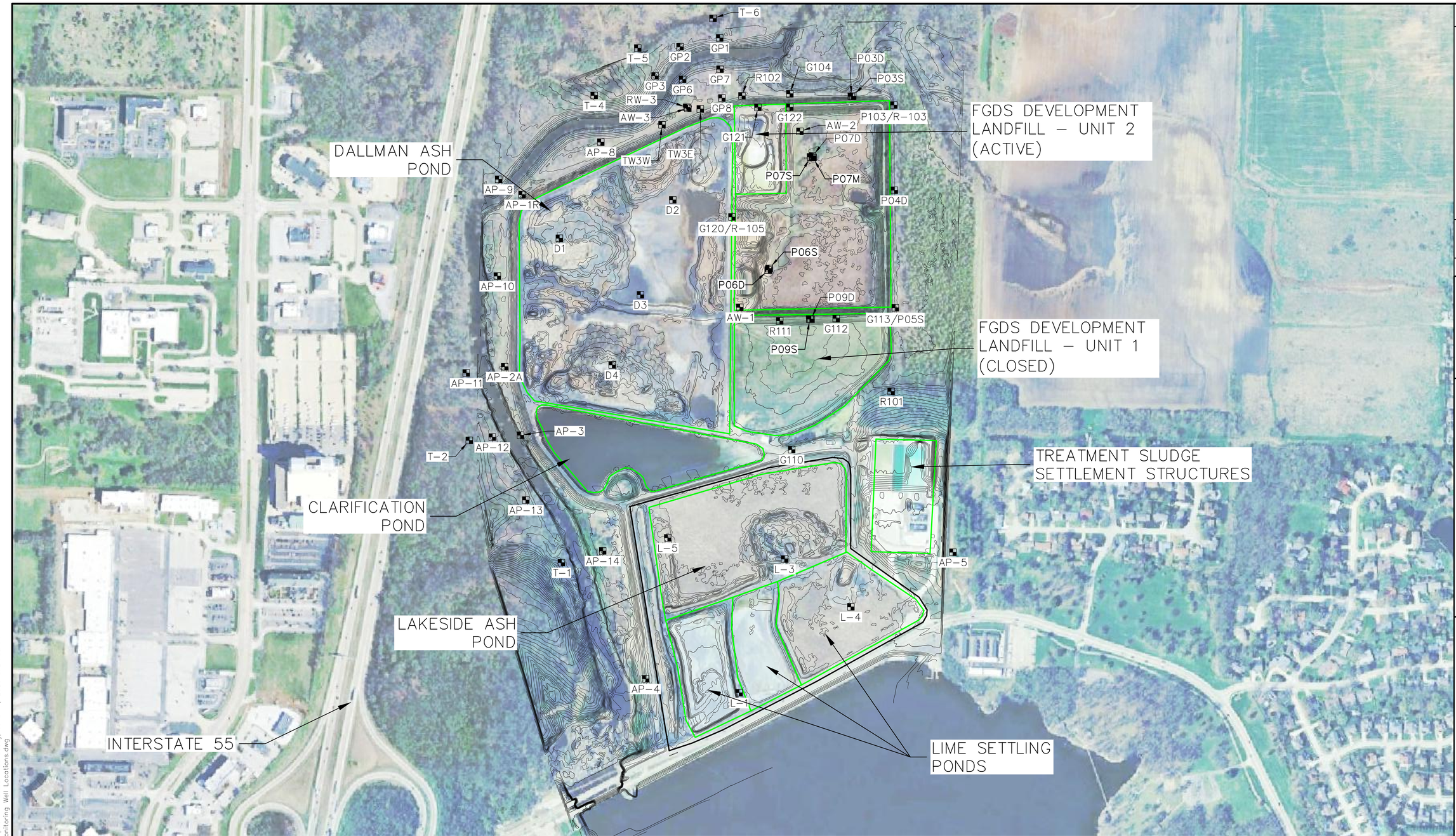
FIGURE 2:
Site Features with Current Monitor Well Network



LEGEND

- POND/LANDFILL BOUNDARY
- IMPOUNDMENT BOUNDARY
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◔ PART 257 GROUNDWATER MONITORING WELL

NOTE

1. AERIAL IMAGE FROM APRIL 7, 2024, FROM GOOGLE EARTH.

N

0 250 500 1000

SCALE: IN FEET

NO.	DATE	REVISION DESCRIPTION	BY

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

MONITORING WELL LOCATIONS

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: APRIL 2025

PROJECT ID: 240338/0016

SHEET NUMBER:

FIG. 3

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Tab: FIG 3 Last Saved: April 4, 2025, by Ben Karpus Plotted: Wednesday, June 11, 2025 8:21:38 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\2025\Monitoring Well Locations.dwg

FIGURE 3:
Extent of Total Arsenic Exceedances

Tab: Layout1 Last Saved: November 6, 2025, by Ben Karpus Plotted: Tuesday, November 18, 2025 11:14:45 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\ISOPACH\Arsenic total2.dwg

LEGEND

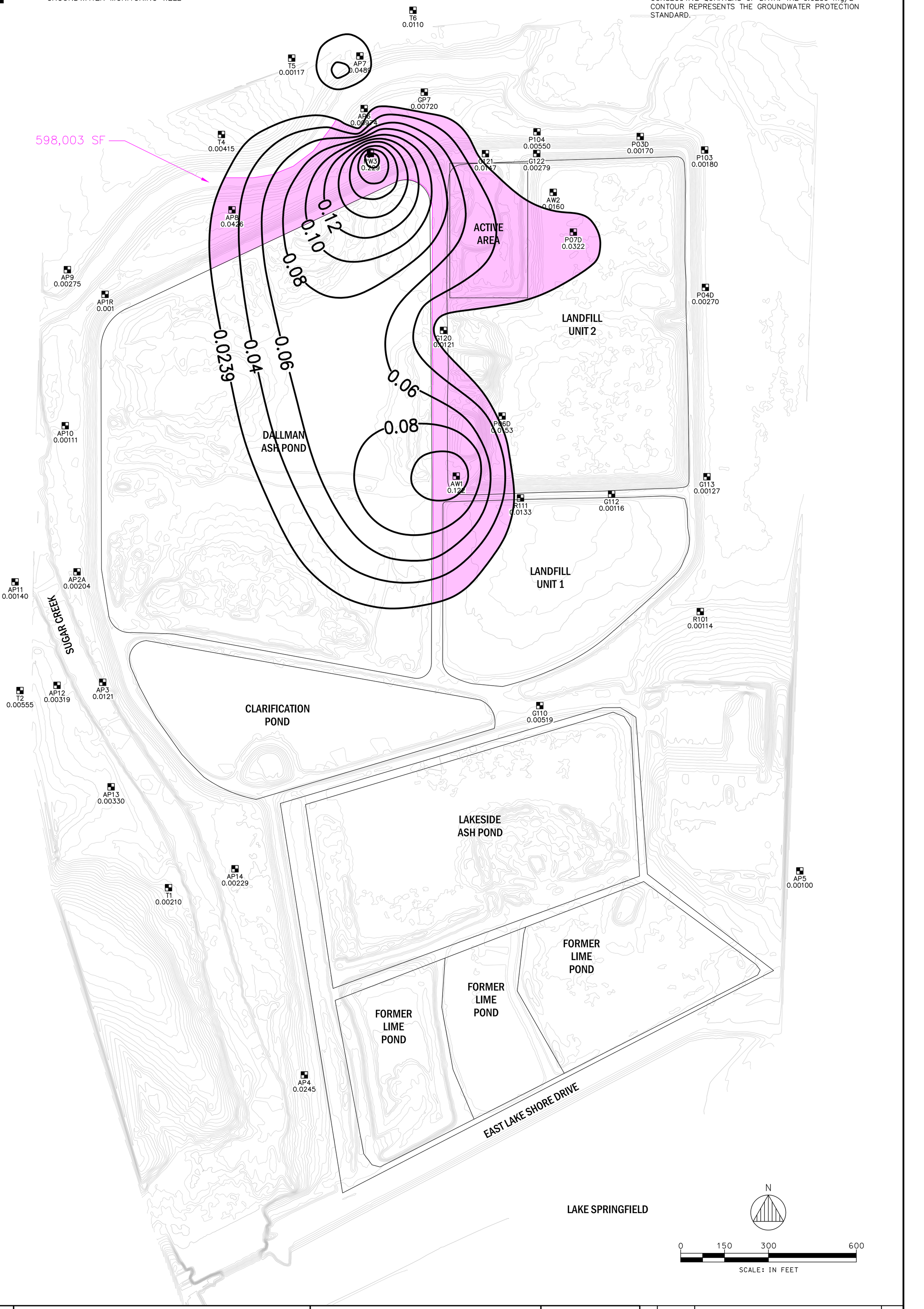
550 — EXISTING GROUND CONTOURS

100 — ARSENIC TOTAL CONTOURS (mg/L)

GROUNDWATER MONITORING WELL

NOTES

1. FLIGHT DATE APRIL 2023.
2. PLUME CONTOUR INTERVAL SHOWN IS 0.02 mg/L.
3. ARSENIC TOTAL PLUME BASED ON AVERAGE OF 8 CONSECUTIVE QUARTERS OF DATA. THE 0.0239 mg/L CONTOUR REPRESENTS THE GROUNDWATER PROTECTION STANDARD.



3

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: SEPTEMBER 2025

EXTENT OF TOTAL ARSENIC EXCEEDANCES

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: MPN

NO.	DATE	REVISION DESCRIPTION	BY

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FIGURE 4:
Extent of Total Cobalt Exceedances

Tab: Layout1 Last Saved: September 19, 2025, by Ben Karpus Plotted: Friday, September 19, 2025 10:42:18 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\ISOPACH\Cobalt total2.dwg

LEGEND

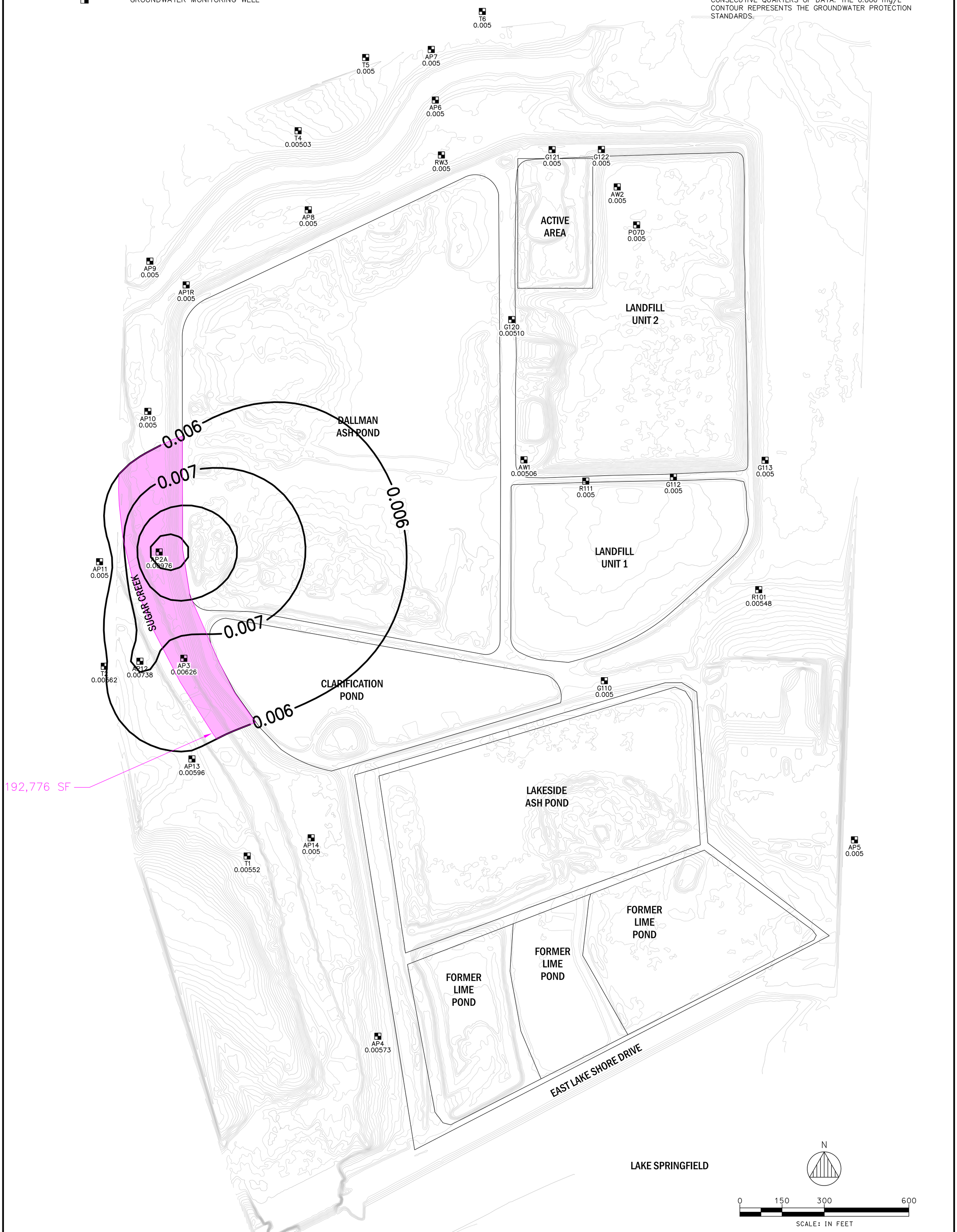
550 — EXISTING GROUND CONTOURS

10 — COBALT TOTAL CONTOURS (mg/L)

GROUNDWATER MONITORING WELL

NOTES

1. FLIGHT DATE APRIL 2023.
2. PLUME CONTOUR INTERVAL SHOWN IS 0.001 mg/L.
3. COBALT TOTAL PLUME BASED ON AVERAGES OF 8 CONSECUTIVE QUARTERS OF DATA. THE 0.006 mg/L CONTOUR REPRESENTS THE GROUNDWATER PROTECTION STANDARDS.



4	SHEET NUMBER:	PROJECT ID: 240338/0014	DATE: SEPTEMBER 2025

EXTENT OF TOTAL COBALT EXCEEDANCES

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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NO.	DATE	REVISION DESCRIPTION	BY

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APPENDICES

Appendix A: Boring Logs/Well Completion Reports: T-1, T-2, T-4, T-5 and T-6

Appendix B: Potentiometric Surface Maps

Appendix C: Slug Test Results and Boring Logs for P-6R/P-7R

Appendix D: Analytical Summary

Appendix E: Exceedance parameter Trend Graphs

Appendix F: Cross Sections

Appendix G: Laboratory Analytical Reports

Appendix H: Boring Log and Well Completion Report for P06D

Appendix I: Boring Log/Well Completion Report and Laboratory Report for GP-7

APPENDIX A:

Boring Logs/Well Completion Reports: T-1, T-2, T-4, T-5 and T-6

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1128150.33
Easting: 2455538.81

Weather: Sunny 66 F

Boring Information:
Boring No: B1
Well No: T1
Surf Elev.: 535.33

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 05/01/2024
Finish: 05/01/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	535.3
0							Dark brown silty CLAY (topsoil); Sample CS1A	
	1		4.0/5		0.25		Dark brown silty CLAY; moist	
5								530.0
	2		5.0/5		0.25		Sample CS2 7.0-7.5'; saturated 7.5'	
10							Free water 9.5'	
							Light brown silty CLAY; gray mottling; Sample CS3A 11.0-11.3'	525.0
	3		5.0/5		2.0		Sample CS3B 13.0-13.5'	
					2.75			
15					1.75		Sample CS4A 15.5-16.0'	520.0
					0.5		Brown SAND and GRAVEL; fine to coarse grained; silty clay matrix	
	4		3.0/4.5				Gray SANDSTONE; weathered	
							Greenish gray SANDSTONE; fine grained	
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1128803.76
Easting: 2455006.85

Weather: Sunny 66 F

Boring Information:
Boring No: B2
Well No: T2
Surf Elev.: 547.22

Depth Information:
Total: 35.0'
Auger: 35.0'
Core: -

Dates:
Start: 05/01/2024
Finish: 05/01/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	547.2
0							Dark brown silty CLAY (topsoil); Sample CS1A 0-0.5	
							Brown silty CLAY; moist; Sample CS1B 2.5-3.0	
	1		4.3/5		3.0 3.0			545.0
5							Brown clayey SILT; greenish gray mottling; moist	
	2		4.0/5					540.0
					2.25		Sample CS2A 8.0-8.5'	
10							Sample CS3A 11.0-11.5	
							Dark brown CONCRETIONS; Sample CS3B 12.1-12.3'	535.0
	3		5.0/5				Brown silty CLAY; Sample CS3C	
					1.5			
15								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: B2 Boring No: B2 Well No: T2

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Sample CS4	
	4		5.0/5		4.75			530.0
20	5		2.0/2					
							Gray clayey SILT; brown mottling; moist; trace black organics	525.0
	6		3.0/3		3.25		Sample CS6A 23-23.5'	
25					1.25		Increasing black organics; Sample CS7A 25.5-26	
							Gray silty CLAY; brown mottling; moist; trace organics	520.0
	7		5.0/5		1.75		Sample CS7B 27.0-28.0'	
30								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: B2 Boring No: B2 Well No: T2

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Sample CS8A	
							Gray to brownish gray SHALE; weathered; wet; Sample CS8B	
	8		5.0/5				Gray SHALE; Sample CS8C 32.25-33.0'	515.0
35							End of Boring = 35 Feet	
								510.0
40								
								505.0
45								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1130726.70
Easting: 2455622.14

Weather: Cloudy 50 F

Boring Information:
Boring No: B4
Well No: T4
Surf Elev.: 546.56

Depth Information:
Total: 35.0'
Auger: 35.0'
Core: -

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

Dates:
Start: 04/26/2024
Finish: 04/26/2024

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	546.6
0							Brown silty CLAY; moist; organics	
	1		4.7/5		0.5			545.0
5							Brown clayey SILT; moist; trace organics; becoming more dense with depth	
	2		5.0/5		3.5 >5			540.0
10								
	3		5.0/5		0.5		Black organics; Sample CS3A	535.0
					0.25		Brown silty CLAY; Sample CS3B	
15								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: B4 Boring No: B4 Well No: T4

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Brown clayey SILT; moist	
					0.25			530.0
							Brown silty CLAY; moist; medium to fine coarse gravel	
	4		3.6/5		0.5			
							Gray SHALE; weathered	
							Gray SHALE; weathered; moist	
20								
								525.0
	5		3.6/5					
25							End of Boring = 25 Feet	
								520.0
30								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1130996.32
Easting: 2455852.04

Weather: Sunny 43 F

Boring Information:
Boring No: B5
Well No: T5
Surf Elev.: 538.15

Depth Information:
Total: 20.0'
Auger: 20.0'
Core: -

Dates:
Start: 04/25/2024
Finish: 04/25/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	538.2
0							Brown SILT; moist	
					0.25			
							Dark brown silty CLAY; moist	
	1		4.6/5		2.0			535.0
					2.25		Dark brown silty CLAY; brown/tan mottling; moist	
							Olive green to brown silty CLAY; mottling; moist	
5								
	2		4.8/5		2.25		8.0' Free water	530.0
10							Brown SAND; fine grained; with silt; saturated	
							Olive green clayey SILT; brown mottling	
					>5.0			
	3		3.8/5				Gray SHALE; weathered	
								525.0
15								

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: B5 Boring No: B5 Well No: T5

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	4		1.6/5				Black SHALE; saturated	520.0
20							End of Boring = 20 Feet	515.0
25								510.0
30								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1131175.15
Easting: 2456259.47

Weather: Sunny 43 F

Boring Information:
Boring No: B6
Well No: T6
Surf Elev.: 535.96

Depth Information:
Total: 42.2'
Auger: 42.2'
Core: -

Dates:
Start: 04/25/2024
Finish: 04/25/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	536.0
0							Dark brown silty CLAY (topsoil)	
					1.5			535.0
	1		4.1/5				Greenish brown silty CLAY; moist; trace organics	
5							Greenish brown silty CLAY; gray mottling; trace organics	
	2		4.2/5		2.0			530.0
10							Gray/brown clayey SILT; greenish mottling; moist	
	3		5.0/5		4.5			525.0
							14.0' Wet	
15								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: B6 Boring No: B6 Well No: T6

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Gray silty CLAY; trace brown mottling; organics	520.0
	4		5.0/5		1.75		18.0' Saturated	
20							Gray CLAY; saturated; soft	
					0.25			515.0
	5		5.0/5				Dark gray SILT; saturated	
25							Dark gray silty CLAY; saturated; small gravel	
								510.0
	6		4.7/5					
					0.5			
30								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: B6 Boring No: B6 Well No: T6

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Dark gray SILT; saturated; trace white clasts	505.0
	7		5.0/5		0.5			
35					0.5			500.0
	8		3.5/5				Gray SILT to silty SAND; fine to coarse grained	
40							Gray SHALE (bedrock)	
	9		1.5/5					495.0
							End of Boring = 42.2 Feet	
45								

Notes:

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T1

Site Name: CWLP Borehole #: B1

Coordinates: X 1128150.33 Y 2455538.81 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 05/01/2024 Date Well Finished: 05/01/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite chips

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

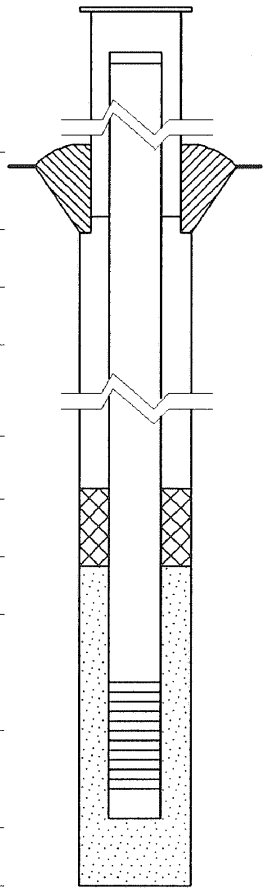
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
536.10	-2.45	Top of Protective Casing
535.65	-2.00	Top of Riser Pipe
533.65	0	Ground Surface
531.83	3.50	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
529.83	5.50	Top of Seal
527.29	8.04	Top of Sandpack
525.77	9.56	Top of Screen
516.27	19.06	Bottom of Screen
515.83	19.50	Bottom of Well
515.83	19.50	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	9.88
Bottom of Screen to End Cap (ft)	0.44
Screen Length [1st slot to last slot] (ft)	9.50
Total Length of Casing (ft)	19.82
Screen Slot Size*	#10 (0.01')

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T2

Site Name: CWLP Borehole #: B2

Coordinates: X 1128803.76 Y 2455006.85 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 05/01/2024 Date Well Finished: 05/01/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

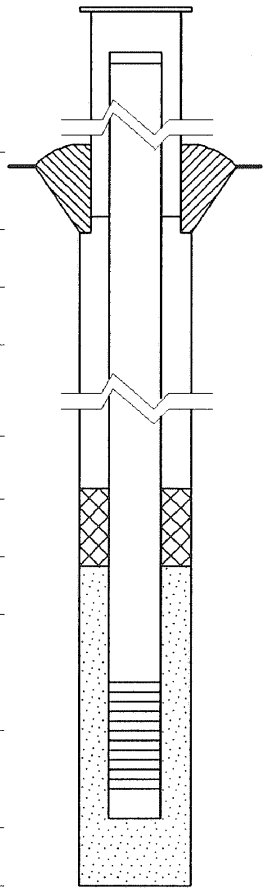
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
549.86	-2.64	Top of Protective Casing
549.62	-2.4	Top of Riser Pipe
547.22	0	Ground Surface
544.22	3.00	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
526.12	21.10	Top of Seal
524.02	23.20	Top of Sandpack
522.46	24.76	Top of Screen
512.96	34.26	Bottom of Screen
512.22	35.00	Bottom of Well
512.22	35.00	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	27.16
Bottom of Screen to End Cap (ft)	0.44
Screen Length [1st slot to last slot] (ft)	9.50
Total Length of Casing (ft)	37.40
Screen Slot Size*	#10 (0.01')

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T4

Site Name: CWLP Borehole #: B4

Coordinates: X 1130726.70 Y 2455622.14 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 04/26/2024 Date Well Finished: 04/26/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

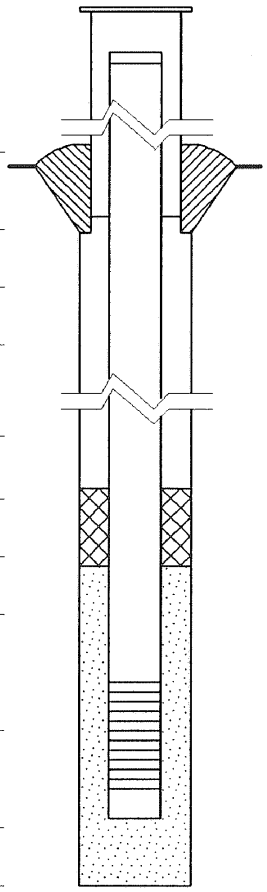
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
549.43	-2.87	Top of Protective Casing
548.94	-2.38	Top of Riser Pipe
546.56	0	Ground Surface
543.56	3.00	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
534.76	11.80	Top of Seal
532.66	13.90	Top of Sandpack
531.43	15.13	Top of Screen
521.94	24.62	Bottom of Screen
521.56	25.00	Bottom of Well
521.56	25.00	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	17.51
Bottom of Screen to End Cap (ft)	0.44
Screen Length [1st slot to last slot] (ft)	9.49
Total Length of Casing (ft)	27.38
Screen Slot Size*	#10 (0.01')

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #:_____ County:_____ Well #:_____

Site Name:_____ Borehole #:_____

Coordinates: X_____ Y_____ (or) Latitude:____° ___' ____" Longitude:____° ___' ____"

Surveyed by:_____ IL Registration #:_____

Drilling Contractor:_____ Consulting Firm:_____

Driller:_____ Geologist:_____

Drilling Method:_____ Logged by:_____

Drilling Fluids (type):_____ Report Form Completed by:_____

Date Well Started:_____ Date Well Finished:_____ Date Form Completed:_____

ANNULAR SPACE DETAILS

Type of surface seal:_____

Type of annular sealant:_____

Installation method:_____

Setting time:_____

Type of bentonite seal:_____

Installation method:_____

Setting time:_____

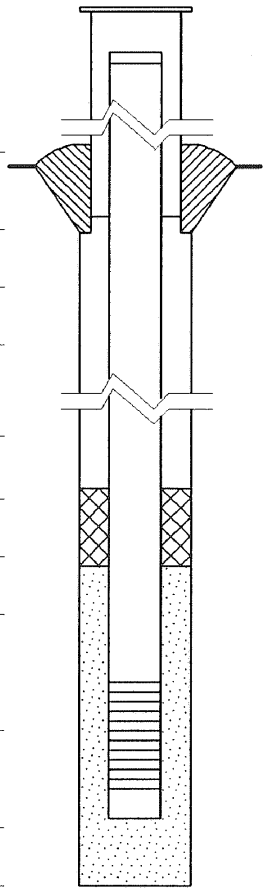
Type of sand pack:_____

Grain size:_____ (sieve size)

Installation method:_____

Type of backfill material:_____ (if applicable)

Installation method:_____



ELEVATION (MSL)®	DEPTH (BGS)*	(0.01 ft)
_____	_____	Top of Protective Casing
_____	_____	Top of Riser Pipe
_____	_____	Ground Surface
_____	_____	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
_____	_____	Top of Seal
_____	_____	Top of Sandpack
_____	_____	Top of Screen
_____	_____	Bottom of Screen
_____	_____	Bottom of Well
_____	_____	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	
Riser Pipe Above W.T.	
Riser Pipe Below W.T.	
Screen	

CASING MEASUREMENTS

Diameter of Borehole (in)	
ID of Riser Pipe (in)	
Protective Casing Length (ft)	
Riser Pipe Length (ft)	
Bottom of Screen to End Cap (ft)	
Screen Length [1st slot to last slot] (ft)	
Total Length of Casing (ft)	
Screen Slot Size*	

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T5

Site Name: CWLP Borehole #: B5

Coordinates: X 1130996.32 Y 2455852.04 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 04/25/2024 Date Well Finished: 04/25/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

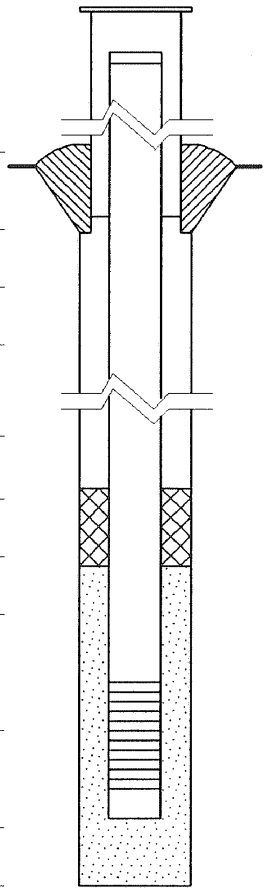
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
541.00	-2.85	Top of Protective Casing
540.66	-2.51	Top of Riser Pipe
538.15	0	Ground Surface
535.15	3.00	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
531.55	6.60	Top of Seal
529.35	8.80	Top of Sandpack
528.22	9.93	Top of Screen
518.72	19.43	Bottom of Screen
518.29	19.86	Bottom of Well
518.29	19.86	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	12.44
Bottom of Screen to End Cap (ft)	0.43
Screen Length [1st slot to last slot] (ft)	9.50
Total Length of Casing (ft)	22.37
Screen Slot Size*	#10 (0.01')

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T6

Site Name: CWLP Borehole #: B6

Coordinates: X 1131175.15 Y 2456259.47 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 04/25/2024 Date Well Finished: 04/25/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

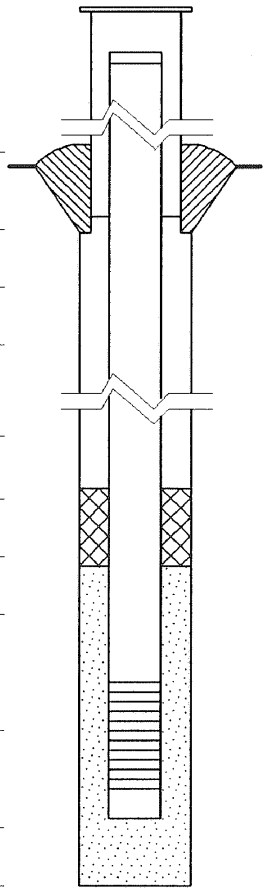
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
_____	_____	Top of Protective Casing
538.32	-2.36	Top of Riser Pipe
535.96	0	Ground Surface
532.96	3.00	Top of Annular Sealant
_____	NA	Static Water Level Measured on (after completion)
507.96	28.00	Top of Seal
505.76	30.20	Top of Sandpack
503.92	32.04	Top of Screen
494.20	41.76	Bottom of Screen
493.85	42.11	Bottom of Well
493.85	42.11	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	32.85
Bottom of Screen to End Cap (ft)	0.35
Screen Length [1st slot to last slot] (ft)	9.72
Total Length of Casing (ft)	42.92
Screen Slot Size*	#10 (0.01')

*Hand-slotted well screens are unacceptable.

APPENDIX B:
Potentiometric Surface Maps

Tab: 1-27-2025 Last Saved: September 9, 2025, by Ben Karpus Plotted: Tuesday, September 9, 2025 2:56:24 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◔ PART 257 GROUNDWATER MONITORING WELL
- ▪ PART 845 GROUNDWATER MONITORING WELL
- ☒ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.

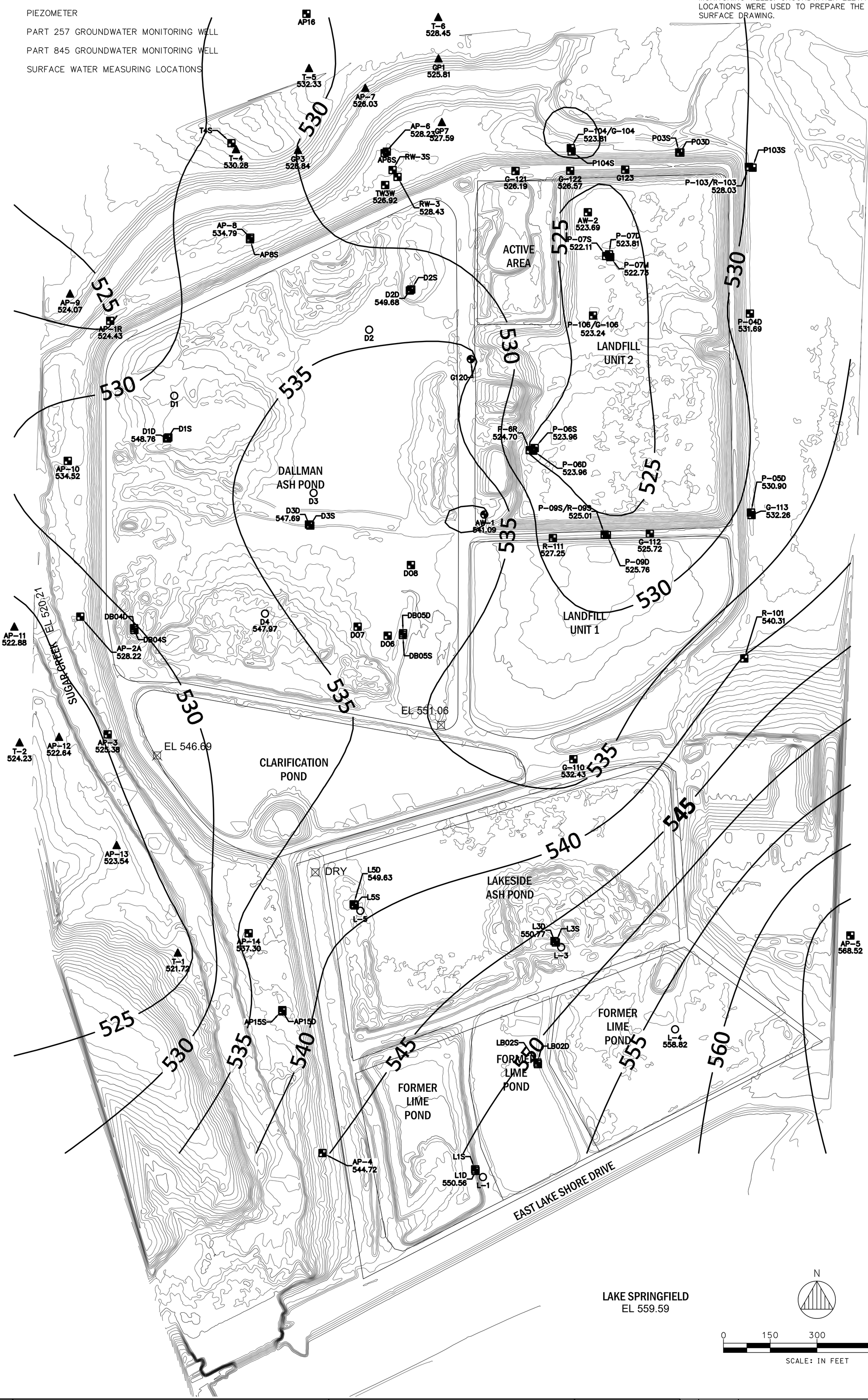


FIG. 1

POTENTIOMETRIC SURFACE MAP
JANUARY 27, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: AUGUST 2025

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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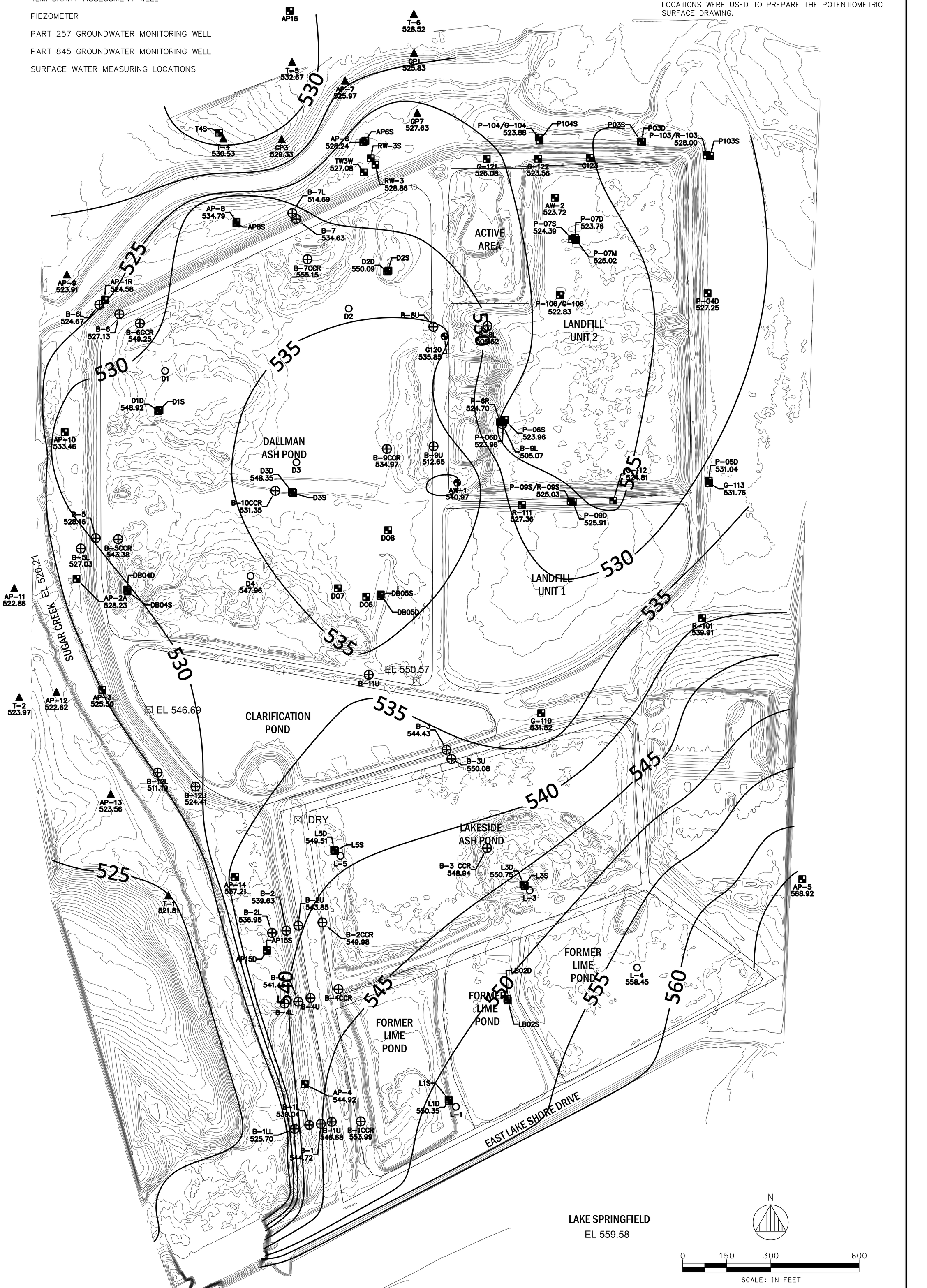
Tab: 2-25-2025 Last Saved: September 10, 2025, by Ben Karpus Plotted: Wednesday, September 10, 2025 11:13:42 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◕ PART 257 GROUNDWATER MONITORING WELL
- ▪ PART 845 GROUNDWATER MONITORING WELL
- ⊠ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.



LAKE SPRINGFIELD
EL 559.58

N

0 150 300 600
SCALE: IN FEET

FIG. 2

POTENTIOMETRIC SURFACE MAP
FEBRUARY 25, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: AUGUST 2025

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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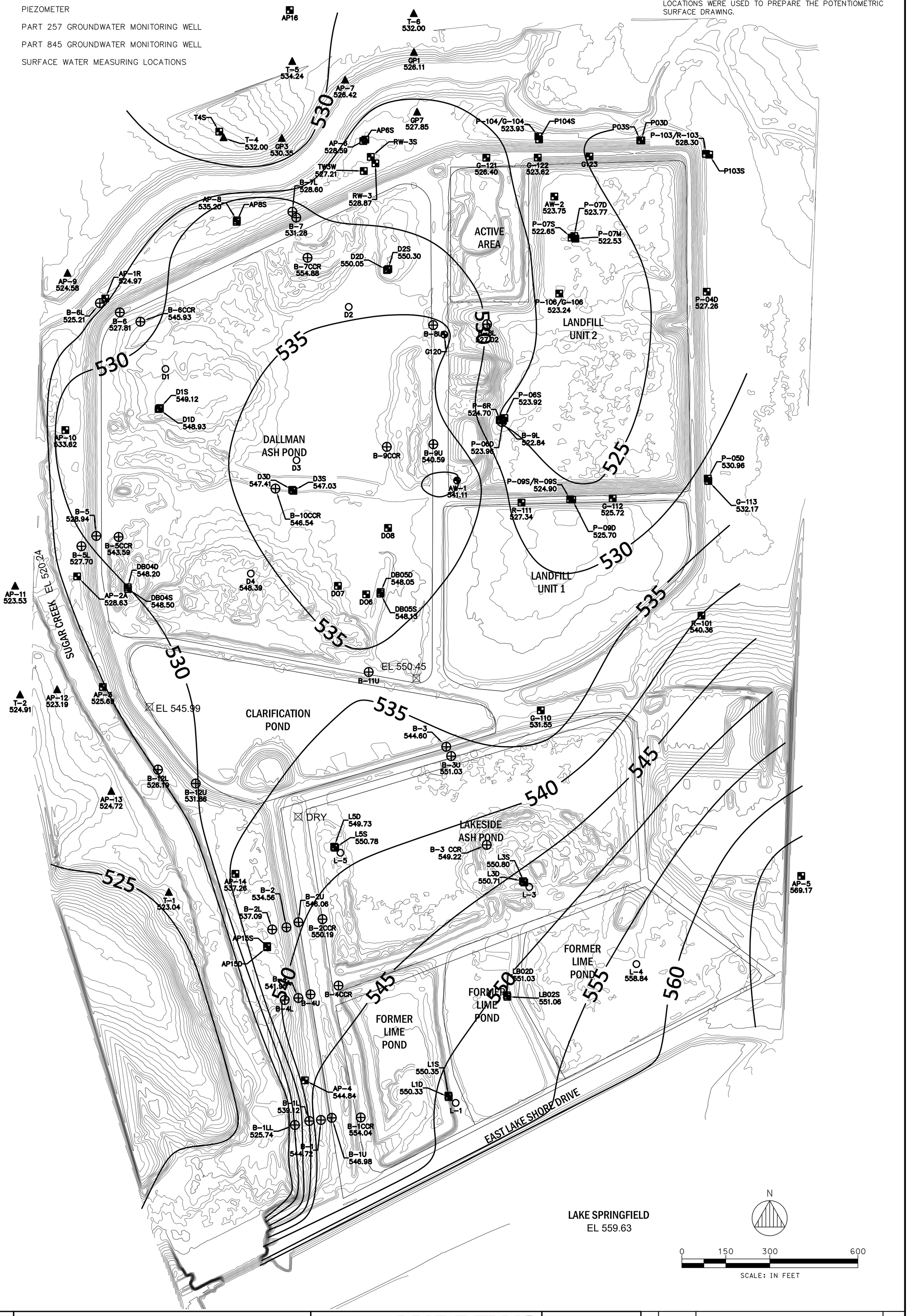
Tab: 3-28-2025 Last Saved: September 10, 2025, by Ben Karpus Plotted: Wednesday, September 10, 2025 11:24:38 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◕ PART 257 GROUNDWATER MONITORING WELL
- ▪ PART 845 GROUNDWATER MONITORING WELL
- ☒ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.



LAKE SPRINGFIELD
EL 559.63

N

0 150 300 600
SCALE: IN FEET

FIG. 3

POTENTIOMETRIC SURFACE MAP
MARCH 28, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: AUGUST 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- 540 — GROUNDWATER CONTOURS
- TEMPORARY ASSESSMENT WELL
- PIEZOMETER
- PART 257 GROUNDWATER MONITORING WELL
- PART 845 GROUNDWATER MONITORING WELL
- SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.

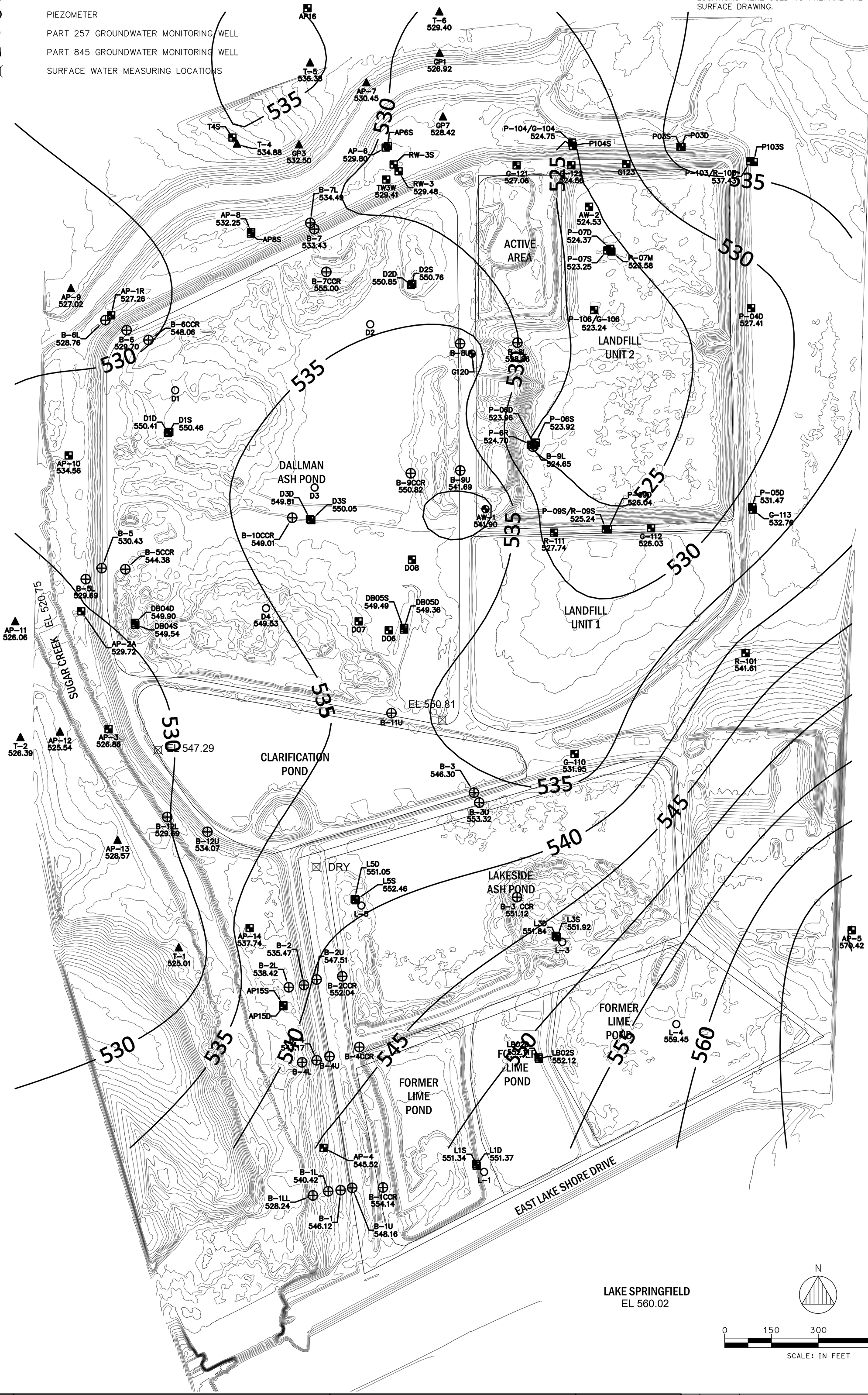

FIG. 4

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: AUGUST 2025

POTENTIOMETRIC SURFACE MAP
APRIL 20, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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NO.	DATE	REVISION DESCRIPTION	BY

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Tab: 5-29-2025 Last Saved: September 10, 2025, by Ben Karpus Plotted: Wednesday, September 10, 2025 2:28:39 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◕ PART 257 GROUNDWATER MONITORING WELL
- ■ PART 845 GROUNDWATER MONITORING WELL
- ⊠ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.

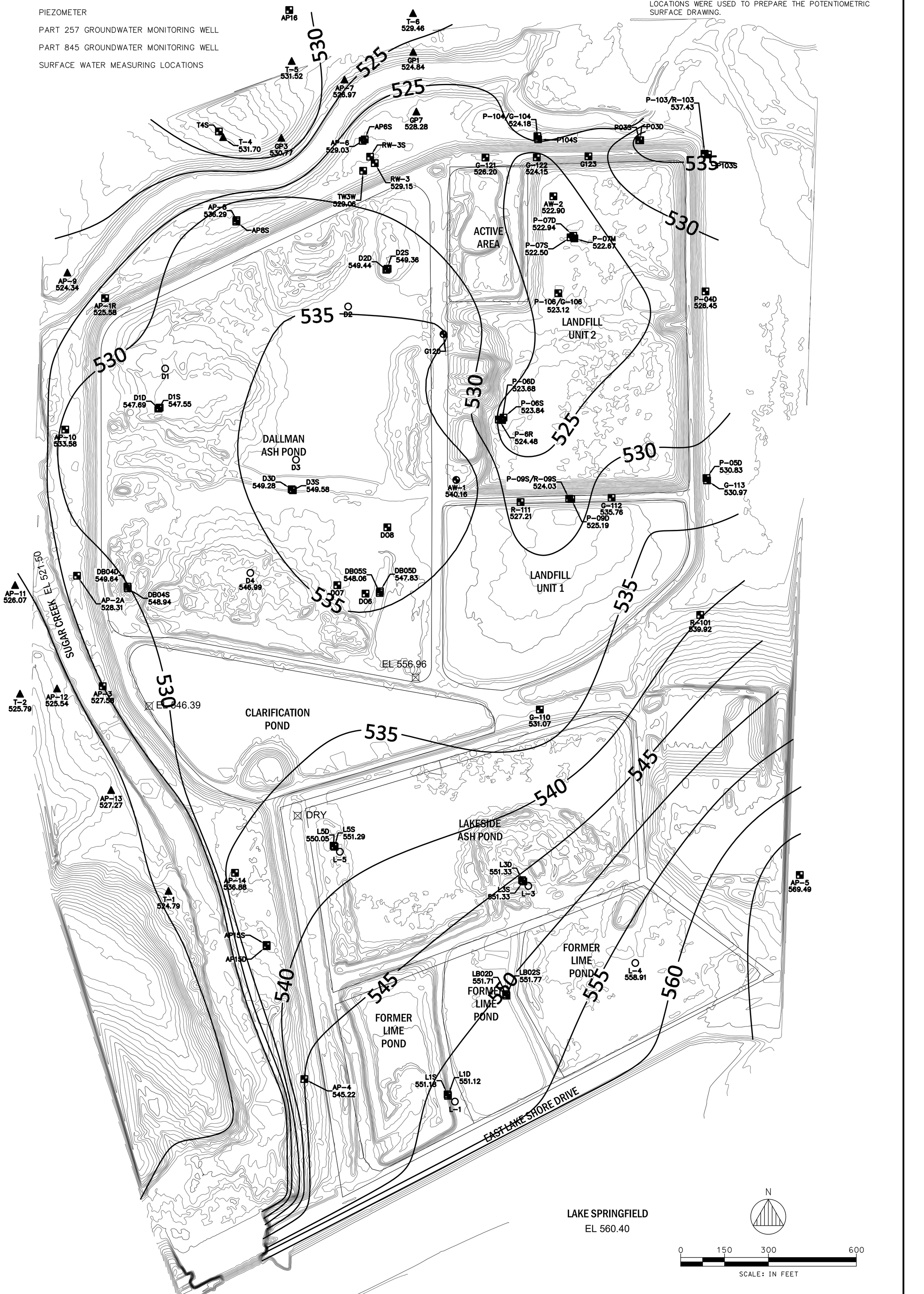

FIG. 5

POTENTIOMETRIC SURFACE MAP
MAY 29, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: AUGUST 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
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Tab: 6-25-2025 Last Saved: September 10, 2025, by Ben Karpus Plotted: Wednesday, September 10, 2025 2:42:35 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- 540 — GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◕ PART 257 GROUNDWATER MONITORING WELL
- ▪ PART 845 GROUNDWATER MONITORING WELL
- ⊠ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.

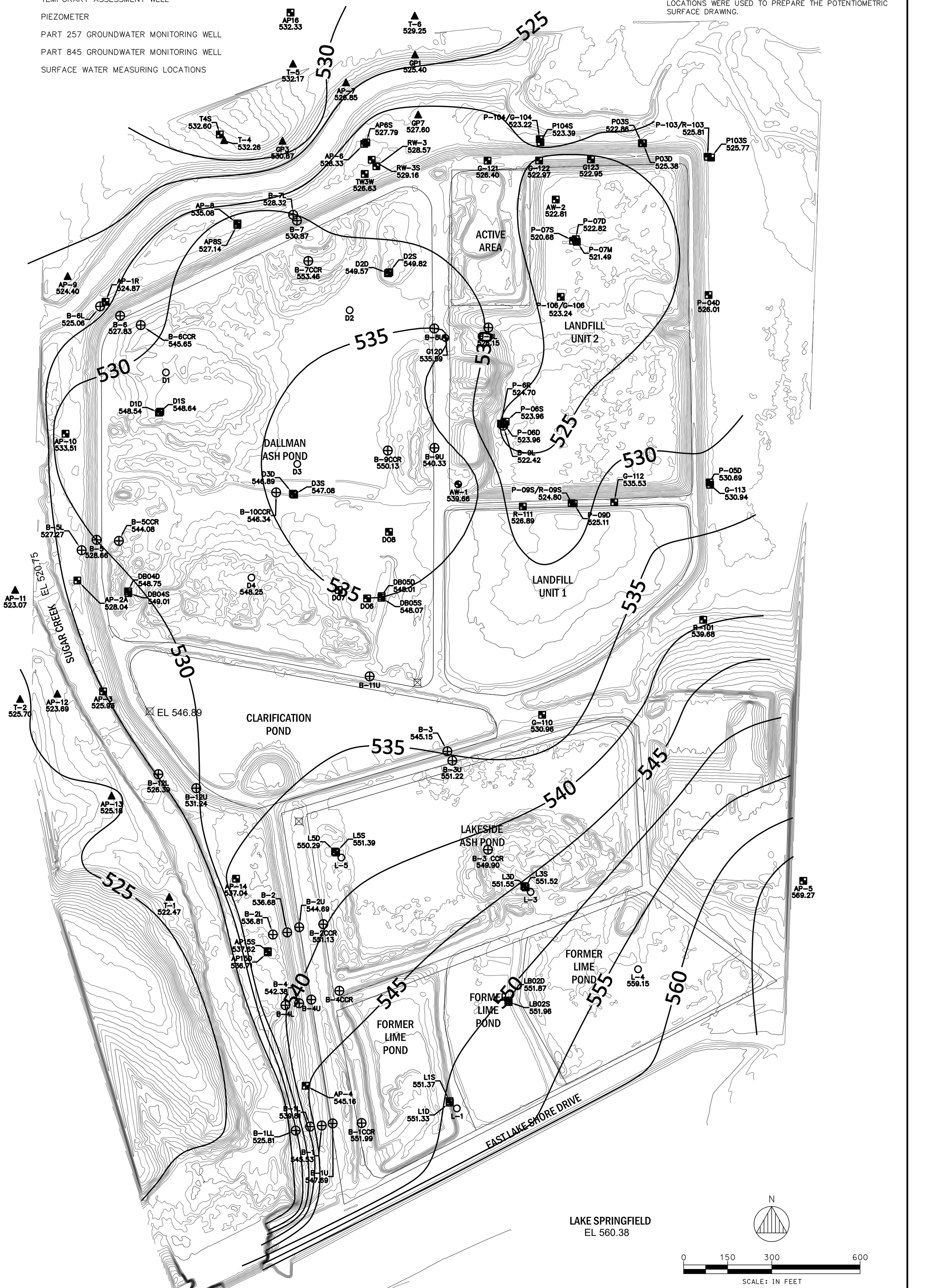

FIG. 6

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: AUGUST 2025

POTENTIOMETRIC SURFACE MAP
JUNE 25, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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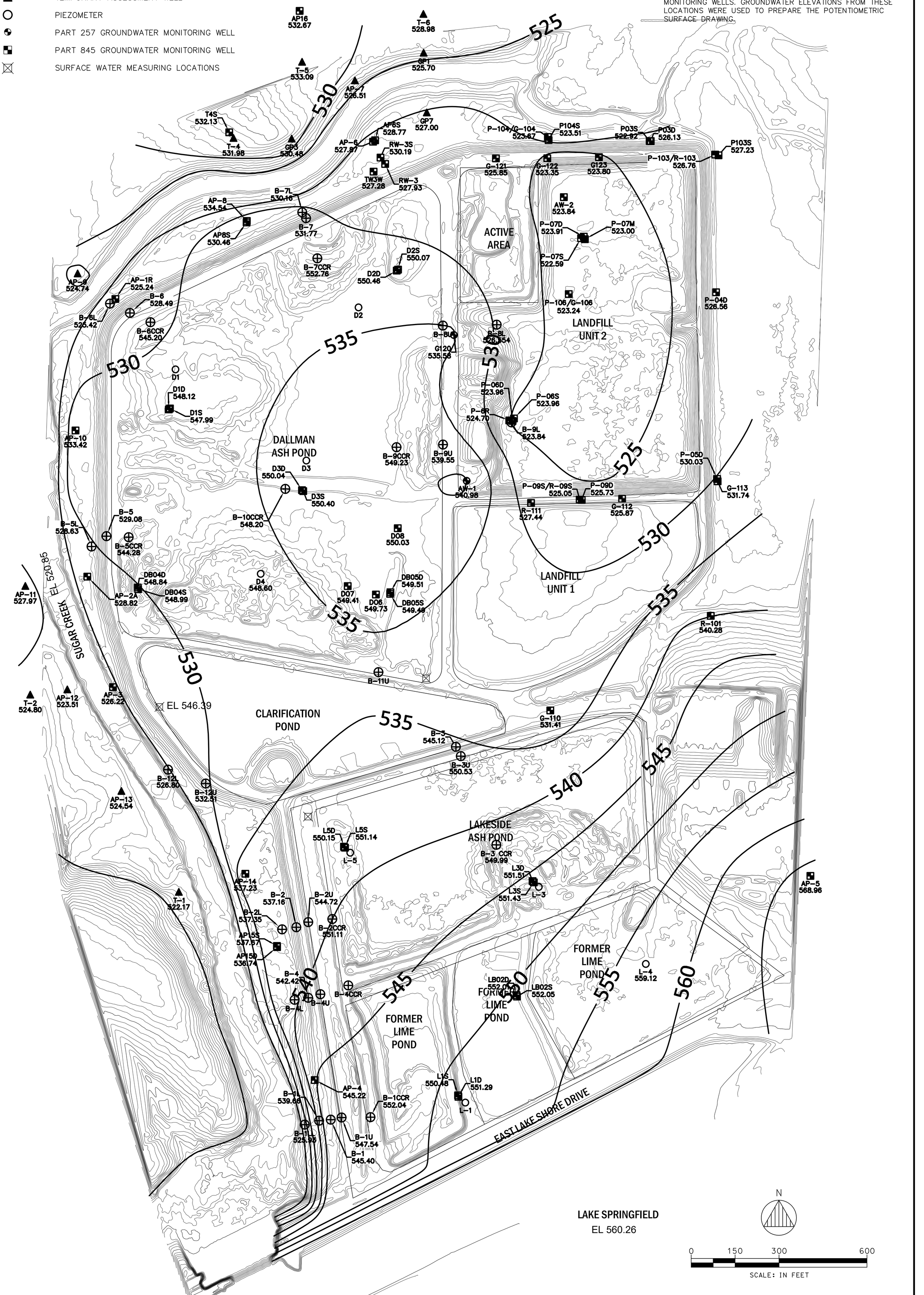
Tab: 7-21-2025 Last Saved: September 10, 2025, by Ben Karpus Plotted: Wednesday, September 10, 2025 2:57:45 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- 540 — GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◕ PART 257 GROUNDWATER MONITORING WELL
- ■ PART 845 GROUNDWATER MONITORING WELL
- ⊠ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.



LAKE SPRINGFIELD
EL 560.26

N

0 150 300 600
SCALE: IN FEET

FIG. 7

POTENTIOMETRIC SURFACE MAP
JULY 21, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: AUGUST 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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Tab: 8-21-2025 Last Saved: September 10, 2025, by Ben Karpus Plotted: Wednesday, September 10, 2025 3:11:35 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◔ PART 257 GROUNDWATER MONITORING WELL
- ▪ PART 845 GROUNDWATER MONITORING WELL
- ☒ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.

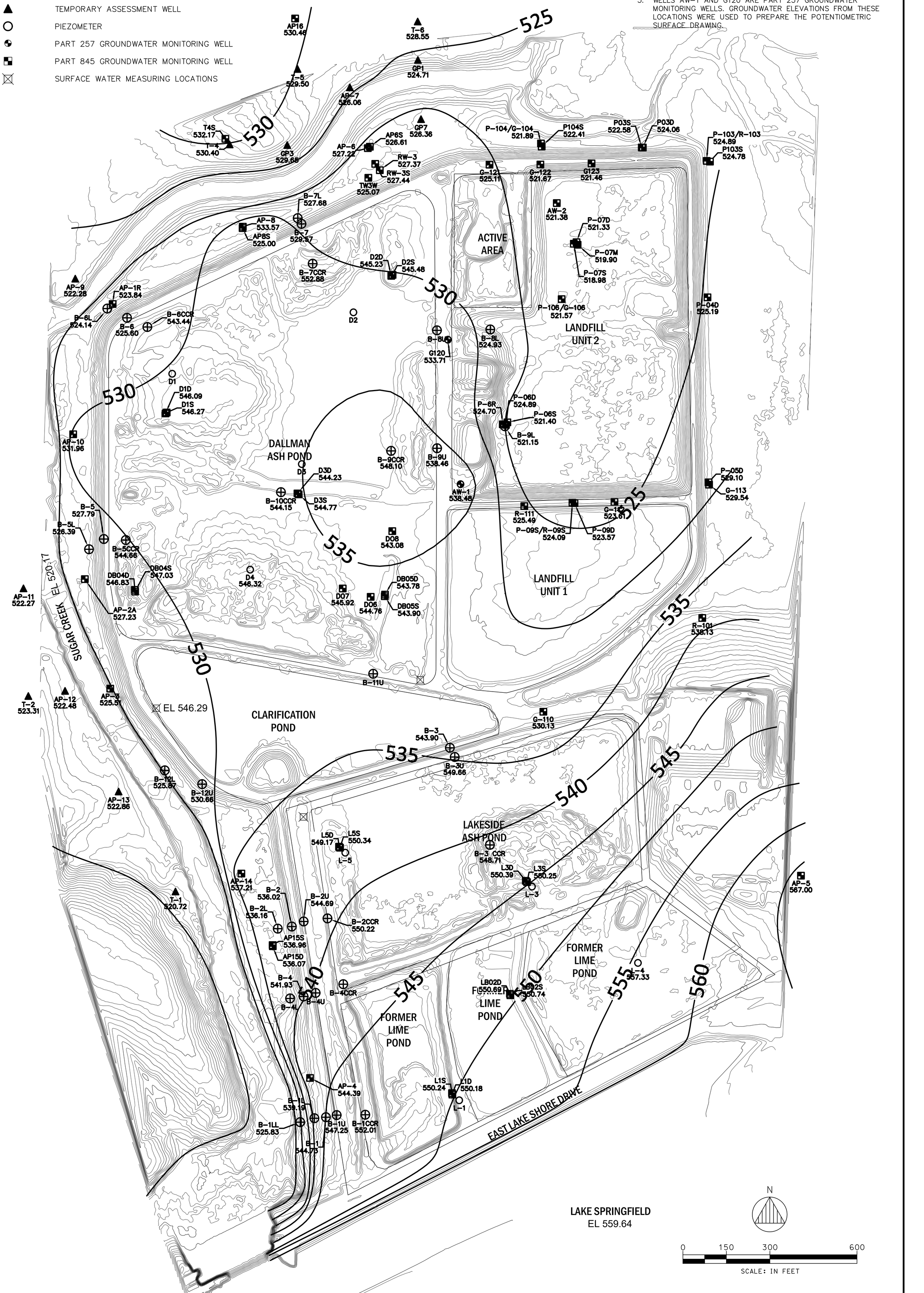

FIG. 8

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: AUGUST 2025

POTENTIOMETRIC SURFACE MAP
AUGUST 21, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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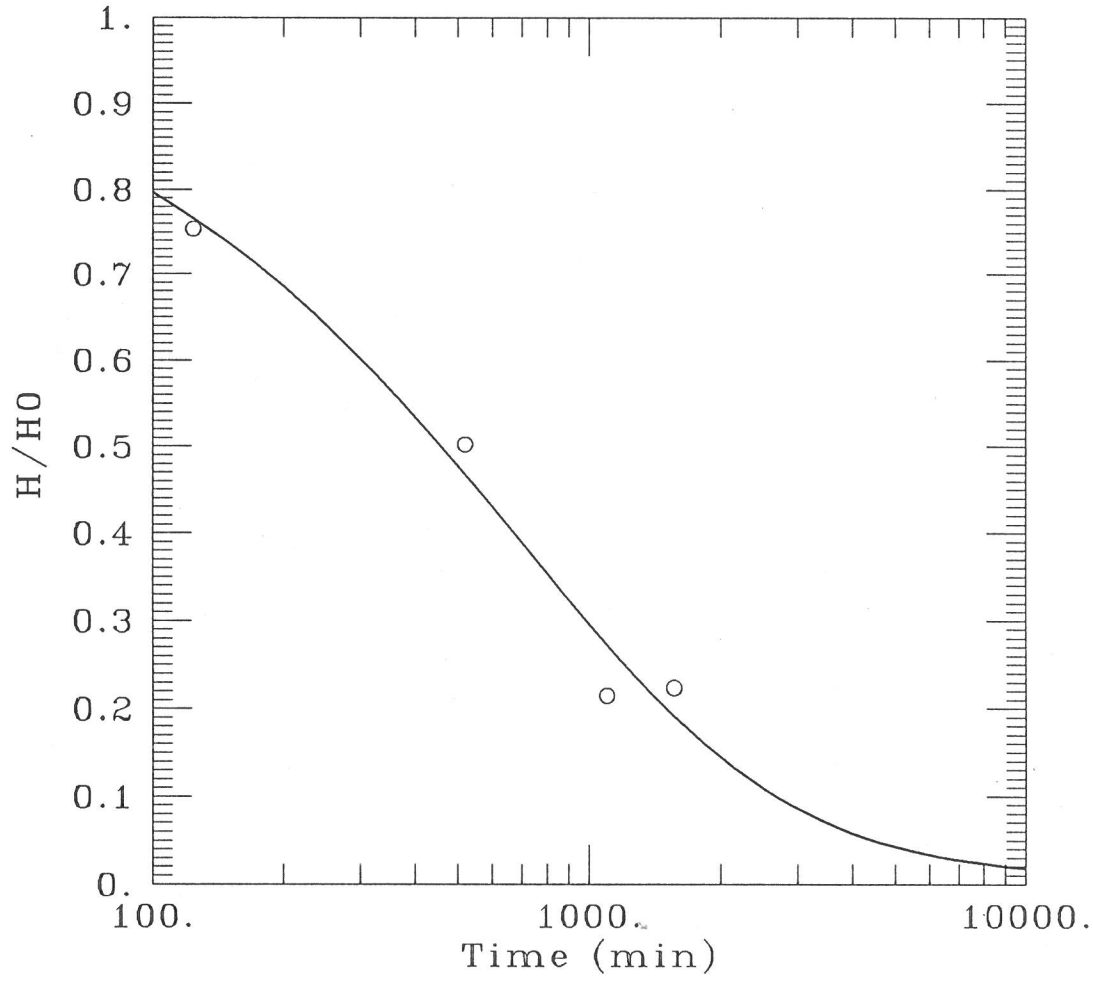
APPENDIX C:

Slug Test Results and Boring Logs for P-6R/P-7R

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-6R DRAWDOWN



DATA SET:
P-6R-D.AQT
06/18/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
5/11/93

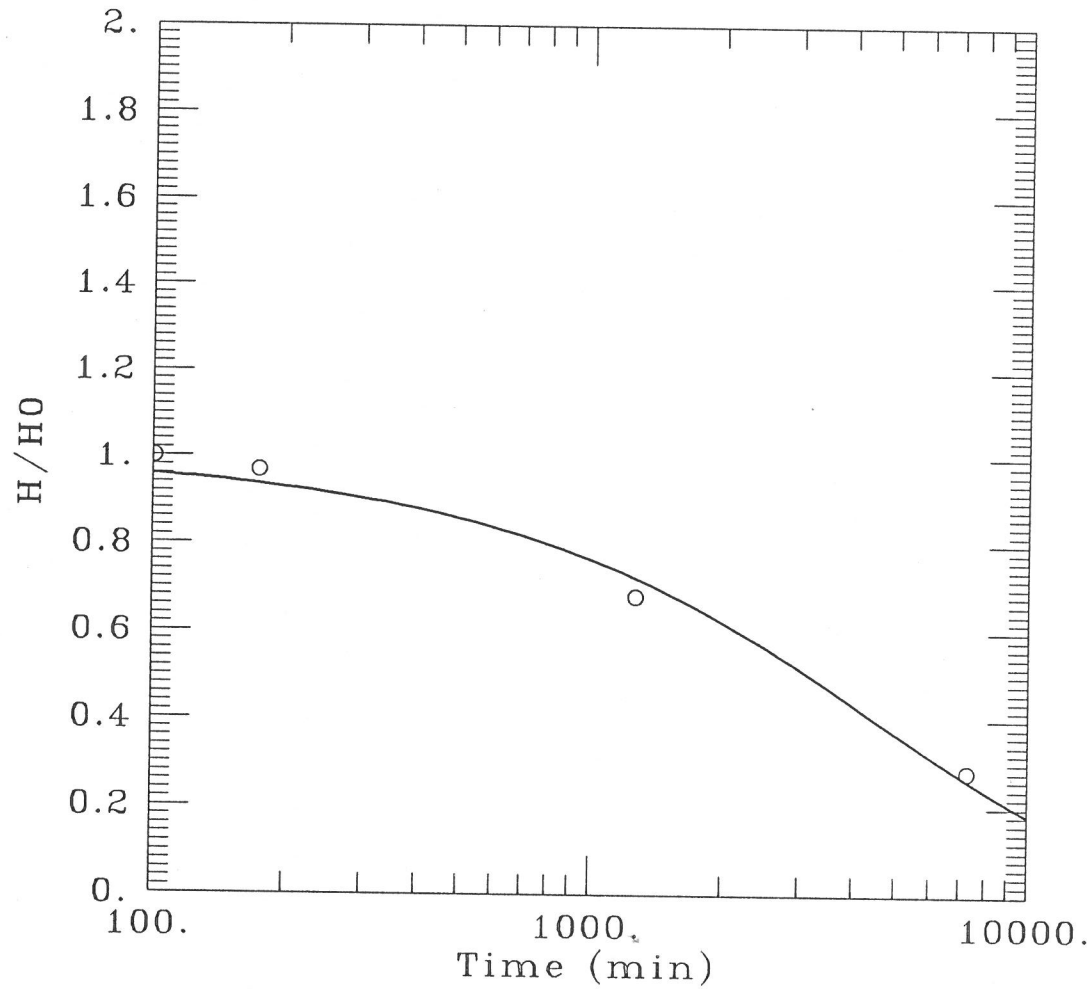
ESTIMATED PARAMETERS:
T = 1.2595E-05 ft^2/min
S = 0.0006438

TEST DATA:
H0 = 2.19 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_0128

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-7R DRAWDOWN



DATA SET:
P-7R-D.AQT
03/22/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
10/05/92

ESTIMATED PARAMETERS:
T = 2.7658E-06 ft^2/min
S = 6.6124E-05

TEST DATA:
H0 = 2.56 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_0129

PATRICK ENGINEERING INC.

BORING NUMBER **P-6D** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,717.0 E 2,186.8**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
524.8	0.0		Brown silty clay, trace to little fine sand, soft, medium plasticity, wet CL	AU-1 0.0-2.0		22.2	
			Mottled at 2.0'	SS-2 2.0-4.0 18"R	2 1 2 3	✳ 21.2	
				SS-3 4.0-6.0 20"R	1 1 2 2	✳ 21.7	
518.3	6.5			SS-4AB 6.0-8.0 18"R	1 2 2 2	✳ 22.0 25.4	Water level at 6.0' during drilling.
517.3	7.5		Brown, clayey, fine sand, little to some silt, loose, poorly graded, saturated SC				
			Brown mottled silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-5 8.0-10.0 10"R	1 1 2 2	✳ 21.7	Wood fragments in SS-5.
514.8	10.0		Gray silty clay, trace fine sand, soft to medium stiff, medium plasticity, wet CL	SS-6 10.0-12.0 20"R	3 1 1 1	✳ 29.8	
				SS-7 12.0-14.0 20"R	2 2 2 2	✳ 28.3	
				SS-8 14.0-16.0 22"R	1 2 4 3	✳ 24.1	
				SS-9 16.0-18.0 24"R	2 2 2 2	✳ 24.7	
				3T-10 18.0-20.0 24"R		✳	
504.8	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/12/92** ENDED **8/12/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **6.0'** during drilling
▽ **1.0'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-6D** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,717.0 E 2,186.8**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
504.8	20.0		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	1 2 2 1	✳ 23.3 ○	
501.8	23.0		Little fine sand in SS-12	SS-12 22.0-24.0 24"R	WOH 1 2 1	✳ 22.7 ○	
			Gray clayey silt, trace fine sand, loose, wet to saturated CL-ML/ML	SS-13 24.0-26.0 24"R	2 3 4 4	18.3 ○	
497.3	27.5			SS-14AB 26.0-28.0 24"R	4 4 7 10	19.5 ○ 15.9 ○	
496.8	28.0		Gray fine sand, trace coarse to medium sand, some silt, medium dense, poorly graded, saturated SM	SS-15 28.0-30.0 24"R	7 7 18 9	14.6 ○	
			Gray coarse to fine sand, trace coarse to fine gravel, some silt, medium dense, well graded, saturated SM	SS-16AB 30.0-32.0 22"R	13 16 17 100 +	13.2 ○	Water level at 1.0' immediately after drilling. Piezometer was installed immediatley after completion of drilling. Refer to As-Built Diagram P-6D for more information.
493.3	31.5					16.9 ○	
492.8	32.0		Gray shale				
			End of Boring at 32.0'				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/12/92** ENDED **8/12/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **6.0'** during drilling.
▼ **1.0'** after drilling.

PATRICK ENGINEERING INC.

BORING NUMBER **P-6R** SHEET **1** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,719.5 E 2,175.7**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
524.8	0.0		Drilled to top of bedrock at 32.5 feet without sampling. Refer to Boring Log P-6D for soil conditions above top of bedrock.				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/5/92** ENDED **8/6/92**

REMARKS

WATER LEVEL (ft.)
▽
▼
▼

PATRICK ENGINEERING INC.

BORING NUMBER **P-6R** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,719.5 E 2,175.7**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
504.8	20.0		Drilled to top of bedrock at 32.5 feet without sampling. Refer to Boring Log P-6D for soil conditions above top of bedrock.				Ceased drilling at 32.5' on 8/5/92. Switched to PQ coring and cored on 8/6/92.
492.3	32.5		Gray shale, massive, excellent	PQ-1 32.5-38.5 72"R			RQD = 100%
				PQ-2 38.5-42.5 48"R			RQD = 100%

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/5/92** ENDED **8/6/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-6R** SHEET **3** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,719.5 E 2,175.7**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

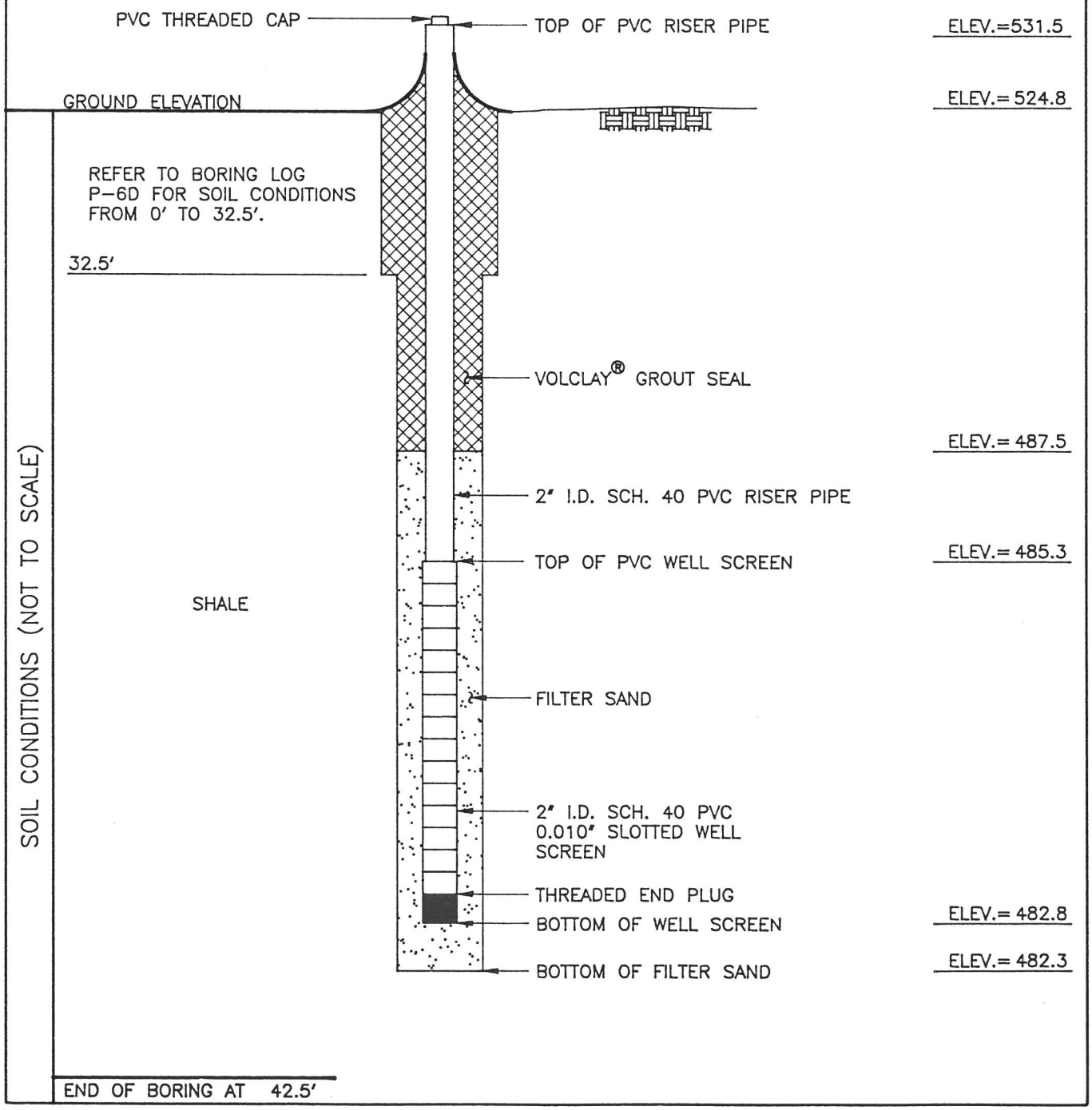
ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
484.8	40.0		Gray shale, massive, excellent				
482.3	42.5		End of Boring at 42.5'.				Piezometer P-6R was installed immediately after completion of drilling. Refer to as-built diagram P-6R for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/5/92** ENDED **8/6/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-6R PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-6R LOCATION N 4719.5 E 2175.7 INSTALLATION DATE 8/6/92 WEATHER SUNNY, 70'S



PATRICK ENGINEERING INC.

BORING NUMBER **P-7D** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,342.8 E 2,432.5**

LOGGED BY **KRR**
GROUND ELEVATION **526.5**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
526.5	0.0		Brown silty clay, trace fine sand, stiff to very stiff, medium plasticity, wet CL	AU-1 0.0-2.0		19.2	
			Mottled from 2.0'.	SS-2 2.0-4.0 24"R	3 3 4 5	17.6	SS-3: LL=33 PL=19 PI=14
				SS-3 4.0-6.0 24"R	2 3 4 4	21.7	
				SS-4 6.0-8.0 24"R	5 5 5 6	25.3	SS-4: CEC = 16.5 meq/100g
				3T-5 8.0-10.0 24"R		22.6	3T-5: Dry dens=101pcf k=2.0 E-07 cm/s
515.0	11.5			SS-6AB 10.0-12.0 24"R	2 1 2 2	24.8	SS-6B: Gravel = 0% Sand = 52% Silt or Clay = 48%
514.5	12.0		Brown clayey fine sand, little silt, loose, poorly graded, moist SC			23.1	
			Gray silty clay, trace fine sand, soft to stiff, low to medium plasticity, wet CL	SS-7 12.0-14.0 24"R	2 2 3 3	28.9	
				SS-8 14.0-16.0 24"R	WOH 1 1 1	26.9	SS-8: LL = 29 PL = 22 PI = 7
				SS-9 16.0-18.0 24"R	2 2 2 2	25.1	
				SS-10 18.0-20.0 24"R	WOH 1 1 1	23.6	
506.5	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/30/92** ENDED **7/30/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **20.0'** during drilling.
▼
▼

PATRICK ENGINEERING INC.

BORING NUMBER **P-7D** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,342.8 E 2,432.5**

LOGGED BY **KRR**
GROUND ELEVATION **526.5**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
506.5	20.0		Gray silty clay, trace fine sand, soft, low to medium plasticity, wet CL	SS-11 20.0-22.0 24"R	WOH 1 1 1	✳ 22.6	Water level at 20.0' during drilling.
				3T-12 22.0-24.0 20"R		✳	
502.5	24.0		Gray clayey silt, some fine sand, loose, poorly graded, saturated CL-ML	SS-13 24.0-26.0 24"R	1 2 1 3	24.3	SS-13: Gravel = 0% Sand = 34% Silt or Clay = 66%
500.5	26.0		Gray fine sand, some silt, very loose, poorly graded, saturated SM	SS-14 26.0-28.0 18"R	1 1 1 1	19.1	
				SS-15 28.0-30.0 20"R	1 1 1 3	10.9	
497.5	29.0		Gray coarse to fine sand, some coarse to fine gravel, little silt, loose, well graded, saturated SW-SM/SM	SS-16 30.0-32.0 20"R	2 2 4 11	✳ 24.2	SS-16: Gravel = 27% Sand = 59% Silt or clay = 14%
495.5	31.0		Gray silty clay to clay, trace fine sand, very stiff to hard, medium to high plasticity, moist CL/CH	SS-17 32.0-34.0 15"R	28 115 200+ /3"	✳ 13.3	
494.0	32.5						
493.3	33.2		Gray shale				
			End of Boring at 33.2'.				Piezometer was installed immediately after completion of drilling. Refer to as-built diagram P-7D for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/30/92** ENDED **7/30/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **20.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-7M** SHEET **1** OF **1**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,337.0 E 2,432.8**

LOGGED BY **KRR**
GROUND ELEVATION **525.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
525.9	0.0		Drilled to 16.0' without sampling. Refer to Boring Log P-6D for soil conditions from 0' to 16'.				Soil conditions from 0' to 16' were consistent with soil conditions in P-6D based on soil cuttings.
							3T-2: Dry dens. = 101pcf k = 1.5 E-07 cm/s
509.9	16.0		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-1 16.0-18.0 24"R	1 1 1 2	✳ 22.0 20.1	Piezometer P-7M was installed immediately after completion of drilling. Refer to as-built diagram P-7M for more details.
				3T-2 18.0-20.0 20"R		✳ 22.5	
505.9	20.0		End of Boring at 20.0'.				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/30/92** ENDED **7/30/92**

REMARKS

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **P-7R** SHEET **1** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,326.9 E 2,424.5**

LOGGED BY **KRR**
GROUND ELEVATION **525.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
525.4	0.0		Drilled to 34.0' (auger refusal) without sampling. Refer to Boring Log P-7D for soil conditions from 0' to 34'.				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/31/92** ENDED **7/31/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-7R** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,326.9 E 2,424.5**

LOGGED BY **KRR**
GROUND ELEVATION **525.4**

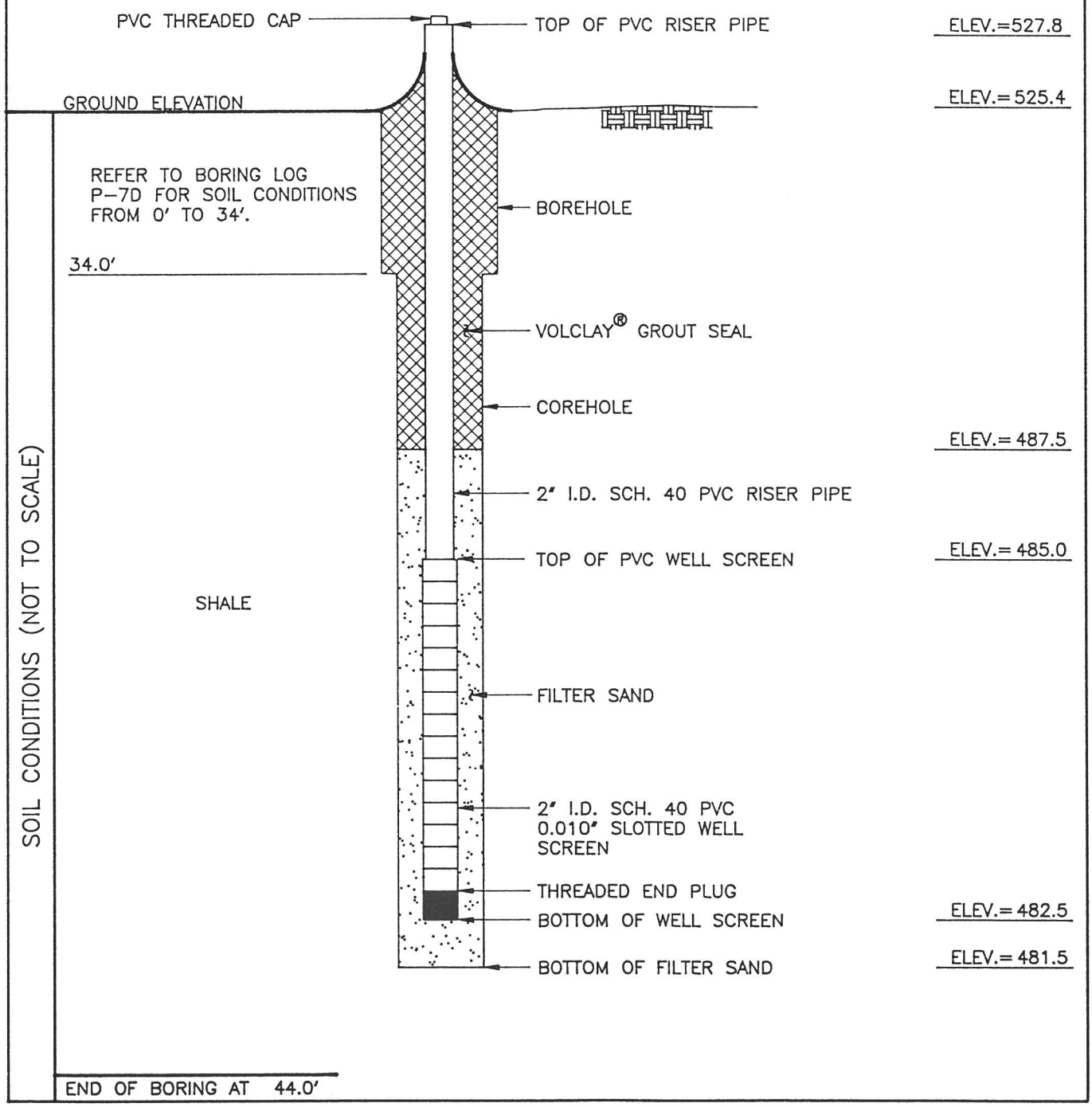
ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
505.4	20.0		Drilled to 34.0' (auger refusal) without sampling. Refer to Boring Log P-7D for soil conditions from 0' to 34'.				Soil conditions are consistent with soil conditions encountered at P-7D based on soil cuttings.
491.4	34.0		Gray shale, massive, strongly cemented, excellent	PQ-1 34.0-39.0 60"R			Changed to PQ coring from 34.0'. RQD = 100%
				PQ-2 39.0-44.0			

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/31/92** ENDED **7/31/92**

REMARKS

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-7R PROJ. NO. 496B
PROJECT FGDS LANDFILL		BORING NO. P-7R
LOCATION SPRINGFIELD, ILLINOIS		LOCATION N 5326.9
CLIENT CWL&P		E 2424.5
ENGINEER KRISHNA REDDY		INSTALLATION DATE 7/31/92
DRILLER KEVIN SHAMWAY		WEATHER CLOUDY, DRIZZLE, 70'S



APPENDIX D:
Analytical Summary

City Water, Light and Power
CWLP CCR Surface Impoundments
2022 - 2024 Groundwater Analytical Summary Data

Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
Appendix III																		
AP-1	Boron, total	mg/L	0.14973			**0.14973**	22.3	23.1	22.1	21.4	23.2	21.2	22.5	21.7	23.5	22.7	22.9	23.6
AP-2	Boron, total	mg/L	0.14973			**0.14973**	4.68	4.25	4.32	4.08	3.94	3.7	3.73	3.23	3.38	3.43	3.1	3.52
AP-3	Boron, total	mg/L	0.14973			**0.14973**	15.8	14.7	14.8	14.6	14.5	14.3	14	15.2	14.8	14.5	14.6	14.9
AP-4	Boron, total	mg/L	0.14973			**0.14973**	0.0954	0.0968	0.0927	0.102	0.0918	0.101	0.0845	0.0841	0.0871	0.0834	0.0825	0.082
AP-5	Boron, total	mg/L	0.14973			**0.14973**	< 0.02	0.0341	< 0.02	0.045	0.0353	0.0311	0.0323	0.0455	0.0434	0.0269	0.0339	0.0326
AP-6	Boron, total	mg/L	0.14973			**0.14973**	0.247	0.275	0.0716	0.166	0.13	0.174	0.0753	0.214	0.171	0.238	0.25	0.248
AP-7	Boron, total	mg/L	0.14973			**0.14973**	0.381	0.339	0.204	0.26	0.18	0.391	0.141	0.331	0.173	0.0978	0.244	0.332
AP-8	Boron, total	mg/L	0.14973			**0.14973**	0.125	0.0877	0.0839	0.0927	0.0849	0.11	0.0932	0.0896	0.0866	0.0877	0.0855	0.084
AP-9	Boron, total	mg/L	0.14973			**0.14973**	0.0491	0.122	0.092	0.11	0.0973	0.102	0.0807	0.0956	0.0932	0.0988	0.0979	0.0995
AP-10	Boron, total	mg/L	0.14973			**0.14973**		3.58	3.52	3.35	3.32	3.76	3.81	3.6	3.71	3.92	3.9	3.95
AP-11	Boron, total	mg/L	0.14973			**0.14973**	0.276	0.271	0.0533	0.261	0.282	0.241	0.24	0.256	0.232	0.0555	0.211	0.261
AP-12	Boron, total	mg/L	0.14973			**0.14973**	0.0244	< 0.02	0.0213	0.0294	0.0277	< 0.02	< 0.02	0.038	0.021	< 0.02	0.0241	< 0.02
AP-13	Boron, total	mg/L	0.14973			**0.14973**	0.0403	0.0375	0.268	0.044	0.0485	0.0328	0.0235	0.0386	0.0356	0.0343	0.0357	< 0.02
AP-14	Boron, total	mg/L	0.14973			**0.14973**	23.1	23.3	21.8	21.3	21.3	23	22.6	22.1	21.6	22.3	20	21
AW-1	Boron, total	mg/L	0.14973			**0.14973**		8.24	7.78			8.39		8.66	8.24	9.44	9.19	8.91
RW-3	Boron, total	mg/L	0.14973			**0.14973**	0.179	0.196	0.177	0.192	0.175	0.186	0.0595	0.117	0.116	0.154	0.122	0.137
R111	Boron, total	mg/L	0.14973			**0.14973**	4.19		0.104			4.64	3.89	0.102	< 0.02	0.901	3.5	4.19
G120	Boron, total	mg/L	0.14973			**0.14973**		6.19	5.85			6.92		7.15	7.12	7.43	7.71	7.5
T-1	Boron, total	mg/L	0.14973			**0.14973**										0.227	0.141	0.15
T-2	Boron, total	mg/L	0.14973			**0.14973**										0.189	0.0718	0.0507
T-4	Boron, total	mg/L	0.14973			**0.14973**										0.0304	0.0537	0.0565
T-5	Boron, total	mg/L	0.14973			**0.14973**										0.0639	0.0843	0.0791
T-6	Boron, total	mg/L	0.14973			**0.14973**										0.201	0.214	0.21
AP-1	Calcium, total	mg/L	181.6			**181.6**	245	243	239	242	230	242	285	229	250	248	244	237
AP-2	Calcium, total	mg/L	181.6			**181.6**	265	236	241	248	217	210	244	204	210	194	206	222
AP-3	Calcium, total	mg/L	181.6			**181.6**	150	152	157	160	161	168	189	181	177	176	175	185
AP-4	Calcium, total	mg/L	181.6			**181.6**	123	122	116	121	115	125	132	118	119	123	118	< 0.1
AP-5	Calcium, total	mg/L	181.6			**181.6**	87.2	74.3	102	80.2	78.3	80.4	96.3	90.7	96.7	94.1	96.3	92.6
AP-6	Calcium, total	mg/L	181.6			**181.6**	69.2	66.2	43	57.8	52.4	60.9	49	65.8	61.4	65.8	65.6	66
AP-7	Calcium, total	mg/L	181.6			**181.6**	62.9	64.9	46.4	44.8	49.3	53.6	49.6	50.6	55.6	52.3	59.5	61.9
AP-8	Calcium, total	mg/L	181.6			**181.6**	100	96.5	96.1	100	95.1	99.1	107	101	99.3	99.4	89.5	98.4
AP-9	Calcium, total	mg/L	181.6			**181.6**	46.5	112	102	104	105	108	86.1	97.8	97.9	101	103	104
AP-10	Calcium, total	mg/L	181.6			**181.6**		141	140	142	139	144	138	138	141	141	133	140
AP-11	Calcium, total	mg/L	181.6			**181.6**	127	149	102	141	169	145	118	134	150	217	126	124
AP-12	Calcium, total	mg/L	181.6			**181.6**	201	287	266	260	265	269	271	268	228	240	258	203
AP-13	Calcium, total	mg/L	181.6			**181.6**	106	105	138	112	107	105	106	122	101	109	106	103
AP-14	Calcium, total	mg/L	181.6			**181.6**	225	215	217	236	209	233	235	278	263	245	237	253
AW-1	Calcium, total	mg/L	181.6			**181.6**		195				191		197	203	200	186	193
RW-3	Calcium, total	mg/L	181.6			**181.6**	72.7	75.6	72.3	72.7	67.8	70.5	52.8	58.7	63.4	65.6	63.2	67.2
R111	Calcium, total	mg/L	181.6			**181.6**	169		40.2			181		15.1	11	93.5	163	169
G120	Calcium, total	mg/L	181.6			**181.6**		263				274		257	265	259	240	263
T-1	Calcium, total	mg/L	181.6			**181.6**										105	183	172
T-2	Calcium, total	mg/L	181.6			**181.6**										150	218	211
T-4	Calcium, total	mg/L	181.6			**181.6**										62.7	77.3	96.8
T-5	Calcium, total	mg/L	181.6			**181.6**										65.4	64.6	70.3
T-6	Calcium, total	mg/L	181.6			**181.6**										91.3	84.3	91.4

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

City Water, Light and Power
CWLP CCR Surface Impoundments
2022 - 2024 Groundwater Analytical Summary Data

Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Chloride, total	mg/L	12.3			**12.3**	55	59	44	61	58	60	36	53	54	29	59	52.1
AP-2	Chloride, total	mg/L	12.3			**12.3**	36	35	34	34	36	37	54	40	39	36	39	35.1
AP-3	Chloride, total	mg/L	12.3			**12.3**	42	42	47	55	60	59	51	57	54	53	55.9	59.5
AP-4	Chloride, total	mg/L	12.3			**12.3**	12	16	13	14	14	14	13	14	13	13	15	12.3
AP-5	Chloride, total	mg/L	12.3			**12.3**	< 4	2	6	< 4	3	4	4	5	8	8	8	7.59
AP-6	Chloride, total	mg/L	12.3			**12.3**	35	38	25	31	27	31	28	33	30	33	37	34.5
AP-7	Chloride, total	mg/L	12.3			**12.3**	64	66	36	58	45	70	39	60	42	43	50	62.1
AP-8	Chloride, total	mg/L	12.3			**12.3**	26	28	27	26	26	26	25	25	24	26	35	23.2
AP-9	Chloride, total	mg/L	12.3			**12.3**	24	64	30	27	36	60	28	26	25	39	29	23.6
AP-10	Chloride, total	mg/L	12.3			**12.3**		29	28	28	27	28	28	27	27	27	30	25.7
AP-11	Chloride, total	mg/L	12.3			**12.3**	83	119	29	105	140	123	79	90	122	429	90	91
AP-12	Chloride, total	mg/L	12.3			**12.3**	113	162	143	147	140	142	139	124	115	121	136	120
AP-13	Chloride, total	mg/L	12.3			**12.3**	35	27	103	26	29	26	26	27	27	26	27	25.8
AP-14	Chloride, total	mg/L	12.3			**12.3**	49	52	59	65	59	71	73	89	82	83	92	94
AW-1	Chloride, total	mg/L	12.3			**12.3**		40				41		40	40	40	41	37.3
RW-3	Chloride, total	mg/L	12.3			**12.3**	29	31	31	30	29	32	28	31	27	28	29	25.1
R111	Chloride, total	mg/L	12.3			**12.3**	202		25			219		< 4	6	22	185	202
G120	Chloride, total	mg/L	12.3			**12.3**		40				40		40	39	39	41	37.4
T-1	Chloride, total	mg/L	12.3			**12.3**										49	259	233
T-2	Chloride, total	mg/L	12.3			**12.3**										173	447	509
T-4	Chloride, total	mg/L	12.3			**12.3**										< 4	< 4	< 5
T-5	Chloride, total	mg/L	12.3			**12.3**										< 4	< 4	< 5
T-6	Chloride, total	mg/L	12.3			**12.3**										21	24	19.4
AP-1	Fluoride, total	mg/L	0.5	4		**4**	0.2	0.21	0.2	0.18	0.2	0.27	0.24	0.26	0.18	0.19	0.2	< 0.5
AP-2	Fluoride, total	mg/L	0.5	4		**4**	0.24	0.24	0.24	0.22	0.24	0.22	0.2	0.27	0.21	0.23	0.25	< 0.5
AP-3	Fluoride, total	mg/L	0.5	4		**4**	0.21	0.24	0.23	0.21	0.22	0.22	0.21	0.25	0.17	0.19	< 0.5	< 0.5
AP-4	Fluoride, total	mg/L	0.5	4		**4**	0.14	0.15	0.15	0.13	0.14	0.14	0.14	0.16	0.16	0.13	0.15	< 0.5
AP-5	Fluoride, total	mg/L	0.5	4		**4**	0.33	0.38	0.29	0.31	0.34	0.32	0.31	0.37	0.28	0.29	0.32	< 0.5
AP-6	Fluoride, total	mg/L	0.5	4		**4**	0.49	0.55	0.31	0.4	0.38	0.51	0.26	0.5	0.37	0.48	0.56	< 0.5
AP-7	Fluoride, total	mg/L	0.5	4		**4**	0.55	0.56	0.37	0.39	0.36	0.53	0.34	0.53	0.44	0.38	0.46	< 0.5
AP-8	Fluoride, total	mg/L	0.5	4		**4**	0.29	0.31	0.3	0.27	0.3	0.33	0.29	0.31	0.26	0.28	0.33	< 0.5
AP-9	Fluoride, total	mg/L	0.5	4		**4**	0.25	0.23	0.25	0.22	0.22	0.2	0.23	0.29	0.26	0.21	0.26	< 0.5
AP-10	Fluoride, total	mg/L	0.5	4		**4**		0.35	0.34	0.3	0.3	0.36	0.32	0.35	0.29	0.28	0.32	< 0.5
AP-11	Fluoride, total	mg/L	0.5	4		**4**	0.21	0.22	0.22	0.2	0.18	0.2	0.21	0.65	0.22	0.22	0.21	< 0.5
AP-12	Fluoride, total	mg/L	0.5	4		**4**	0.17	0.19	0.18	0.17	0.17	0.18	0.18	0.2	0.19	0.16	0.19	< 0.5
AP-13	Fluoride, total	mg/L	0.5	4		**4**	0.23	0.24	0.22	0.21	0.2	0.23	0.22	0.24	0.24	0.2	0.22	< 0.5
AP-14	Fluoride, total	mg/L	0.5	4		**4**	0.28	0.3	0.29	0.26	0.25	0.28	0.27	0.29	0.3	0.24	0.28	< 0.5
AW-1	Fluoride, total	mg/L	0.5	4		**4**		< 0.1				< 0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.5
RW-3	Fluoride, total	mg/L	0.5	4		**4**	0.47	0.49	0.48	0.43	0.46	0.52	0.27	0.44	0.37	0.4	0.43	< 0.5
R111	Fluoride, total	mg/L	0.5	4		**4**	< 0.5		0.11			0.16		< 0.1	< 0.1	< 0.1	0.14	< 0.5
G120	Fluoride, total	mg/L	0.5	4		**4**		0.18				0.19		0.18	0.17	0.16	0.16	< 0.5
T-1	Fluoride, total	mg/L	0.5	4		**4**										0.2	0.22	< 0.5
T-2	Fluoride, total	mg/L	0.5	4		**4**										0.24	0.23	< 0.5
T-4	Fluoride, total	mg/L	0.5	4		**4**										0.26	0.32	< 0.5
T-5	Fluoride, total	mg/L	0.5	4		**4**										0.18	0.22	< 0.5
T-6	Fluoride, total	mg/L	0.5	4		**4**										0.28	0.32	< 0.5

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Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	pH	s.u.	6.7 - 7.87			**7.87**	6.57	6.58	6.65	6.68	6.6	6.52	6.51	6.71	6.51	6.31	6.7	6.54
AP-2	pH	s.u.	6.7 - 7.87			**7.87**	6.43	6.43	6.45	6.52	6.46	6.44	6.4	6.57	6.41	6.21	6.58	6.41
AP-3	pH	s.u.	6.7 - 7.87			**7.87**	6.6	6.58	6.6	6.65	6.58	6.64	6.53	6.69	6.55	6.36	6.2	6.48
AP-4	pH	s.u.	6.7 - 7.87			**7.87**	6.92	6.86	6.89	6.95	6.99	6.82	6.86	6.99	6.86	6.83	6.97	6.82
AP-5	pH	s.u.	6.7 - 7.87			**7.87**	7.01	7.17	7.16	7.16	7.06	7.08	7.16	7.17	7.01	6.99	7.07	6.9
AP-6	pH	s.u.	6.7 - 7.87			**7.87**	7.18	7.11	7.2	7.14	7.07	7.02	7.06	7.17	6.97	7.27	7.16	7
AP-7	pH	s.u.	6.7 - 7.87			**7.87**	7.2	6.92	7.12	7.17	7.2	7.11	7.28	7.15	7.15	7.15	7.2	7.17
AP-8	pH	s.u.	6.7 - 7.87			**7.87**	6.91	6.9	6.76	6.99	6.86	6.77	6.75	7.01	6.83	7.03	7.03	6.78
AP-9	pH	s.u.	6.7 - 7.87			**7.87**	7.47	6.63	6.92	6.83	6.85	6.69	6.88	6.81	6.82	6.75	6.89	6.8
AP-10	pH	s.u.	6.7 - 7.87			**7.87**		6.69	6.7	6.76	6.58	6.68	6.57	6.82	6.65	6.54	6.53	6.73
AP-11	pH	s.u.	6.7 - 7.87			**7.87**	6.57	6.51	6.61	6.64	6.42	6.45	6.64	6.6	6.45	6.75	6.44	6.66
AP-12	pH	s.u.	6.7 - 7.87			**7.87**	6.53	6.44	6.56	6.6	6.47	6.43	6.57	6.62	6.53	6.52	6.43	6.59
AP-13	pH	s.u.	6.7 - 7.87			**7.87**	6.71	6.59	6.76	6.79	6.62	6.54	6.66	6.74	6.73	6.7	6.59	6.67
AP-14	pH	s.u.	6.7 - 7.87			**7.87**	6.93	6.95	6.94	7.05	6.69	6.97	6.93	7.06	6.93	6.95	6.76	6.93
AW-1	pH	s.u.	6.7 - 7.87			**7.87**	6.67	6.66	6.64	6.83	6.54	6.47	6.51	6.54	6.55	6.58	6.58	6.56
RW-3	pH	s.u.	6.7 - 7.87			**7.87**	7.27	7.2	7.11	7.21	6.15	7.06	7.13	7.31	7.1	6.7	7.23	7.13
R111	pH	s.u.	6.7 - 7.87			**7.87**	5.96	6.86	6.92	6.81	7.69	6.97	6.91	6.42	6.14	6.01	6.84	5.96
G120	pH	s.u.	6.7 - 7.87			**7.87**	6.77	6.73	6.7	6.7	6.62	6.54	6.79	6.78	6.47	6.65	6.81	6.55
T-1	pH	s.u.	6.7 - 7.87			**7.87**										6.57	6.51	6.57
T-2	pH	s.u.	6.7 - 7.87			**7.87**										6.51	6.37	6.54
T-4	pH	s.u.	6.7 - 7.87			**7.87**										6.31	6.68	6.65
T-5	pH	s.u.	6.7 - 7.87			**7.87**										6.62	6.86	6.82
T-6	pH	s.u.	6.7 - 7.87			**7.87**										6.56	6.77	6.97
AP-1	Sulfate, total	mg/L	55.5			**55.5**	732	791	753	777	56.8	768	443	740	790	805	836	849
AP-2	Sulfate, total	mg/L	55.5			**55.5**	583	532	545	643	485	462	795	380	393	411	417	440
AP-3	Sulfate, total	mg/L	55.5			**55.5**	410	408	384	444	461	483	467	495	512	493	554	558
AP-4	Sulfate, total	mg/L	55.5			**55.5**	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	11	< 10	< 10	< 10
AP-5	Sulfate, total	mg/L	55.5			**55.5**	57	35	66	36	37	44	43	45	50	43	63	59.2
AP-6	Sulfate, total	mg/L	55.5			**55.5**	< 10	< 10	15	13	12	11	22	13	14	< 10	11	< 10
AP-7	Sulfate, total	mg/L	55.5			**55.5**	< 10	< 10	15	13	16	< 10	20	15	17	11	14	< 10
AP-8	Sulfate, total	mg/L	55.5			**55.5**	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	11	< 10
AP-9	Sulfate, total	mg/L	55.5			**55.5**	23	57	27	28	38	64	24	23	23	22	25	17.7
AP-10	Sulfate, total	mg/L	55.5			**55.5**		86	87	96	96	100	100	91	96	100	108	89.4
AP-11	Sulfate, total	mg/L	55.5			**55.5**	67	88	120	89	105	89	65	81	89	134	77	63.4
AP-12	Sulfate, total	mg/L	55.5			**55.5**	402	678	607	691	641	659	632	563	460	499	612	457
AP-13	Sulfate, total	mg/L	55.5			**55.5**	134	135	64	142	133	146	139	151	118	140	135	121
AP-14	Sulfate, total	mg/L	55.5			**55.5**	670	681	639	736	699	707	714	806	679	740	821	909
AW-1	Sulfate, total	mg/L	55.5			**55.5**		344				399		384	369	401	406	388
RW-3	Sulfate, total	mg/L	55.5			**55.5**	10	< 10	< 10	< 10	< 10	< 10	22	16	14	< 10	14	< 10
R111	Sulfate, total	mg/L	55.5			**55.5**	33.3		< 10			38		< 10	< 10	11	32	33.3
G120	Sulfate, total	mg/L	55.5			**55.5**		464				500		555	503	535	534	565
T-1	Sulfate, total	mg/L	55.5			**55.5**										36	236	224
T-2	Sulfate, total	mg/L	55.5			**55.5**										135	181	142
T-4	Sulfate, total	mg/L	55.5			**55.5**										87	100	104
T-5	Sulfate, total	mg/L	55.5			**55.5**										27	40	40.4
T-6	Sulfate, total	mg/L	55.5			**55.5**										< 10	11	< 10

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Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Total Dissolved Solids	mg/L	609.21			**609.21**	1490	1550	1550	1540	7.4	1540	1190	1360	1400	1490	1530	1640
AP-2	Total Dissolved Solids	mg/L	609.21			**609.21**	1310	1270	1360	1310	1180	1100	1600	1020	1020	1040	1110	1160
AP-3	Total Dissolved Solids	mg/L	609.21			**609.21**	882	942	1030	920	1040	984	990	1080	935	1040	1170	1160
AP-4	Total Dissolved Solids	mg/L	609.21			**609.21**	496	516	540	495	515	534	560	420	520	500	510	565
AP-5	Total Dissolved Solids	mg/L	609.21			**609.21**	406	354	488	358	374	404	400	396	434	405	422	470
AP-6	Total Dissolved Solids	mg/L	609.21			**609.21**	374	458	246	348	322	380	268	322	380	390	396	445
AP-7	Total Dissolved Solids	mg/L	609.21			**609.21**	440	480	290	348	328	444	300	352	330	340	386	470
AP-8	Total Dissolved Solids	mg/L	609.21			**609.21**	502	552	540	505	555	544	555	430	520	590	526	530
AP-9	Total Dissolved Solids	mg/L	609.21			**609.21**	224	618	565	595	586	638	515	524	530	535	558	740
AP-10	Total Dissolved Solids	mg/L	609.21			**609.21**		752	755	730	778	756	725	732	745	720	796	790
AP-11	Total Dissolved Solids	mg/L	609.21			**609.21**	606	778	550	625	820	726	670	640	665	1780	596	686
AP-12	Total Dissolved Solids	mg/L	609.21			**609.21**	998	1600	1540	1440	1440	1580	1640	1320	1290	1620	1670	1300
AP-13	Total Dissolved Solids	mg/L	609.21			**609.21**	486	530	690	525	495	538	530	465	500	910	560	655
AP-14	Total Dissolved Solids	mg/L	609.21			**609.21**	1240	1340	1390	1380	1280	1330	1480	1440	1510	1480	1610	1840
AW-1	Total Dissolved Solids	mg/L	609.21			**609.21**	1080	1060	1090	1100	1150			1220	1120	1010	1190	1100
RW-3	Total Dissolved Solids	mg/L	609.21			**609.21**	1030	428	428	425	420		290	340	335	345	344	470
R111	Total Dissolved Solids	mg/L	609.21			**609.21**	875	135	805	118	110			68	78	525	832	875
G120	Total Dissolved Solids	mg/L	609.21			**609.21**	1360	1440	1420	1400	1450			1390	1320	1320	1450	1430
T-1	Total Dissolved Solids	mg/L	609.21			**609.21**										700	1020	1060
T-2	Total Dissolved Solids	mg/L	609.21			**609.21**										1060	1430	1580
T-4	Total Dissolved Solids	mg/L	609.21			**609.21**										255	382	695
T-5	Total Dissolved Solids	mg/L	609.21			**609.21**										280	338	382
T-6	Total Dissolved Solids	mg/L	609.21			**609.21**										475	494	595
Appendix IV																		
AP-1	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-2	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0021	< 0.001	< 0.001
AP-3	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-4	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-5	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-6	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0021
AP-7	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0016	< 0.001
AP-8	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-9	Antimony, total	mg/L	0.001	0.006		**0.006**	0.0025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0017	< 0.001
AP-10	Antimony, total	mg/L	0.001	0.006		**0.006**		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0014	< 0.001	< 0.001
AP-11	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-12	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	0.0015	< 0.001	< 0.001	< 0.001	< 0.001	0.0018	< 0.001	< 0.001
AP-13	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-14	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AW-1	Antimony, total	mg/L	0.001	0.006		**0.006**		< 0.001				< 0.001		< 0.001	< 0.001	< 0.001	0.0016	< 0.001
RW-3	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
R111	Antimony, total	mg/L	0.001	0.006		**0.006**	< 0.001		< 0.001			< 0.001		< 0.001	< 0.001	< 0.001	0.0014	< 0.001
G120	Antimony, total	mg/L	0.001	0.006		**0.006**		< 0.001				< 0.001		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
T-1	Antimony, total	mg/L	0.001	0.006		**0.006**										< 0.001	< 0.001	< 0.001
T-2	Antimony, total	mg/L	0.001	0.006		**0.006**										< 0.001	< 0.001	< 0.001
T-4	Antimony, total	mg/L	0.001	0.006		**0.006**										0.0013	< 0.001	< 0.001
T-5	Antimony, total	mg/L	0.001	0.006		**0.006**										< 0.001	< 0.001	< 0.001
T-6	Antimony, total	mg/L	0.001	0.006		**0.006**										< 0.001	< 0.001	< 0.001

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

City Water, Light and Power
CWLP CCR Surface Impoundments
2022 - 2024 Groundwater Analytical Summary Data

Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-2	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.002	0.002	0.0027	0.002	0.0031	0.0016
AP-3	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.0109	0.0182	0.0101	0.0021	0.008	0.0182
AP-4	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	0.0306	< 0.025	0.0309	0.027	< 0.025	0.025	0.0239	0.0225	0.0375	0.0229	0.0207	0.0246
AP-5	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-6	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.004	0.0183	0.0068	0.0121	0.0074	0.0108
AP-7	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	0.0468	0.0376	< 0.025	< 0.025	0.0462	0.0412	0.075	0.0555	0.0395	0.0438	0.0947
AP-8	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	0.0319	0.0352	0.0377	0.034	0.0336	0.0348	0.0513	0.0395	0.0426	0.0461	0.0414	0.0386
AP-9	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.0114	0.0062	0.0037	0.0024	0.0028	0.0019
AP-10	Arsenic, total	mg/L	0.0239	0.01		**0.0239**		< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.0013	< 0.001	0.0011	< 0.001	< 0.001	0.0011
AP-11	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.001	< 0.001	< 0.001	0.0037	< 0.001	< 0.001
AP-12	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.001	0.0149	0.0013	0.0038	0.0015	< 0.001
AP-13	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.0031	0.0075	0.0028	0.0032	0.0029	0.0038
AP-14	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	0.0018	0.0036	0.0039	0.0019	0.0016	0.0022
AW-1	Arsenic, total	mg/L	0.0239	0.01		**0.0239**		0.148	0.192			0.152		0.208	0.16	0.153	0.129	0.168
RW-3	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	0.178	0.109	0.11	0.142	0.169	0.185	0.0831	0.74	0.306	0.188	0.107	0.214
R111	Arsenic, total	mg/L	0.0239	0.01		**0.0239**	0.0185		0.0111	0.0031		0.021	0.0212	0.0019	0.0015	0.0175	0.0166	0.0185
G120	Arsenic, total	mg/L	0.0239	0.01		**0.0239**		0.012				0.0138		0.0162	0.0116	0.0121	0.0104	0.0119
T-1	Arsenic, total	mg/L	0.0239	0.01		**0.0239**										< 0.001	0.0048	0.0019
T-2	Arsenic, total	mg/L	0.0239	0.01		**0.0239**										0.0023	0.0053	0.006
T-4	Arsenic, total	mg/L	0.0239	0.01		**0.0239**										0.0013	0.0055	0.0055
T-5	Arsenic, total	mg/L	0.0239	0.01		**0.0239**										< 0.001	< 0.001	0.0016
T-6	Arsenic, total	mg/L	0.0239	0.01		**0.0239**										0.0076	0.0108	0.0158
AP-1	Barium, total	mg/L	0.51918	2		**2**	0.277	0.309	0.246	0.285	0.236	0.329	0.271	0.262	0.292	0.3	0.269	0.269
AP-2	Barium, total	mg/L	0.51918	2		**2**	0.0721	0.073	0.0751	0.0734	0.0744	0.0656	0.0719	0.0716	0.0678	0.0607	0.0751	0.0727
AP-3	Barium, total	mg/L	0.51918	2		**2**	0.08019999	0.0849	0.0883	0.0951	0.111	0.103	0.0993	0.113	0.095	0.077	0.102	0.132
AP-4	Barium, total	mg/L	0.51918	2		**2**	0.413	0.422	0.392	0.399	0.39	0.404	0.396	0.381	0.39	0.407	0.374	0.39
AP-5	Barium, total	mg/L	0.51918	2		**2**	0.0505	0.0345	0.0908	0.042	0.0408	0.0451	0.0461	0.0471	0.0515	0.051	0.0521	0.0525
AP-6	Barium, total	mg/L	0.51918	2		**2**	0.119	0.141	0.066	0.135	0.0938	0.111	0.0844	0.16	0.119	0.147	0.152	0.154
AP-7	Barium, total	mg/L	0.51918	2		**2**	0.125	0.13	0.119	0.13	0.111	0.162	0.106	0.158	0.118	0.0915	0.108	0.148
AP-8	Barium, total	mg/L	0.51918	2		**2**	0.355	0.356	0.355	0.371	0.36	0.375	0.378	0.374	0.374	0.373	0.407	0.364
AP-9	Barium, total	mg/L	0.51918	2		**2**	0.114	0.399	0.403	0.396	0.284	0.295	0.324	0.399	0.378	0.36	0.405	0.434
AP-10	Barium, total	mg/L	0.51918	2		**2**		0.571	0.553	0.57	0.509	0.602	0.596	0.583	0.613	0.605	0.638	0.628
AP-11	Barium, total	mg/L	0.51918	2		**2**	0.108	0.152	0.176	0.184	0.37	0.161	0.113	0.126	0.154	0.238	0.11	0.122
AP-12	Barium, total	mg/L	0.51918	2		**2**	0.171	0.101	0.153	0.0701	0.0794	0.0649	0.0481	0.138	0.0569	0.0707	0.0515	0.0458
AP-13	Barium, total	mg/L	0.51918	2		**2**	0.119	0.161	0.307	0.26	0.175	0.128	0.121	0.177	0.116	0.131	0.127	0.12
AP-14	Barium, total	mg/L	0.51918	2		**2**	0.0411	0.0343	0.0361	0.0438	0.0413	0.0389	0.0349	0.0636	0.0422	0.0329	0.0371	0.0413
AW-1	Barium, total	mg/L	0.51918	2		**2**		0.64				0.622		1.96	2.02	1.48	0.602	0.446
RW-3	Barium, total	mg/L	0.51918	2		**2**	0.154	0.151	0.158	0.166	0.168	0.172	0.106	0.165	0.166	0.143	0.146	0.18
R111	Barium, total	mg/L	0.51918	2		**2**	0.686		0.161			0.704		0.0598	0.0139	0.369	0.639	0.686
G120	Barium, total	mg/L	0.51918	2		**2**		0.432				0.972		0.556	0.628	0.681	0.614	0.565
T-1	Barium, total	mg/L	0.51918	2		**2**										0.0862	0.118	0.0707
T-2	Barium, total	mg/L	0.51918	2		**2**										0.0771	0.246	0.225
T-4	Barium, total	mg/L	0.51918	2		**2**										0.0382	0.0562	0.0578
T-5	Barium, total	mg/L	0.51918	2		**2**										0.0478	0.0538	0.0564
T-6	Barium, total	mg/L	0.51918	2		**2**										0.314	0.323	0.306

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

City Water, Light and Power
CWLP CCR Surface Impoundments
2022 - 2024 Groundwater Analytical Summary Data

Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-2	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-3	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-4	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-5	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-6	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-7	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-8	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-9	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	0.0006	0.0011	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-10	Beryllium, total	mg/L	0.0025	0.004		**0.004**		< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-11	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	0.0005	0.0007	0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-12	Beryllium, total	mg/L	0.0025	0.004		**0.004**	0.001	0.0005	0.0018	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0015	0.0006	< 0.0005	< 0.0005	< 0.0005
AP-13	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	0.0016	0.0015	< 0.0005	< 0.0005	< 0.0005	0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-14	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
AW-1	Beryllium, total	mg/L	0.0025	0.004		**0.004**		< 0.0005				< 0.0005		< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
RW-3	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
R111	Beryllium, total	mg/L	0.0025	0.004		**0.004**	< 0.0005		< 0.0005			< 0.0005		< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
G120	Beryllium, total	mg/L	0.0025	0.004		**0.004**		< 0.0005				< 0.0005		< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
T-1	Beryllium, total	mg/L	0.0025	0.004		**0.004**									< 0.0005	< 0.0005	< 0.0005	< 0.0005
T-2	Beryllium, total	mg/L	0.0025	0.004		**0.004**									< 0.0005	< 0.0005	< 0.0005	< 0.0005
T-4	Beryllium, total	mg/L	0.0025	0.004		**0.004**									< 0.0005	< 0.0005	< 0.0005	< 0.0005
T-5	Beryllium, total	mg/L	0.0025	0.004		**0.004**									< 0.0005	< 0.0005	< 0.0005	< 0.0005
T-6	Beryllium, total	mg/L	0.0025	0.004		**0.004**									< 0.0005	< 0.0005	< 0.0005	< 0.0005
AP-1	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-2	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-3	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-4	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-5	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-6	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-7	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-8	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-9	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-10	Cadmium, total	mg/L	0.0025	0.005		**0.005**		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-11	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-12	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-13	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-14	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AW-1	Cadmium, total	mg/L	0.0025	0.005		**0.005**		< 0.002				< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
RW-3	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
R111	Cadmium, total	mg/L	0.0025	0.005		**0.005**	< 0.002		< 0.002			< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
G120	Cadmium, total	mg/L	0.0025	0.005		**0.005**		< 0.002				< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
T-1	Cadmium, total	mg/L	0.0025	0.005		**0.005**									< 0.002	< 0.002	< 0.002	< 0.002
T-2	Cadmium, total	mg/L	0.0025	0.005		**0.005**									< 0.002	< 0.002	< 0.002	< 0.002
T-4	Cadmium, total	mg/L	0.0025	0.005		**0.005**									< 0.002	< 0.002	< 0.002	< 0.002
T-5	Cadmium, total	mg/L	0.0025	0.005		**0.005**									< 0.002	< 0.002	< 0.002	< 0.002
T-6	Cadmium, total	mg/L	0.0025	0.005		**0.005**									< 0.002	< 0.002	< 0.002	< 0.002

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

City Water, Light and Power
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Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-2	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-3	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-4	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-5	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-6	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-7	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-8	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-9	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	0.0098	0.0119	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-10	Chromium, total	mg/L	0.0653	0.1		**0.1**		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-11	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	0.0098	0.0158	0.0213	< 0.005	< 0.005	< 0.005	0.0081	< 0.005	< 0.005	< 0.005
AP-12	Chromium, total	mg/L	0.0653	0.1		**0.1**	0.0253	0.0119	0.037	0.0073	< 0.005	< 0.005	< 0.005	0.0332	< 0.005	0.0053	< 0.005	< 0.005
AP-13	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	0.0369	0.0413	0.0059	< 0.005	< 0.005	0.019	< 0.005	< 0.005	< 0.005	< 0.005
AP-14	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	0.0058	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AW-1	Chromium, total	mg/L	0.0653	0.1		**0.1**		< 0.005				< 0.005		0.0101	0.0087	0.0105	< 0.005	< 0.005
RW-3	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
R111	Chromium, total	mg/L	0.0653	0.1		**0.1**	< 0.005		< 0.005			< 0.005		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
G120	Chromium, total	mg/L	0.0653	0.1		**0.1**		< 0.005				< 0.005		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
T-1	Chromium, total	mg/L	0.0653	0.1		**0.1**										< 0.005	0.0096	< 0.005
T-2	Chromium, total	mg/L	0.0653	0.1		**0.1**										< 0.005	< 0.005	< 0.005
T-4	Chromium, total	mg/L	0.0653	0.1		**0.1**										< 0.005	< 0.005	< 0.005
T-5	Chromium, total	mg/L	0.0653	0.1		**0.1**										< 0.005	< 0.005	< 0.005
T-6	Chromium, total	mg/L	0.0653	0.1		**0.1**										< 0.005	< 0.005	< 0.005
AP-1	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-2	Cobalt, total	mg/L	0.0052		0.006	**0.006**	0.0102	0.0089	0.0115	0.0111	0.0091	0.0102	0.0085	0.0091	0.0068	0.0102	0.0073	0.0085
AP-3	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	0.0054	< 0.005	0.0054	< 0.005	0.0051	< 0.005	0.0065	0.0071	< 0.005
AP-4	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-5	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-6	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-7	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-8	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-9	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	0.0053	0.0056	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-10	Cobalt, total	mg/L	0.0052		0.006	**0.006**		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-11	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	0.005	0.0061	0.011	< 0.005	0.0055	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AP-12	Cobalt, total	mg/L	0.0052		0.006	**0.006**	0.0143	0.0077	0.0219	0.007	< 0.005	< 0.005	< 0.005	0.0236	< 0.005	0.0054	< 0.005	< 0.005
AP-13	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	0.0215	0.021	< 0.005	< 0.005	< 0.005	0.0127	< 0.005	< 0.005	< 0.005	< 0.005
AP-14	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0051	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
AW-1	Cobalt, total	mg/L	0.0052		0.006	**0.006**		< 0.005				< 0.005		< 0.005	0.0055	< 0.005	< 0.005	< 0.005
RW-3	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
R111	Cobalt, total	mg/L	0.0052		0.006	**0.006**	< 0.005		< 0.005			< 0.005		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
G120	Cobalt, total	mg/L	0.0052		0.006	**0.006**		< 0.005				< 0.005		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
T-1	Cobalt, total	mg/L	0.0052		0.006	**0.006**										< 0.005	0.0063	< 0.005
T-2	Cobalt, total	mg/L	0.0052		0.006	**0.006**										0.0075	< 0.005	< 0.005
T-4	Cobalt, total	mg/L	0.0052		0.006	**0.006**										< 0.005	0.005	< 0.005
T-5	Cobalt, total	mg/L	0.0052		0.006	**0.006**										< 0.005	< 0.005	< 0.005
T-6	Cobalt, total	mg/L	0.0052		0.006	**0.006**										< 0.005	< 0.005	< 0.005

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

City Water, Light and Power
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Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-2	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-3	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-4	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-5	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-6	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-7	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-8	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-9	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	0.0168	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-10	Lead, total	mg/L	0.0075		0.015	**0.015**		< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-11	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-12	Lead, total	mg/L	0.0075		0.015	**0.015**	0.0225	< 0.015	0.0228	< 0.015	< 0.015	< 0.015	< 0.015	0.0161	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-13	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.015	0.0163	0.0177	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AP-14	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	0.0189	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
AW-1	Lead, total	mg/L	0.0075		0.015	**0.015**		0.0018				< 0.001		< 0.015	< 0.015	0.0051	< 0.0075	< 0.0075
RW-3	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.015	< 0.001	< 0.015	< 0.015	< 0.015	< 0.001	< 0.015	< 0.015	< 0.015	< 0.015	< 0.0075	< 0.0075
R111	Lead, total	mg/L	0.0075		0.015	**0.015**	< 0.0075		< 0.001			0.002		< 0.015	< 0.015	< 0.001	< 0.0075	< 0.0075
G120	Lead, total	mg/L	0.0075		0.015	**0.015**		< 0.001				0.0037		< 0.015	< 0.015	< 0.001	< 0.0075	< 0.0075
T-1	Lead, total	mg/L	0.0075		0.015	**0.015**										< 0.015	< 0.0075	< 0.0075
T-2	Lead, total	mg/L	0.0075		0.015	**0.015**										< 0.015	< 0.0075	< 0.0075
T-4	Lead, total	mg/L	0.0075		0.015	**0.015**										< 0.015	< 0.0075	< 0.0075
T-5	Lead, total	mg/L	0.0075		0.015	**0.015**										< 0.015	< 0.0075	< 0.0075
T-6	Lead, total	mg/L	0.0075		0.015	**0.015**										< 0.015	< 0.0075	< 0.0075
AP-1	Lithium	mg/L	0.0124		0.04	**0.04**	0.0098	0.0096	0.0087	< 0.05	0.0566	< 0.005	0.0109	0.0085	0.0099	< 0.05	0.0103	0.0094
AP-2	Lithium	mg/L	0.0124		0.04	**0.04**	0.0057	0.0056	0.0055	< 0.05	0.0476	< 0.005	0.0063	0.0056	0.0059	< 0.05	0.0081	0.0068
AP-3	Lithium	mg/L	0.0124		0.04	**0.04**	0.0053	< 0.005	< 0.005	< 0.05	0.0501	< 0.005	0.0063	0.0051	0.0062	< 0.05	0.0064	0.0062
AP-4	Lithium	mg/L	0.0124		0.04	**0.04**	0.0092	0.0092	0.0077	< 0.05	0.0196	< 0.005	0.0078	0.0051	0.0076	< 0.05	0.0072	0.0077
AP-5	Lithium	mg/L	0.0124		0.04	**0.04**	0.0053	< 0.005	0.0104	< 0.05	0.0142	0.0074	0.0046	< 0.005	< 0.005	< 0.05	0.0062	0.0043
AP-6	Lithium	mg/L	0.0124		0.04	**0.04**	0.0071	0.0079	< 0.005	< 0.05	0.014	< 0.005	< 0.003	< 0.005	< 0.005	< 0.05	0.0098	0.0104
AP-7	Lithium	mg/L	0.0124		0.04	**0.04**	0.009	0.0079	< 0.005	< 0.05	< 0.005	0.0113	0.0047	< 0.005	< 0.005	< 0.05	0.0063	0.0079
AP-8	Lithium	mg/L	0.0124		0.04	**0.04**	0.0068	0.0065	0.0065	< 0.05	0.0201	< 0.005	0.0074	< 0.005	0.0069	< 0.05	0.0075	0.0069
AP-9	Lithium	mg/L	0.0124		0.04	**0.04**	< 0.005	0.0073	0.0114	< 0.05	< 0.005	0.0067	0.0054	< 0.005	0.0059	< 0.05	0.0069	0.0066
AP-10	Lithium	mg/L	0.0124		0.04	**0.04**		0.01	0.0087	< 0.05	< 0.005	< 0.005	0.01	< 0.005	0.009	< 0.05	0.0094	0.0101
AP-11	Lithium	mg/L	0.0124		0.04	**0.04**	< 0.005	< 0.005	0.017	< 0.05	0.0115	0.0068	0.0045	< 0.005	< 0.005	< 0.05	0.0044	0.005
AP-12	Lithium	mg/L	0.0124		0.04	**0.04**	0.0257	0.0141	0.0331	< 0.05	< 0.005	0.006	0.0072	0.0352	0.0064	< 0.05	0.0077	0.0065
AP-13	Lithium	mg/L	0.0124		0.04	**0.04**	0.0134	0.0114	0.0299	< 0.05	0.0167	0.0152	0.0133	0.0237	0.0109	< 0.05	0.0124	0.012
AP-14	Lithium	mg/L	0.0124		0.04	**0.04**	0.0074	0.0066	0.0063	< 0.05	0.0716	< 0.005	0.0076	< 0.005	0.0076	< 0.05	0.0078	0.0072
AW-1	Lithium	mg/L	0.0124		0.04	**0.04**								0.0739	0.0184	< 0.05	0.0145	0.0113
RW-3	Lithium	mg/L	0.0124		0.04	**0.04**	0.0066	0.0064	0.0064	< 0.05	0.0179	< 0.005	< 0.003	0.0147	< 0.005	< 0.05	0.0038	0.0047
R111	Lithium	mg/L	0.0124		0.04	**0.04**	0.0066							0.0185	< 0.005	< 0.05	0.007	0.0066
G120	Lithium	mg/L	0.0124		0.04	**0.04**								0.0486	0.008	< 0.05	0.0081	0.0086
T-1	Lithium	mg/L	0.0124		0.04	**0.04**										< 0.05	0.0266	0.0199
T-2	Lithium	mg/L	0.0124		0.04	**0.04**										< 0.05	0.0394	0.0345
T-4	Lithium	mg/L	0.0124		0.04	**0.04**										< 0.05	0.0164	0.0161
T-5	Lithium	mg/L	0.0124		0.04	**0.04**										< 0.05	0.0095	0.0109
T-6	Lithium	mg/L	0.0124		0.04	**0.04**										< 0.05	0.0149	0.0134

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

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Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-2	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-3	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-4	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-5	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-6	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-7	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-8	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-9	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-10	Mercury, total	mg/L	0.0005	0.002		**0.002**		< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-11	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.00021	< 0.0002	< 0.0002	< 0.0002
AP-12	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-13	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AP-14	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
AW-1	Mercury, total	mg/L	0.0005	0.002		**0.002**		< 0.0002				< 0.0002		< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
RW-3	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
R111	Mercury, total	mg/L	0.0005	0.002		**0.002**	< 0.0002		< 0.0002			< 0.0002		< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
G120	Mercury, total	mg/L	0.0005	0.002		**0.002**		< 0.0002				< 0.0002		< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
T-1	Mercury, total	mg/L	0.0005	0.002		**0.002**										< 0.0002	< 0.0002	< 0.0002
T-2	Mercury, total	mg/L	0.0005	0.002		**0.002**										< 0.0002	< 0.0002	< 0.0002
T-4	Mercury, total	mg/L	0.0005	0.002		**0.002**										< 0.0002	< 0.0002	< 0.0002
T-5	Mercury, total	mg/L	0.0005	0.002		**0.002**										< 0.0002	< 0.0002	< 0.0002
T-6	Mercury, total	mg/L	0.0005	0.002		**0.002**										< 0.0002	< 0.0002	< 0.0002
AP-1	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-2	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-3	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-4	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-5	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-6	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-7	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-8	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-9	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-10	Molybdenum, total	mg/L	0.025		0.1	**0.1**		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-11	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-12	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-13	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AP-14	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
AW-1	Molybdenum, total	mg/L	0.025		0.1	**0.1**								< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
RW-3	Molybdenum, total	mg/L	0.025		0.1	**0.1**	0.0103	0.0106	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
R111	Molybdenum, total	mg/L	0.025		0.1	**0.1**	< 0.01							< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
G120	Molybdenum, total	mg/L	0.025		0.1	**0.1**								< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
T-1	Molybdenum, total	mg/L	0.025		0.1	**0.1**										< 0.01	< 0.01	< 0.01
T-2	Molybdenum, total	mg/L	0.025		0.1	**0.1**										< 0.01	< 0.01	< 0.01
T-4	Molybdenum, total	mg/L	0.025		0.1	**0.1**										< 0.01	< 0.01	< 0.01
T-5	Molybdenum, total	mg/L	0.025		0.1	**0.1**										< 0.01	< 0.01	< 0.01
T-6	Molybdenum, total	mg/L	0.025		0.1	**0.1**										< 0.01	< 0.01	< 0.01

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

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Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-2	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-3	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-4	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-5	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0011	< 0.001	< 0.001	< 0.001
AP-6	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0022
AP-7	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-8	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-9	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-10	Selenium, total	mg/L	0.025	0.05		**0.05**		< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-11	Selenium, total	mg/L	0.025	0.05		**0.05**	0.0056	< 0.001	< 0.001	< 0.001	0.0018	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-12	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-13	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AP-14	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
AW-1	Selenium, total	mg/L	0.025	0.05		**0.05**		< 0.04				< 0.04		< 0.001	< 0.001	< 0.04	< 0.001	< 0.001
RW-3	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001	< 0.04	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
R111	Selenium, total	mg/L	0.025	0.05		**0.05**	< 0.001		< 0.04			< 0.04		< 0.001	< 0.001	< 0.04	< 0.001	< 0.001
G120	Selenium, total	mg/L	0.025	0.05		**0.05**		< 0.04				< 0.04		< 0.001	< 0.001	< 0.04	< 0.001	< 0.001
T-1	Selenium, total	mg/L	0.025	0.05		**0.05**										0.0042	< 0.001	< 0.001
T-2	Selenium, total	mg/L	0.025	0.05		**0.05**										0.0011	< 0.001	< 0.001
T-4	Selenium, total	mg/L	0.025	0.05		**0.05**										0.0012	< 0.001	< 0.001
T-5	Selenium, total	mg/L	0.025	0.05		**0.05**										< 0.001	< 0.001	0.0012
T-6	Selenium, total	mg/L	0.025	0.05		**0.05**										< 0.001	< 0.001	< 0.001
AP-1	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	1.52	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-2	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-3	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-4	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-5	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-6	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-7	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-8	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-9	Thallium, total	mg/L	0.002	0.002		**0.002**	0.0032	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-10	Thallium, total	mg/L	0.002	0.002		**0.002**		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-11	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-12	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-13	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AP-14	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
AW-1	Thallium, total	mg/L	0.002	0.002		**0.002**		< 0.002				< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
RW-3	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
R111	Thallium, total	mg/L	0.002	0.002		**0.002**	< 0.002		< 0.002			< 0.002		< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
G120	Thallium, total	mg/L	0.002	0.002		**0.002**		< 0.002				< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
T-1	Thallium, total	mg/L	0.002	0.002		**0.002**										< 0.002	< 0.002	< 0.002
T-2	Thallium, total	mg/L	0.002	0.002		**0.002**										< 0.002	< 0.002	< 0.002
T-4	Thallium, total	mg/L	0.002	0.002		**0.002**										< 0.002	< 0.002	< 0.002
T-5	Thallium, total	mg/L	0.002	0.002		**0.002**										< 0.002	< 0.002	< 0.002
T-6	Thallium, total	mg/L	0.002	0.002		**0.002**										< 0.002	< 0.002	< 0.002

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

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Well	Parameter	Units	Background	40 CFR 257	MCL 40 CFR 141	GPS	2022-Q1	2022-Q2	2022-Q3	2022-Q4	2023-Q1	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4
AP-1	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2.36	< 2	< 2	0.714	1.38	1.4	< 2	0.85	< 2	< 2	< 2	1.23
AP-2	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2	< 2	0.431	0.87	2.5	< 2	0.42	< 2	< 2	< 2	< 2
AP-3	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2	< 2	< 0.5046	0.54	0.36	< 2	0.65	< 2	< 2	< 2	< 2
AP-4	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2.93	< 2	< 2	0.901	1.04	2.89	1.12	1.58	< 2	< 2	< 4	< 2
AP-5	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2.45	< 2	< 0.1664	1.29	0.57	< 2	1.26	< 2	< 2	< 4	< 2
AP-6	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2.2	< 2	2.138	0.47	1.29	< 2	0.52	< 2	< 2	< 4	< 2
AP-7	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2	< 2	< 0.3621	< 2	1.54	< 2	0.8	< 2	< 2	< 4	< 2
AP-8	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2.16	< 2	1.955	1.98	2.88	< 2	1.55	< 2	< 2	< 4	2.57
AP-9	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2	< 2	3.012	< 2	0.15	< 2	0.64	< 2	< 2	< 4	1.01
AP-10	Radium-226 + Radium-228	pCi/L	3.79	5		**5**		< 2	< 2	1.942	2.04	2.66	1.12	3.14	< 2	< 2	< 4	1.61
AP-11	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2	< 2	< -2.1708	< 2	0.47	< 2	0.52	< 2	1.28	< 4	< 2
AP-12	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2.46	3.44	2.215	< 2	1.07	< 2	0.91	< 2	< 2	< 4	< 2
AP-13	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2	< 2.17	2.719	1.22	0.24	2.54	0.69	< 2	< 2	< 4	< 2
AP-14	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2.35	< 2	0.264	< 2	0.45	< 2	0.86	< 2	< 2	< 4	< 2
AW-1	Radium-226 + Radium-228	pCi/L	3.79	5		**5**								0.45	3.39	1.25	< 2	1.17
RW-3	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	< 2	< 2	< 2	< 0.432	-0.09	0.48	< 2	2.46	< 2	< 2	< 2	1.23
R111	Radium-226 + Radium-228	pCi/L	3.79	5		**5**	1.12							0.56	< 1	< 2	< 2	< 2.12
G120	Radium-226 + Radium-228	pCi/L	3.79	5		**5**								1.1	< 2	1.03	1.22	3.52
T-1	Radium-226 + Radium-228	pCi/L	3.79	5		**5**										< 2	< 4	< 2
T-2	Radium-226 + Radium-228	pCi/L	3.79	5		**5**										< 2	< 4	< 2
T-4	Radium-226 + Radium-228	pCi/L	3.79	5		**5**										< 2	< 4	< 2
T-5	Radium-226 + Radium-228	pCi/L	3.79	5		**5**										< 2	< 4	< 2
T-6	Radium-226 + Radium-228	pCi/L	3.79	5		**5**										< 2	< 4	1.08

1. A shaded value indicates an exceedance of the Groundwater Protection Standard (GPS), which is higher of the MCL and the Background.

City Water, Light and Power
CWLP CCR Surface Impoundments
2024 TCLP & SPLP Analytical Results

Parameter	Units	D1 19.5-21.5 4/29/2024 3:00:00 PM Solid	D1 36.5-38.5 4/29/2024 3:30:00 PM Solid	D2 19.5-21.5 4/29/2024 9:30:00 AM Solid	D2 33.5-35.5 4/29/2024 10:00:00 AM Solid	D3 14.5-29.5 4/30/2024 10:15:00 AM Solid	D3 4.5-6.5 4/30/2024 10:15:00 AM Solid	D4 19.5-21.5 4/30/2024 2:45:00 PM Solid	D4 29.5-31.5 4/30/2024 3:00:00 PM Solid	L1 14.5-21.5 5/2/2024 2:50:00 PM Solid	L1 24.5-31.5 5/2/2024 3:30:00 PM Solid	L3 19.5-21.5 5/2/2024 11:15:00 AM Solid	L3 29.5-32.7 5/2/2024 11:00:00 AM Solid	L4 10ft-15.3ft 5/2/2024 8:15:00 AM Solid	L5 19.5-21.5 5/3/2024 8:30:00 AM Solid	L5 32.5-35.2 5/3/2024 9:00:00 AM Solid
pH	S.U.	10	9.64	9.25	9.18	9.38	9.93	9.63	10.2	8.13	9.14	8.14	8.79	8.49	8.14	8.27
Chloride, Shake Extract	mg/L	J 1	J 1	7	8	< 4	< 4	J 2	11	J 1	5	J 4	13	25	6	11
Fluoride, Shake Extract	mg/L	0.13	0.19	0.2	J 0.37	0.11	J 0.08	J 0.06	0.14	0.37	0.21	0.2	0.2	0.42	0.36	J 0.08
Sulfate, Shake Extract	mg/L	65	45	226	158	31	45	70	102	103	139	224	574	149	67	73
Antimony, SPLP	mg/L	0.0035	0.0078	0.0141	0.0273	0.007	0.0029	0.0034	0.024	0.0114	0.0012	0.0054	0.0037	J 0.0009	0.0067	0.0025
Antimony, TCLP	mg/L	0.017	0.0237	0.0163	0.0125	0.0197	0.0178	0.0395	0.0376	0.0019	0.0064	0.0066	0.0024	0.0012	0.0072	0.0017
Arsenic, SPLP	mg/L	< 0.01	0.0471	< 0.01	0.039	0.0173	< 0.01	< 0.01	0.0114	0.0276	< 0.01	0.0195	< 0.01	< 0.01	0.0331	< 0.01
Arsenic, TCLP	mg/L	< 0.01	0.0528	0.0505	0.345	0.0155	< 0.01	< 0.01	0.0242	< 0.01	< 0.01	0.0279	0.0337	< 0.01	0.0276	< 0.01
Barium, SPLP	mg/L	< 0.045	< 0.045	J 0.021	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	< 0.045	J 0.026	J 0.028	J 0.025	< 0.045	0.0596	J 0.023
Barium, TCLP	mg/L	0.358	0.514	0.556	0.352	0.373	0.492	0.238	0.287	0.345	0.172	0.635	0.47	1.04	0.574	1.24
Beryllium, SPLP	mg/L	< 0.001	J 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium, TCLP	mg/L	0.0145	0.0085	0.0231	J 0.0002	0.0113	0.0114	0.0056	0.0012	J 0.0007	0.0015	< 0.001	0.0054	< 0.001	0.0049	< 0.001
Boron, SPLP	mg/L	5.11	2.94	4.2	3.05	2.34	2.65	3.77	2.77	< 1	2.69	J 0.32	J 0.6	< 1	1.05	2.15
Boron, TCLP	mg/L	26.6	10.9	9.63	4.05	8.74	25.9	S 26.9	6.25	J 0.32	17.2	J 0.69	1.23	J 0.59	2.32	2.79
Cadmium, SPLP	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Cadmium, TCLP	mg/L	0.0293	0.0706	0.0638	< 0.002	0.0475	0.0302	0.0422	0.0063	0.0045	0.0045	0.0154	0.0397	< 0.002	0.149	0.0022
Chromium, SPLP	mg/L	J 0.0049	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, TCLP	mg/L	0.105	0.0707	0.116	< 0.01	0.0438	0.0692	0.0151	< 0.01	< 0.01	< 0.01	< 0.01	0.0185	< 0.01	J 0.0082	< 0.01
Cobalt, SPLP	mg/L	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Cobalt, TCLP	mg/L	0.0145	0.0116	0.0182	0.013	J 0.0054	0.0118	0.0107	0.0089	J 0.0054	J 0.0033	0.0065	0.0161	0.0077	0.0218	J 0.0043
Lead, SPLP	mg/L	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075
Lead, TCLP	mg/L	< 0.0075	0.0102	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	< 0.0075	0.0247	< 0.0075	< 0.0075	< 0.0075
Lithium, SPLP	mg/L	0.0033	0.0112	0.0078	0.0065	0.0034	0.0033	0.0075	0.0059	< 0.003	J 0.003	J 0.0015	J 0.003	< 0.003	J 0.0027	0.0033
Lithium, TCLP	mg/L	0.0112	0.0367	0.0228	0.0707	0.01	0.0131	0.0192	0.0374	0.0036	0.0087	0.0053	0.0061	0.0034	0.0153	0.0183
Mercury TCLP	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.00029	< 0.0002	< 0.0002	< 0.0002	0.00028	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Mercury, SPLP	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Molybdenum, SPLP	mg/L	0.216	0.144	0.155	5.21	0.0355	0.0138	0.0495	0.134	0.0145	< 0.01	0.0111	0.0169	< 0.01	J 0.0076	0.0904
Molybdenum, TCLP	mg/L	0.0402	0.0554	0.0571	1.27	0.0415	0.0375	0.105	0.179	< 0.01	0.0118	0.0307	< 0.01	< 0.01	J 0.0081	0.0375
Selenium, SPLP	mg/L	J 0.03	J 0.021	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	J 0.021	J 0.019	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium, TCLP	mg/L	J 0.017	J 0.037	J 0.017	< 0.05	J 0.03	< 0.05	< 0.05	J 0.022	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Thallium, SPLP	mg/L	< 0.002	J 0.001	< 0.002	J 0.0015	J 0.0017	< 0.002	J 0.0017	J 0.0013	< 0.002	< 0.002	< 0.002	< 0.002	J 0.0011	< 0.002	J 0.0019
Thallium, TCLP	mg/L	0.0229	0.0268	0.0257	J 0.0018	0.0185	0.0252	0.0225	0.0243	0.0023	0.0041	0.0086	0.006	J 0.0015	0.0199	0.0021
Radium-226 + Radium-228	pCi/g	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 4.97	< 5.32

Qualifiers
< - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside recovery limits

Andrews Engineering, Inc.

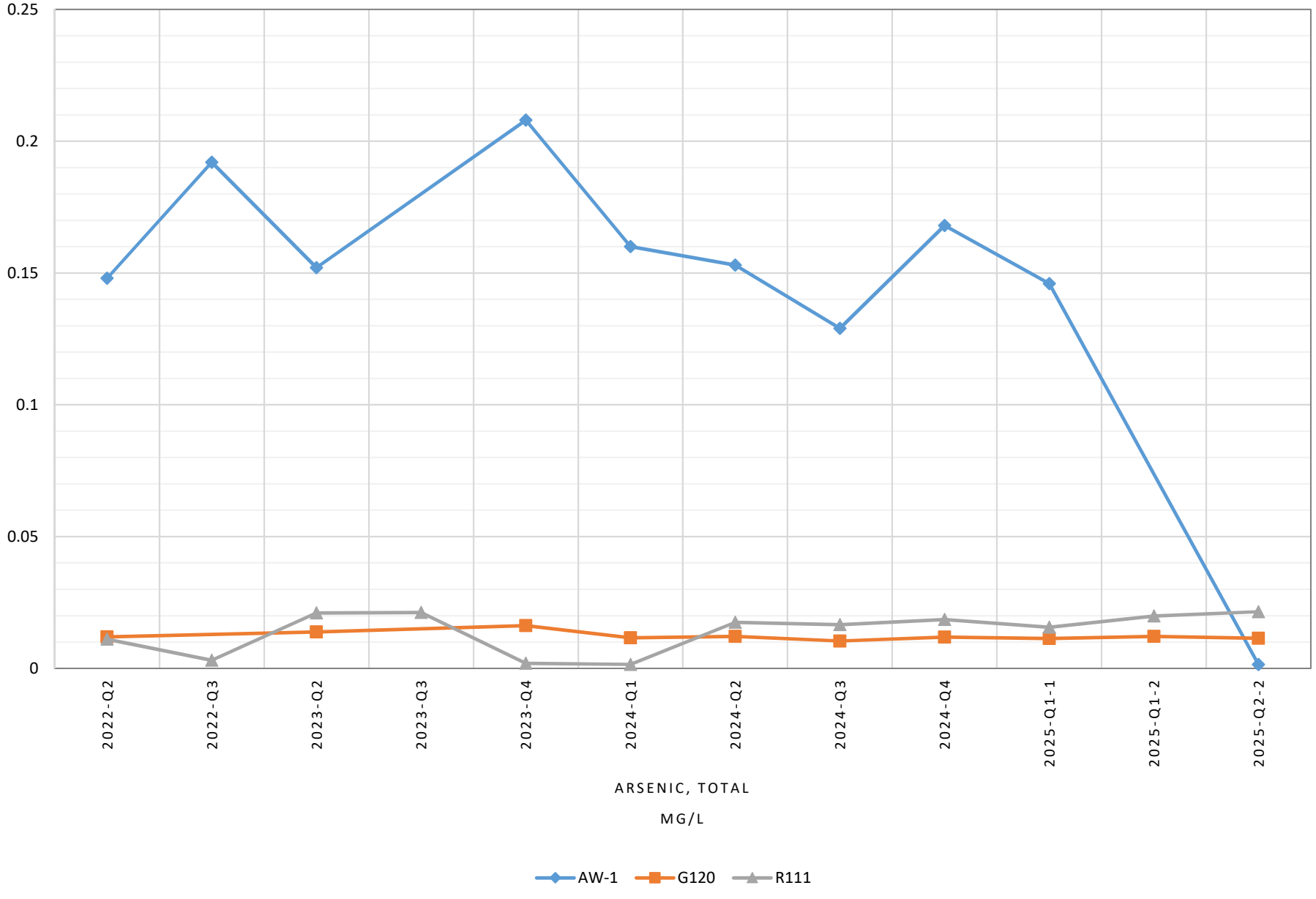
City Water, Light and Power
CWLP CCR Surface Impoundments
2024 TCLP & SPLP Analytical Results

Parameter	Units	D-1 25ft. 4/29/2024 3:00:00 PM Aqueous	D-2 20ft. 4/29/2024 9:30:00 AM Aqueous	D-3 20ft. 4/30/2024 10:00:00 AM Aqueous	D-4 20ft. 4/30/2024 2:45:00 PM Aqueous	L1-20ft. 5/2/2024 2:50:00 PM Aqueous	L3-20ft. 5/2/2024 10:15:00 AM Aqueous	L4 18ft. 5/2/2024 8:40:00 AM Aqueous	L5 20ft. 5/3/2024 8:30:00 AM Aqueous
pH	S.U.	H 9.85	H 9.27	H 10.1	H 9.1	H 7.86	H 8.1	H 7.35	H 7.62
Chloride, Total	mg/L	63	236	41	139	122	269	154	202
Fluoride, Total	mg/L	0.32	0.21	0.33	0.43	0.5	1.07	1.19	1.32
Sulfate, Total	mg/L	1740	1720	1000	2050	1080	2660	1050	2620
Antimony, Total	mg/L	J 0.061	J 0.024	0.23	0.0812	BJ 0.027	B 0.0655	0.002	<B 0.1
Arsenic, Total	mg/L	1.17	0.279	2.33	0.378	0.717	2.43	0.0512	2.58
Barium, Total	mg/L	2.48	1.13	3.51	0.975	3.48	1.49	0.308	1.6
Beryllium, Total	mg/L	0.254	0.064	0.439	0.0674	0.0542	0.102	0.0024	0.0911
Boron, Total	mg/L	78.6	89	105	73.1	4.91	25.8	2.15	28.9
Cadmium, Total	mg/L	0.222	0.0541	0.492	J 0.068	0.0776	0.26	0.0019	0.296
Chromium, Total	mg/L	3.91	0.902	6.25	1.03	0.993	2.08	0.0632	1.81
Cobalt, Total	mg/L	0.241	0.0579	0.323	J 0.061	0.154	0.336	0.0213	0.296
Lead, Total	mg/L	1.04	0.199	1.46	0.266	B 0.655	B 3.4	0.0526	2.78
Lithium, Total	mg/L	0.428	0.154	0.571	0.228	0.172	0.621	0.0288	0.613
Mercury, Total	mg/L	0.00562	0.00046	H 0.00685	0.00717	0.00198	0.00926	0.0005	0.00559
Molybdenum, Total	mg/L	15.7	8.04	2.61	2.3	0.161	0.218	0.0218	0.282
Selenium, Total	mg/L	J 0.1	< 0.05	J 0.13	J 0.09	0.0906	0.158	0.0066	0.205
Thallium, Total	mg/L	J 0.13	J 0.049	0.274	J 0.066	< 0.04	0.0433	J 0.0012	< 0.1
Radium-226 + Radium-228	pci/L	< 2.86	6.81	< 5	< 6.68	< 2.5	< 4.5	< 2.05	17.74

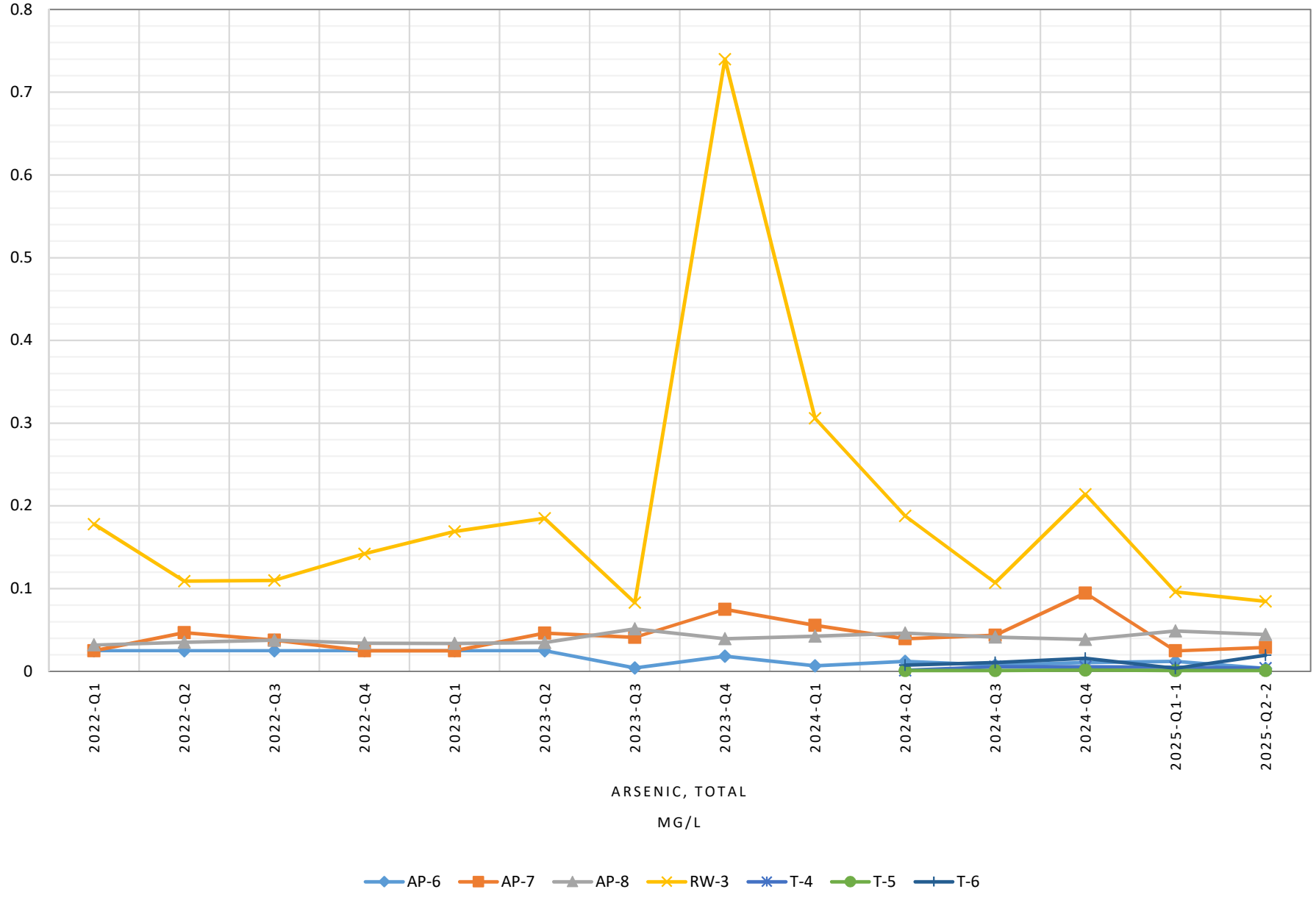
Qualifiers
< - Not Detected at the Reporting Limit
B - Analyte detected in associated Method Blank
H - Hold times exceeded
J - Analyte detected below quantitation limits

Appendix E:
Exceedance Parameter Trend Graphs

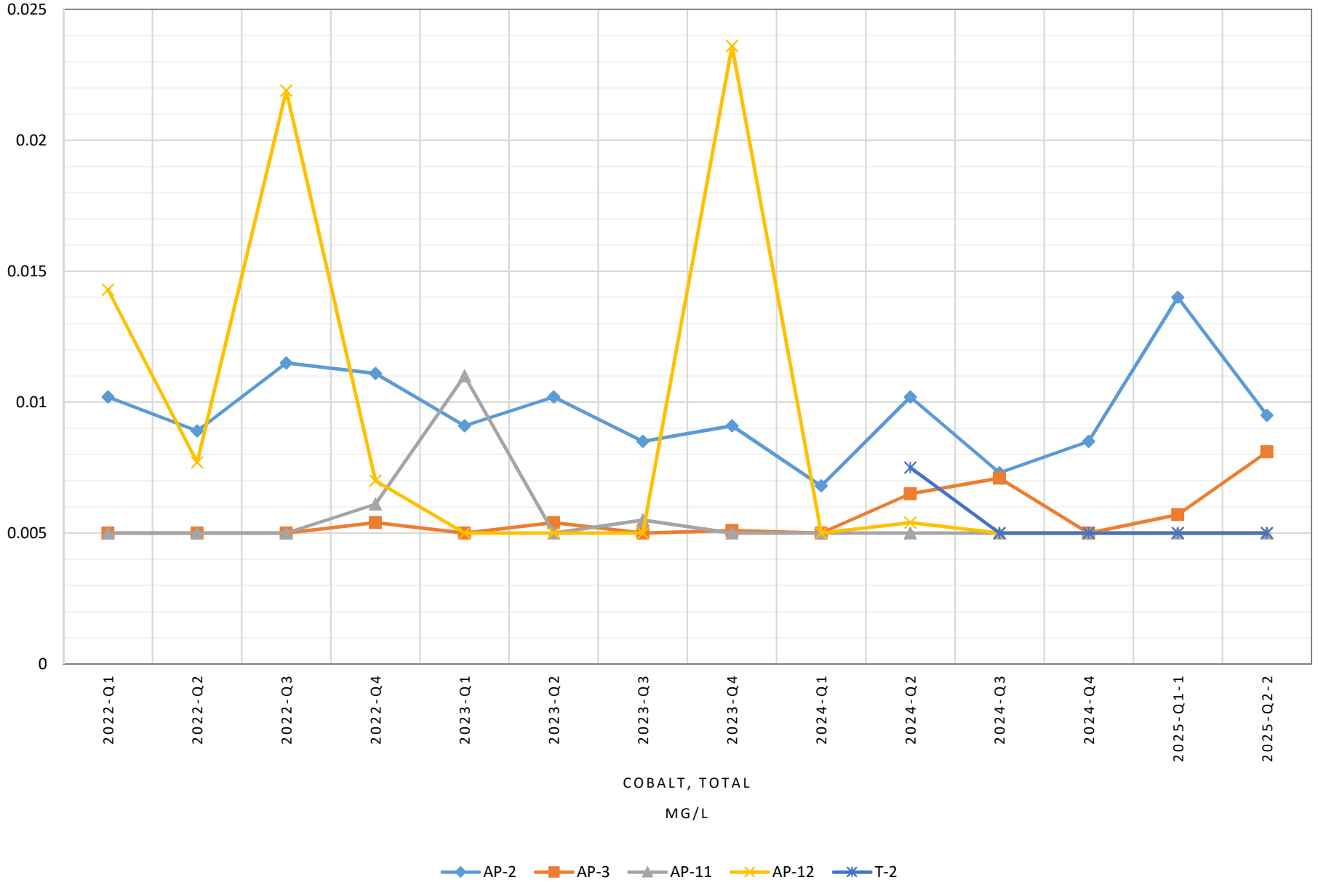
CITY, WATER, LIGHT & POWER



CITY, WATER, LIGHT & POWER



CITY, WATER, LIGHT & POWER



APPENDIX F:
Cross-Sections

Tab: BORINGS IN X SECTIONS Last Saved: September 15, 2025, by Ben Karpus Plotted: Monday, September 15, 2025 4:06:20 PM
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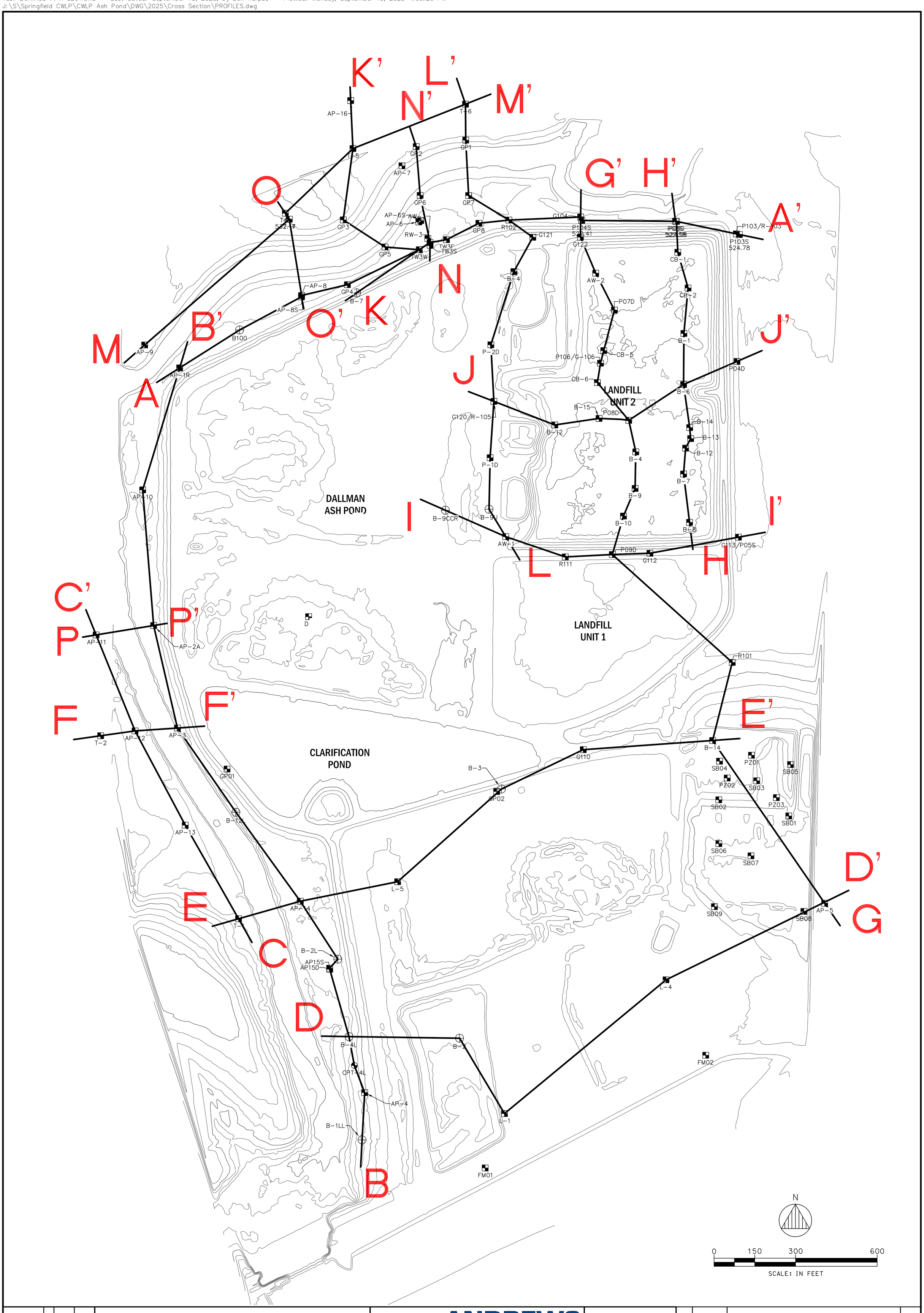

FIG. 1

GEOLOGIC CROSS-SECTION LOCATIONS MAP

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: AUGUST 2024
PROJECT ID: 240227/0010
SHEET NUMBER:

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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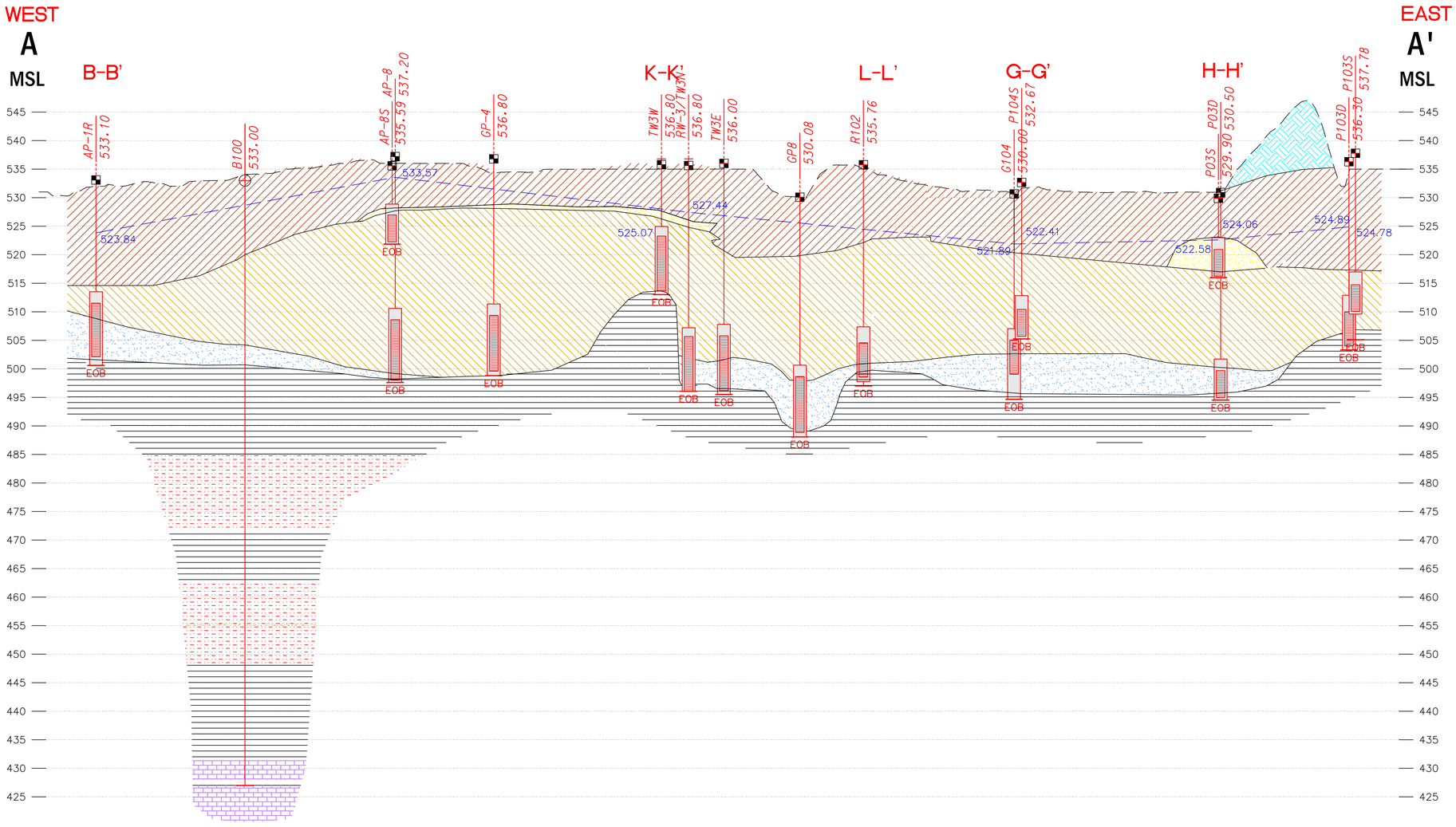
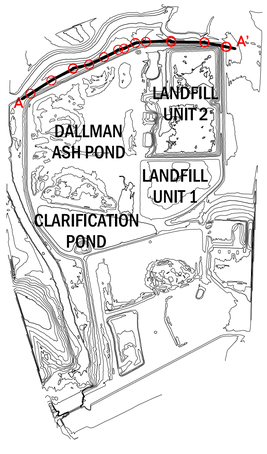


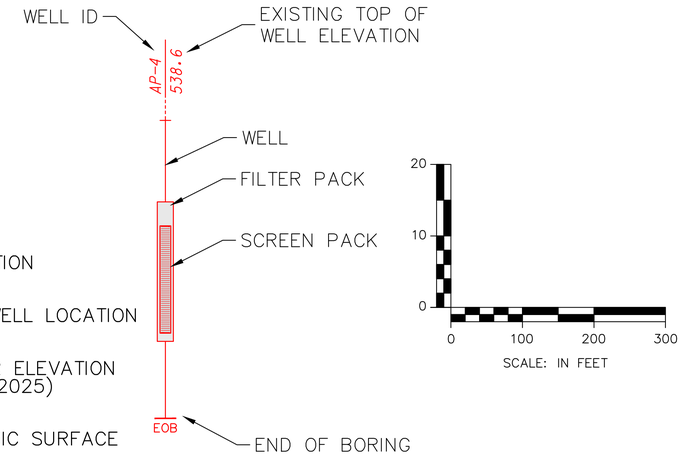


NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
2. SURFACE GENERATED FROM LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: MAY 16, 2023).
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- CLAYSTONE
- SANDSTONE
- LIMESTONE
- BORING LOCATION
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

ANDREWS ENGINEERING
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SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION A-A'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

A-A'

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Tab: AA Last Saved: September 23, 2025, by Mike Nguyen Plotted: Tuesday, September 23, 2025 10:21:44 AM
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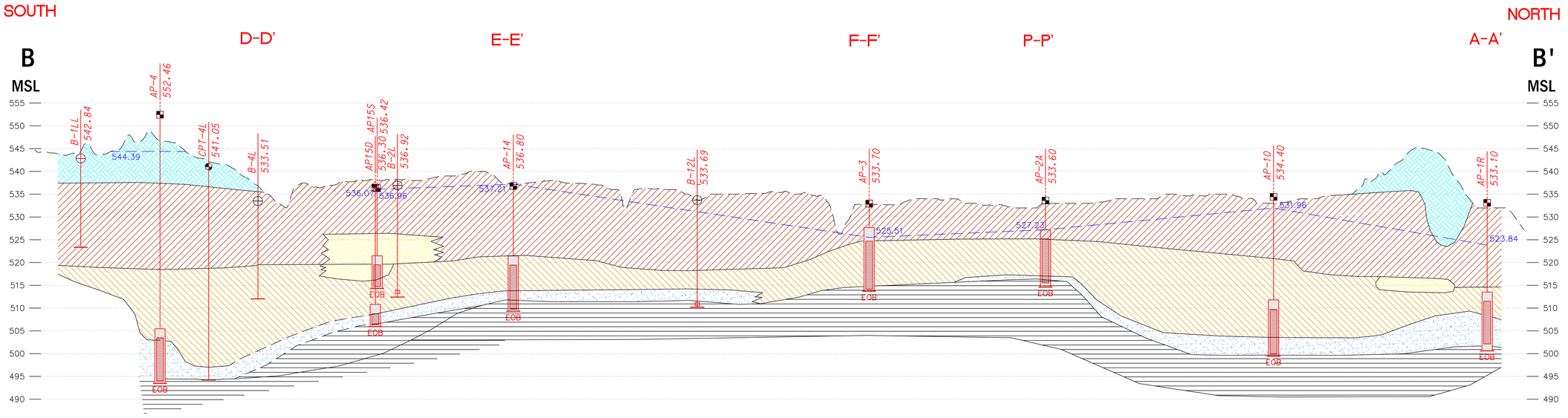

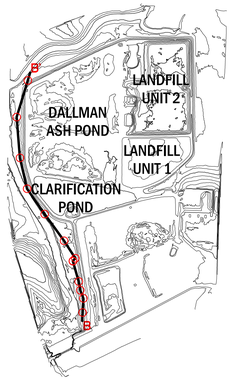

NOTES

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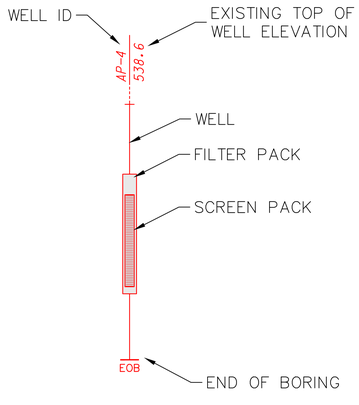
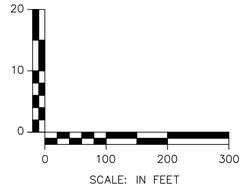
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- SHALLOW SAND
- BORING LOCATION
- MONITORING WELL LOCATION
- CPT BORING LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE





NO.	DATE	REVISION DESCRIPTION	BY

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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWSENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

GEOLOGIC CROSS-SECTION B-B'

PLANS PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

B-B'

Tab: BB Last Saved: September 23, 2025, by Mike Nguyen Plotted: Tuesday, September 23, 2025 10:34:25 AM
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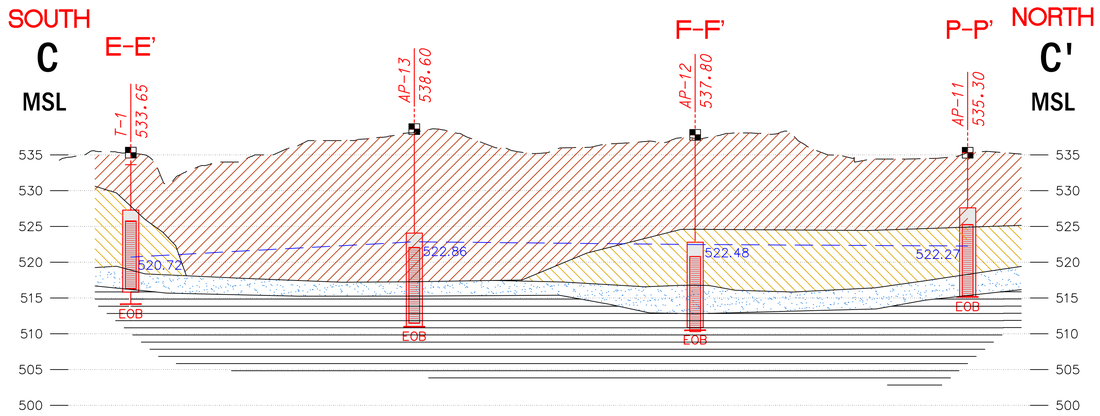

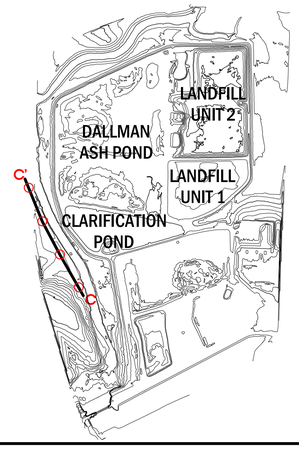

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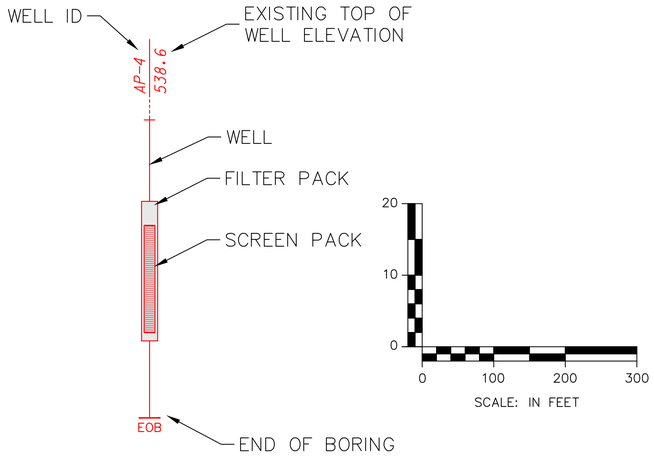
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

ANDREWS ENGINEERING
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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION C-C'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

C-C'

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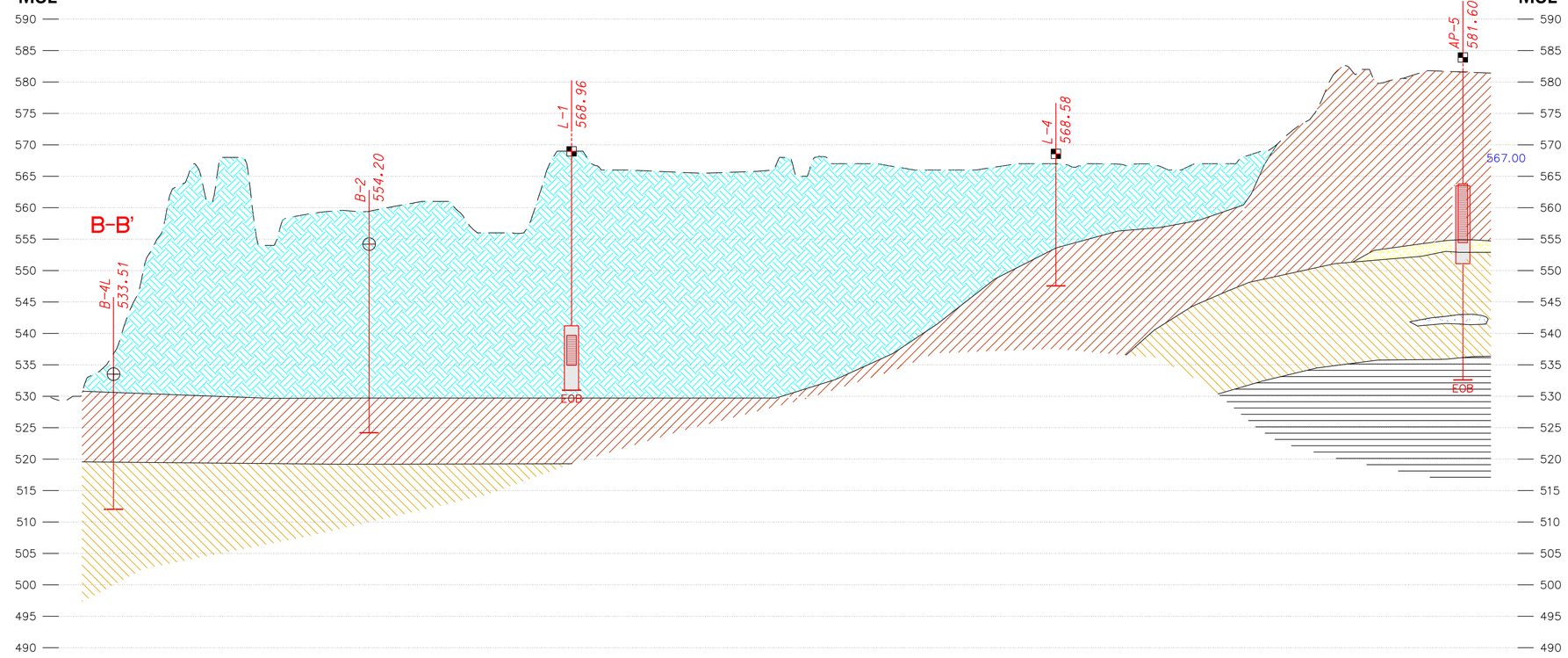
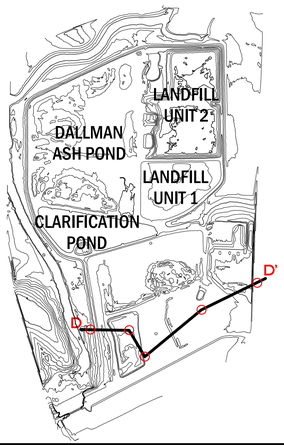
WEST

D

EAST

D'



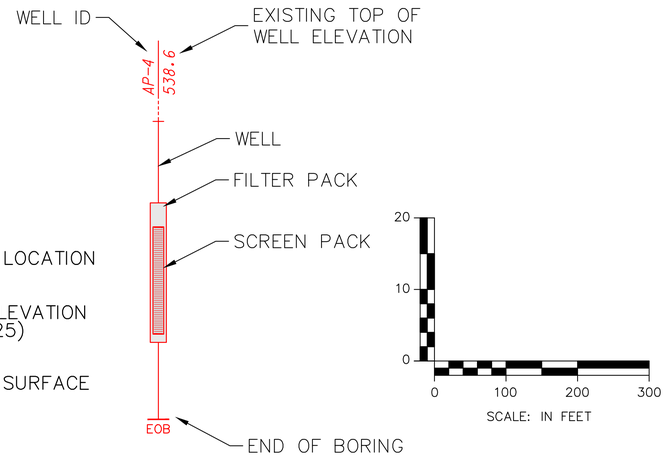


NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
2. SURFACE GENERATED FROM LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: MAY 16, 2023).
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- BORING LOCATION
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

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SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION D-D'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

D-D'

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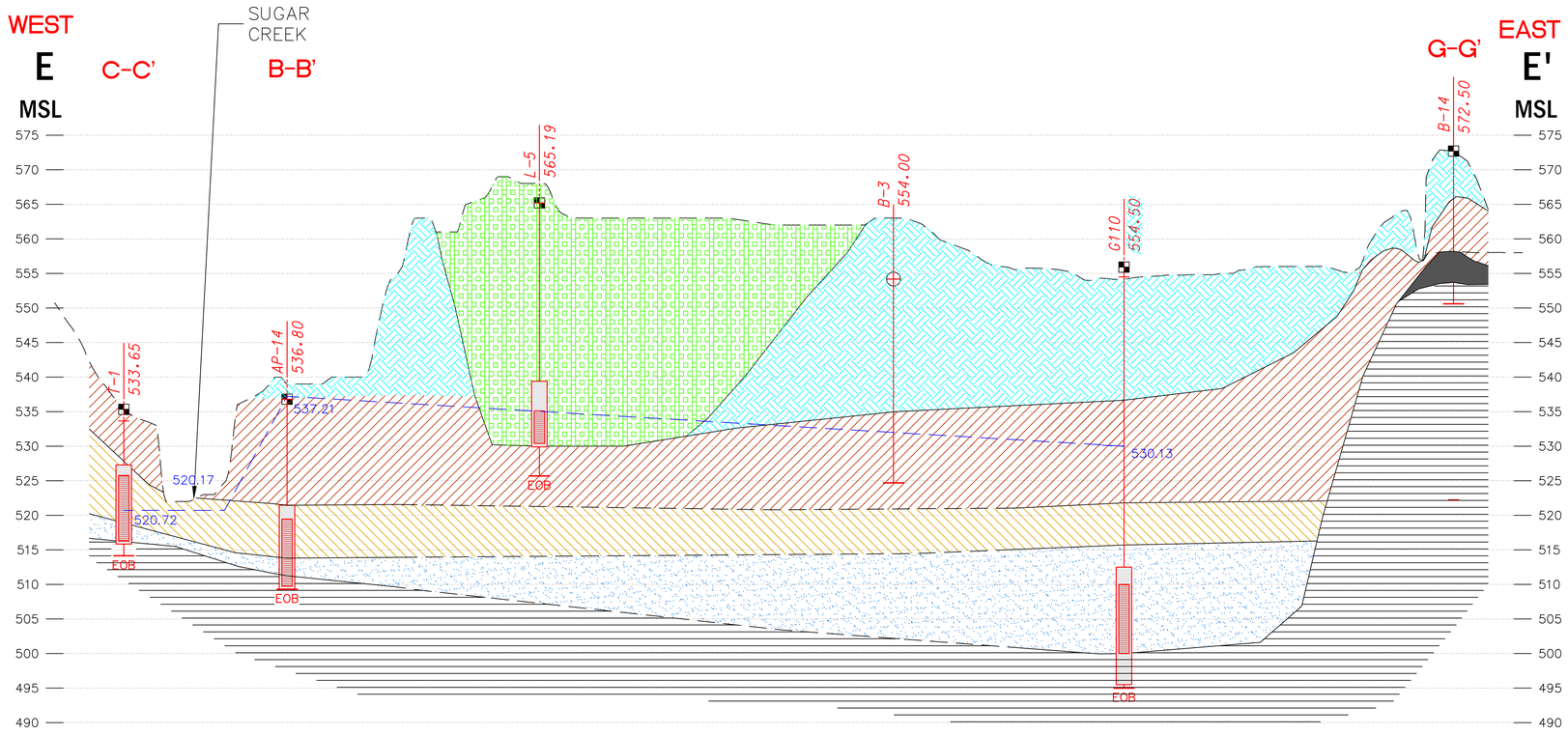

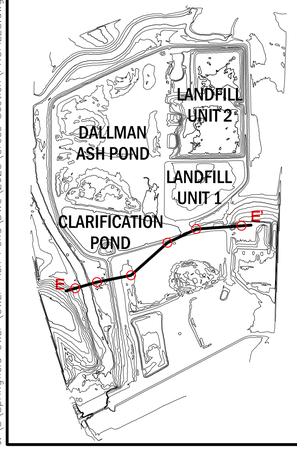

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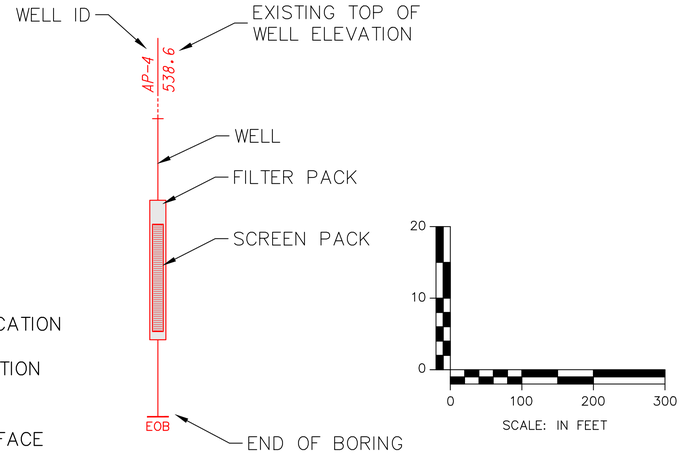
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- CCR ASH
- COAL
- BORING LOCATION
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION E-E'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

E-E'

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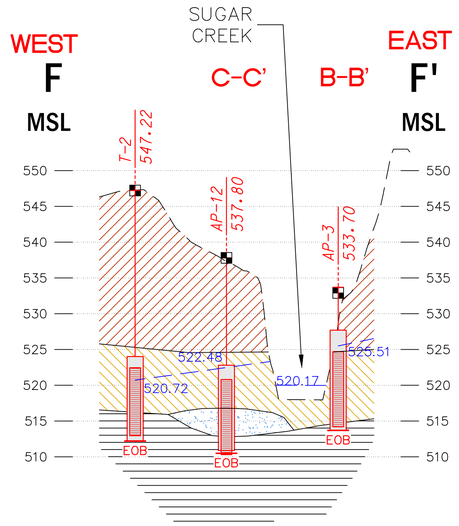

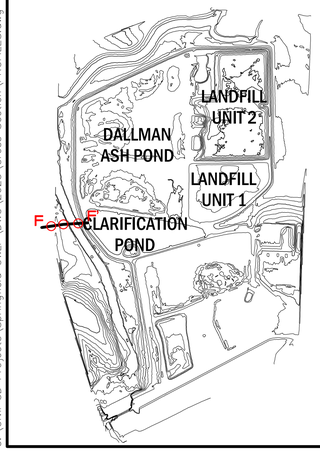

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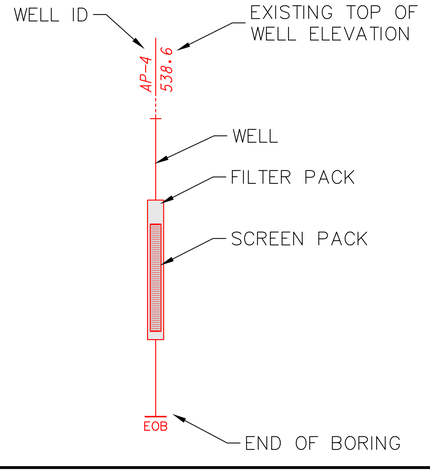
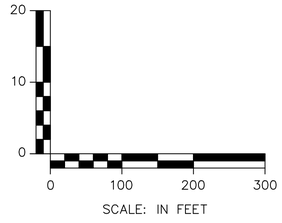
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE





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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION F-F'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

F-F'

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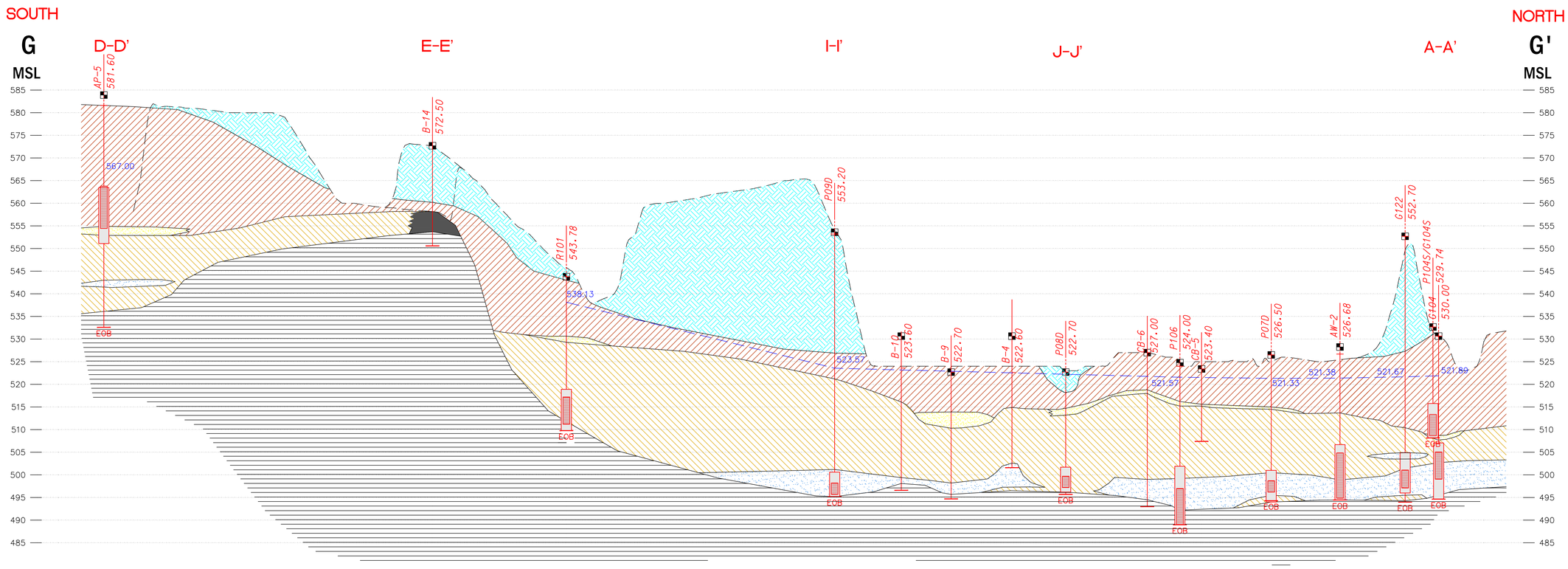

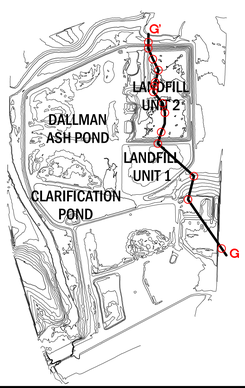

NOTES

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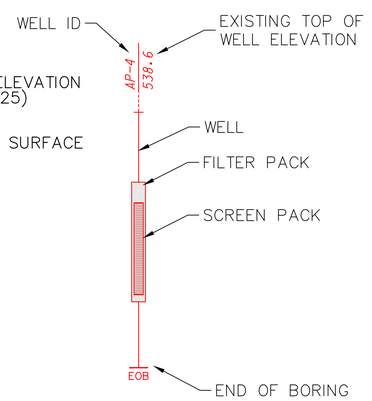
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

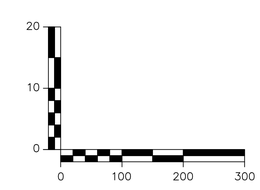
LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- COAL
- MONITORING WELL LOCATION

525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)

BASAL SAND POTENTIOMETRIC SURFACE





NO.	DATE	REVISION DESCRIPTION	BY

NO.	DATE	REVISION DESCRIPTION	BY

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3300 GINGER CREEK DRIVE
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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH DESIGNED BY: MTH DRAWN BY: BCK

GEOLOGIC CROSS-SECTION G-G'

PLANS PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER: G-G'

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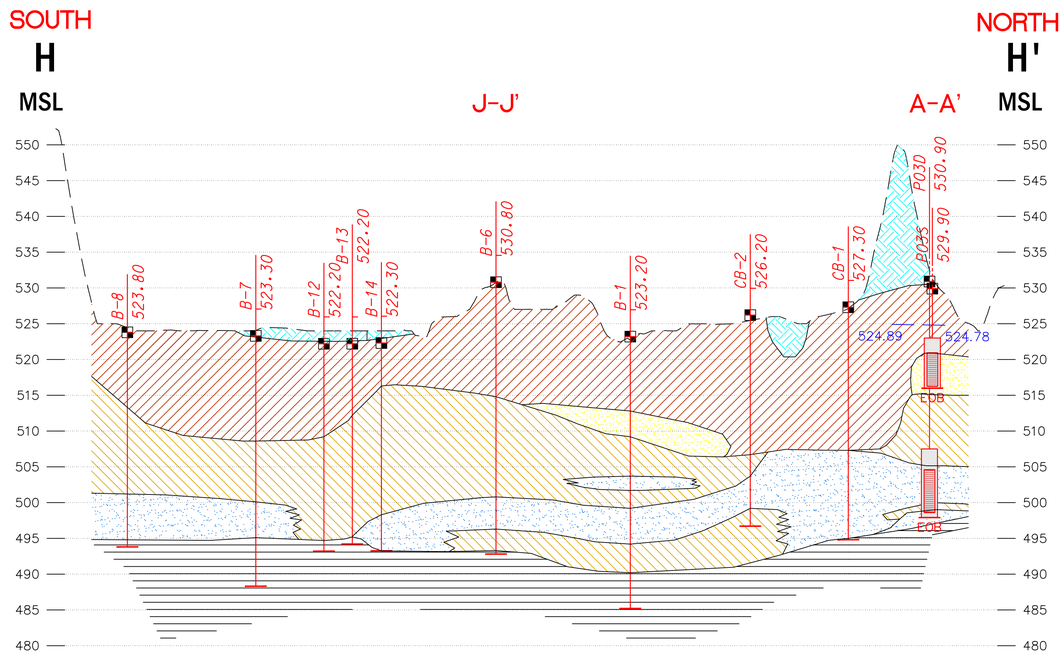

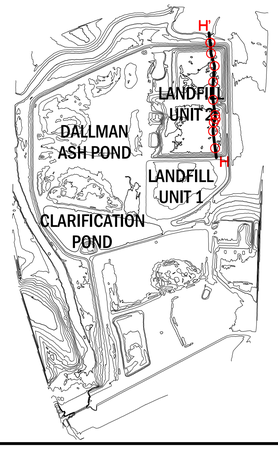

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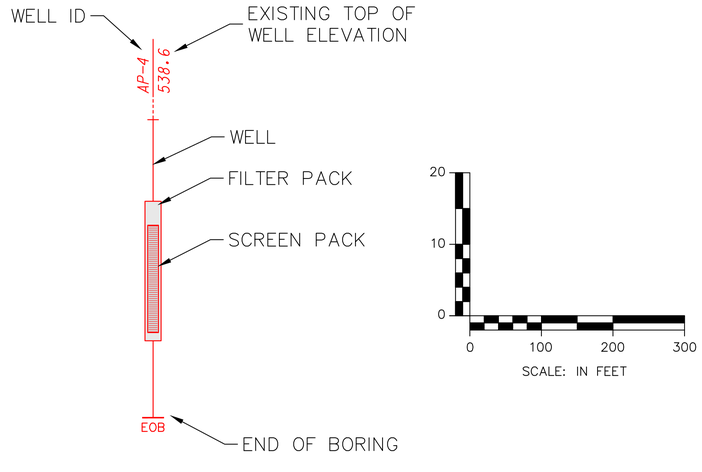
LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION H-H'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

H-H'

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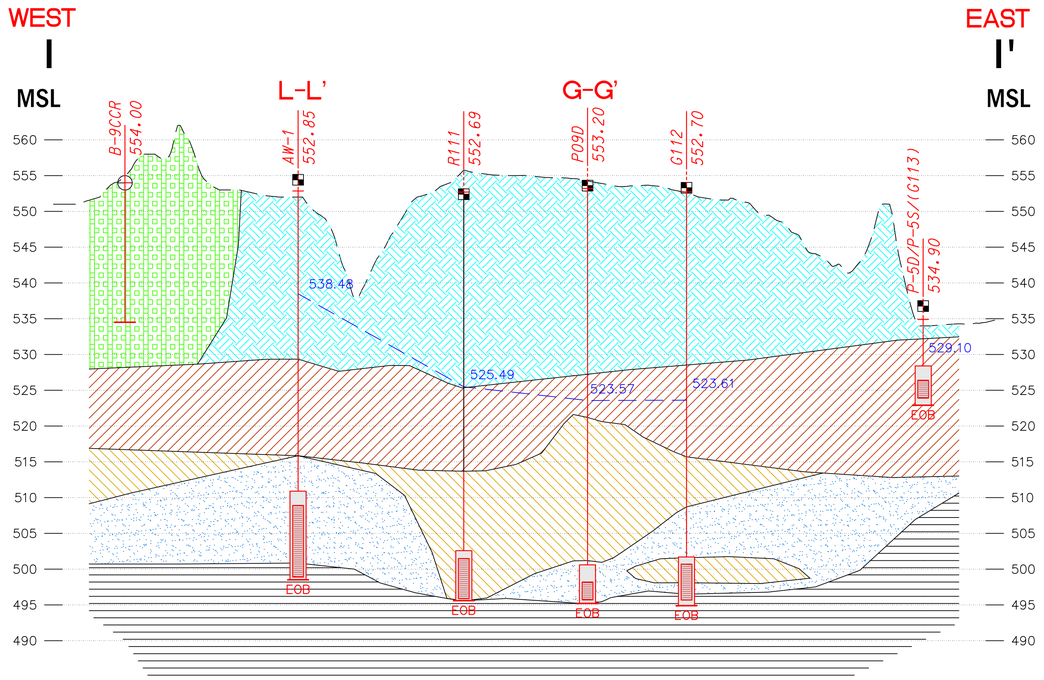

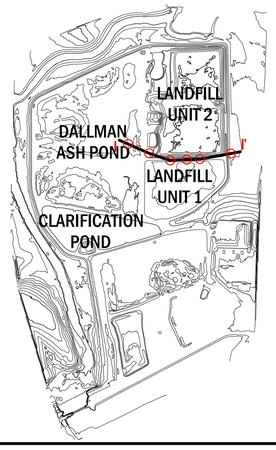

NOTES

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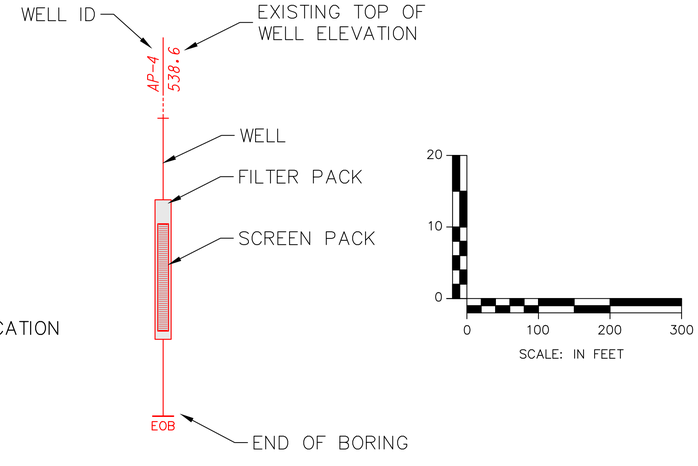
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- 525.00 — GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE
- BASAL SAND
- SHALE
- CCR ASH
- BORING LOCATION
- MONITORING WELL LOCATION



NO.	DATE	REVISION DESCRIPTION	BY

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SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION I-I'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:
I-I'

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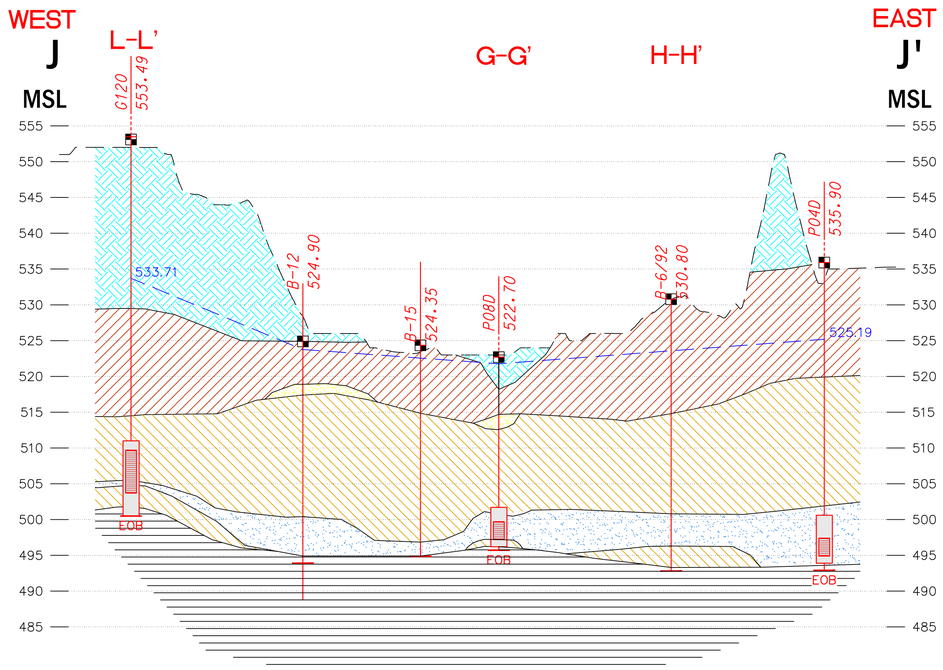

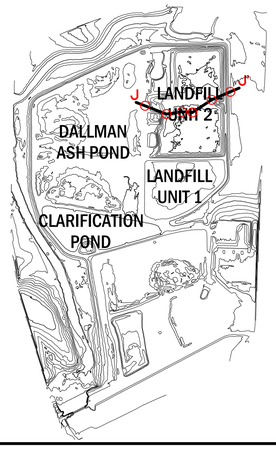

NOTES

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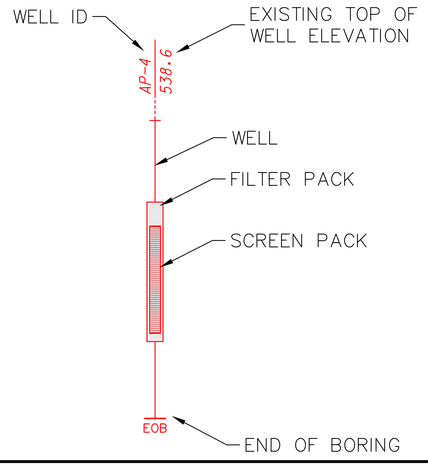
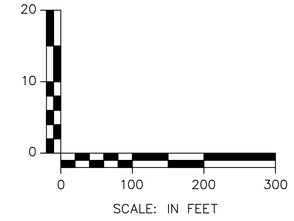
LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE





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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

GEOLOGIC CROSS-SECTION J-J'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

J-J'

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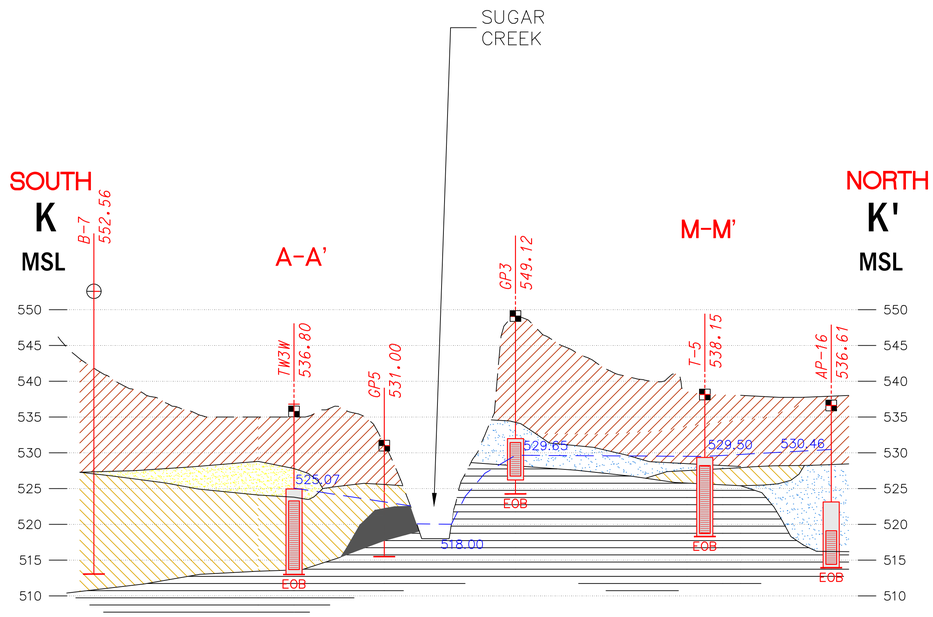

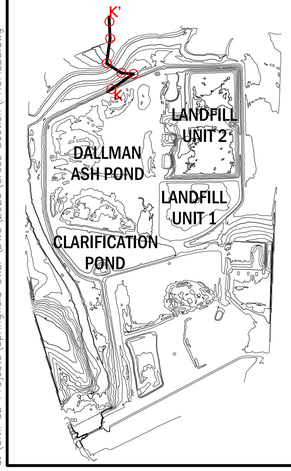

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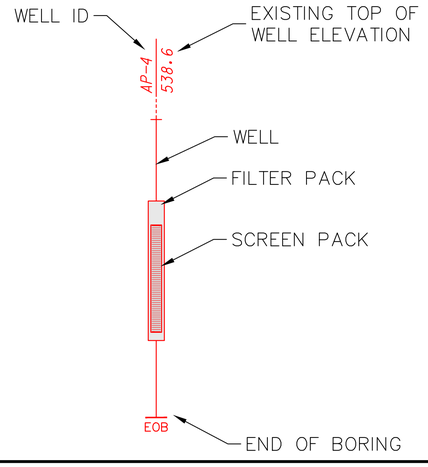
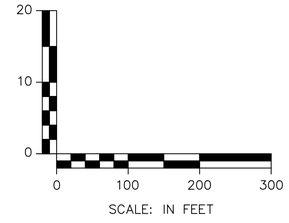
LEGEND

- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- COAL
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE





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3300 GINGER CREEK DRIVE
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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

GEOLOGIC CROSS-SECTION K-K'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

K-K'

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Tab: KK Last Saved: September 23, 2025, by Mike Nguyen Plotted: Tuesday, September 23, 2025 10:11:43 AM
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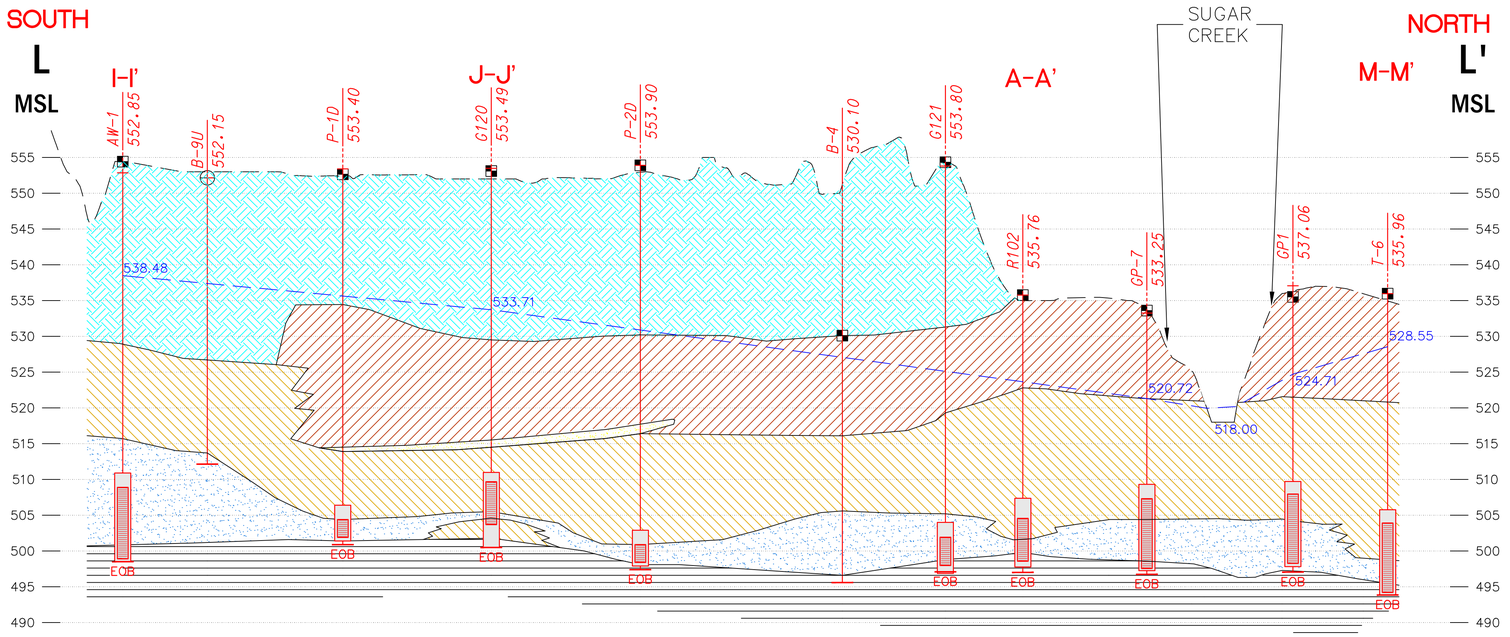
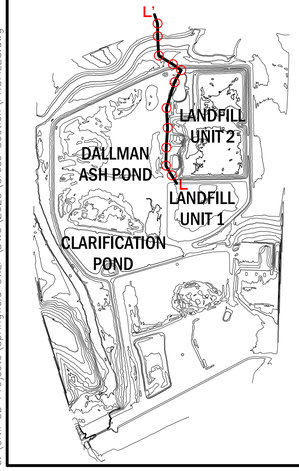


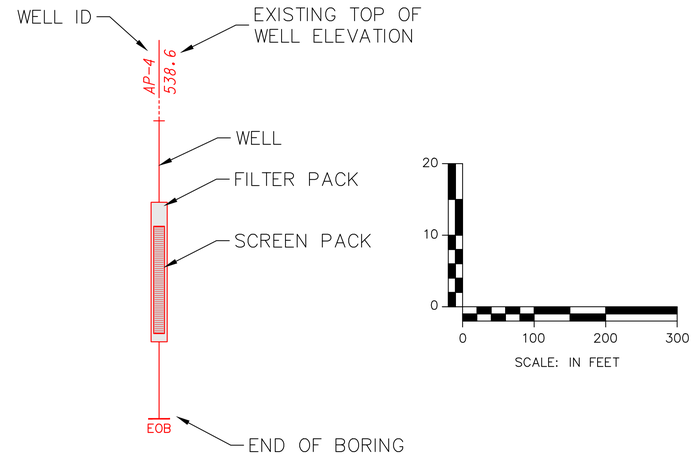


NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
2. SURFACE GENERATED FROM LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: MAY 16, 2023).
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALLOW SAND
- SHALE
- BORING LOCATION
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

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SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION L-L'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

L-L'

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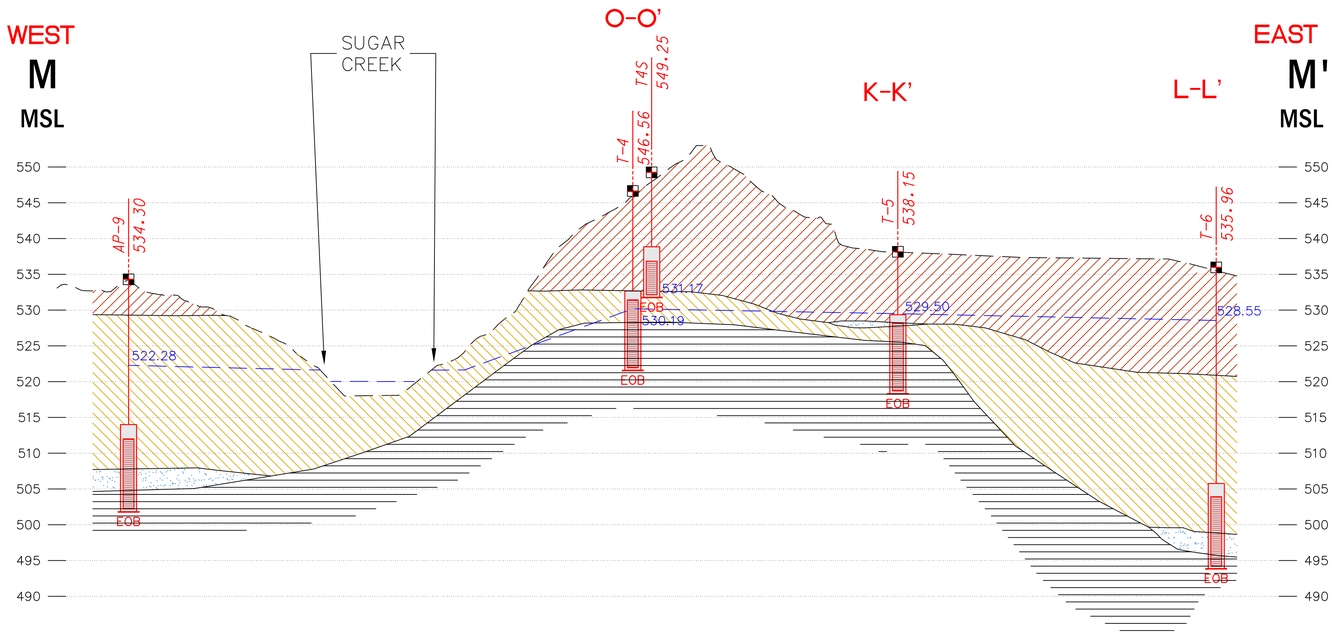

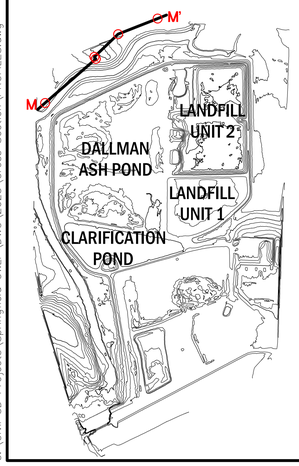

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LEGEND

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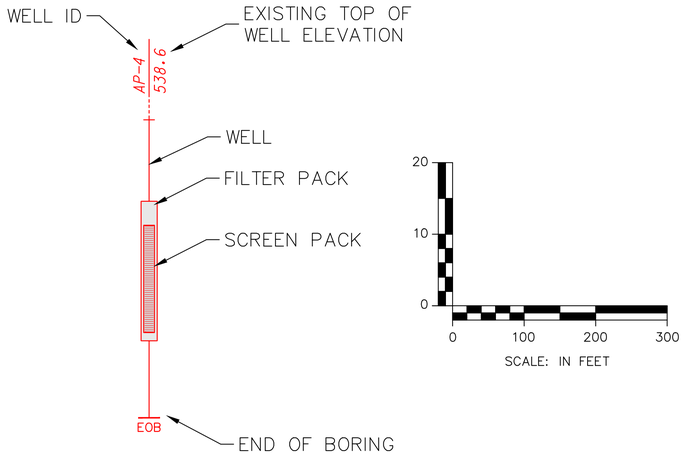
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION M-M'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

M-M'

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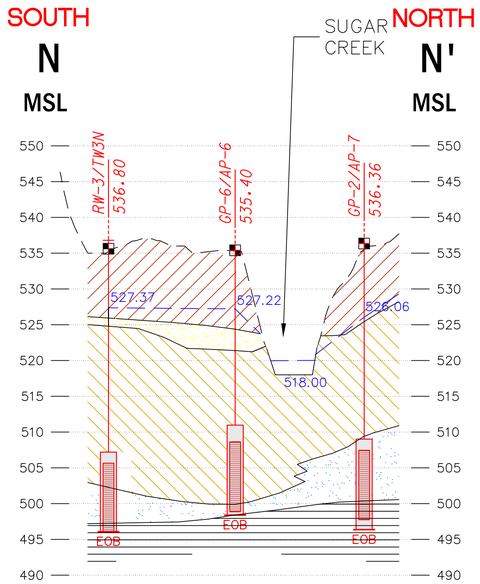

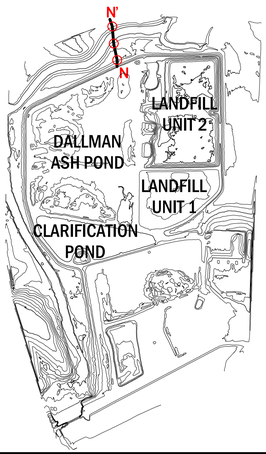

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- SHALE
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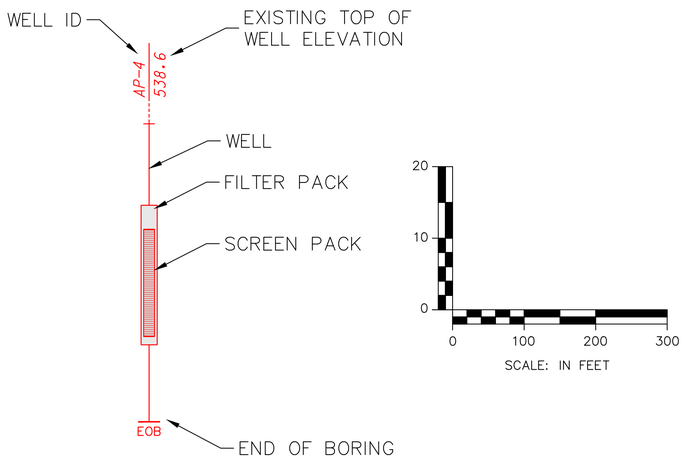

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PONTIAC, IL • DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION N-N'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

N-N'

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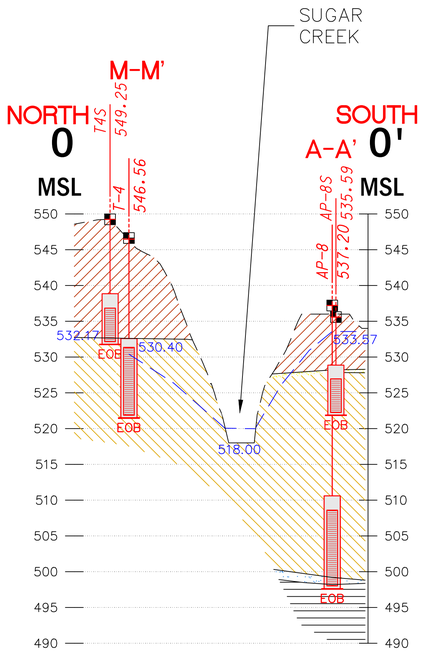

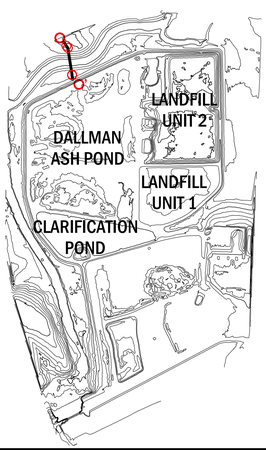

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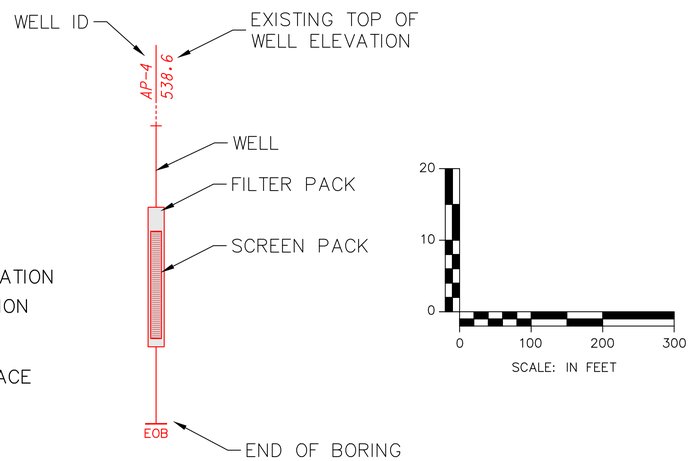

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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION O-O'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

O-O'

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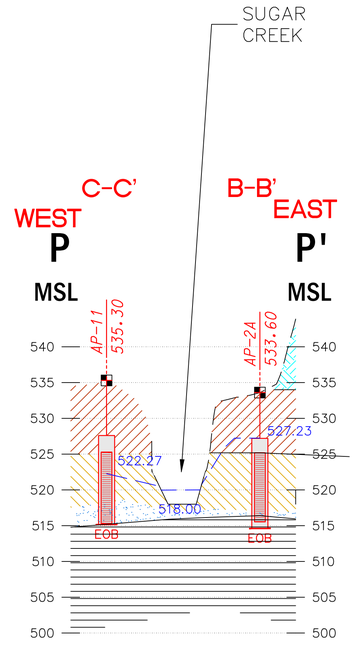

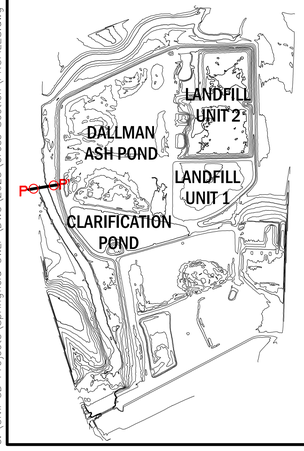

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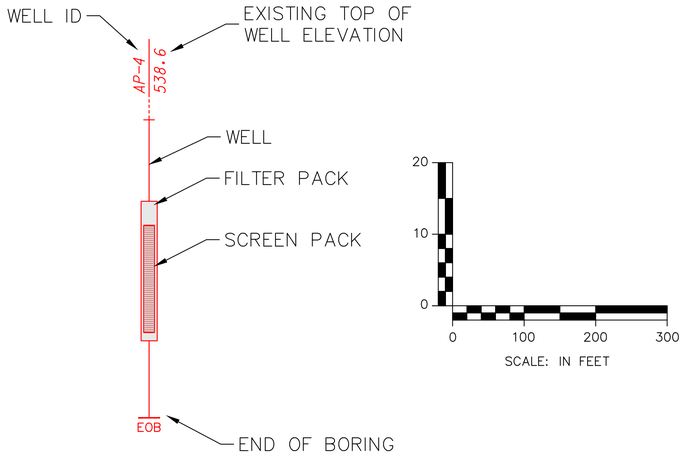

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3300 GINGER CREEK DRIVE
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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION P-P'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

P-P'

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APPENDIX G:
Laboratory Analytical Reports

Interior Impoundment Wells

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

May 28, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: CWLP Borings **WorkOrder:** 24050235

Dear Eric Staley:

TEKLAB, INC received 4 samples on 5/2/2024 1:11:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050235
Report Date: 28-May-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	11
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050235

Client Project: CWLP Borings **Report Date:** 28-May-24

Abbr Definition

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050235
Client Project: CWLP Borings
Report Date: 28-May-24

Qualifiers

- Unknown hydrocarbon
B - Analyte detected in associated Method Blank
C - RL shown is a Client Requested Quantitation Limit
E - Value above quantitation range
H - Holding times exceeded
I - Associated internal standard was outside method criteria
J - Analyte detected below quantitation limits
M - Manual Integration used to determine area response
ND - Not Detected at the Reporting Limit
R - RPD outside accepted recovery limits
S - Spike Recovery outside recovery limits
T - TIC(Tentatively identified compound)
X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050235
Report Date: 28-May-24

Cooler Receipt Temp: 2.9 °C

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050235
Client Project: CWLP Borings
Report Date: 28-May-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050235
Client Project: CWLP Borings
Report Date: 28-May-24
Lab ID: 24050235-001
Client Sample ID: D2 33.5-35.5
Matrix: SOLID
Collection Date: 04/29/2024 10:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	61	100		**158**	mg/L	10	05/09/2024 14:01	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.37	1.0	J	**0.37**	mg/L	10	05/10/2024 9:26	R347102
Elevated reporting limit due to matrix interference.									
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**8**	mg/L	1	05/09/2024 13:56	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**9.18**		1	05/06/2024 11:24	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.345**	mg/L	1	05/07/2024 17:27	222522
Barium	NELAP	0.0150	0.0450		**0.352**	mg/L	1	05/07/2024 17:27	222522
Beryllium	NELAP	0.0002	0.0010	J	**0.0002**	mg/L	1	05/07/2024 17:27	222522
Boron	NELAP	0.250	1.00		**4.05**	mg/L	1	05/07/2024 17:27	222522
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/07/2024 17:27	222522
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/07/2024 17:27	222522
Cobalt	NELAP	0.0020	0.0060		**0.0130**	mg/L	1	05/07/2024 17:27	222522
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/07/2024 17:27	222522
Molybdenum	NELAP	0.0037	0.0100		**1.27**	mg/L	1	05/07/2024 17:27	222522
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/07/2024 17:27	222522
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0125**	mg/L	5	05/09/2024 9:41	222522
Lithium	*	0.0015	0.0030		**0.0707**	mg/L	5	05/09/2024 9:41	222522
Thallium	NELAP	0.0010	0.0020	J	**0.0018**	mg/L	5	05/09/2024 9:41	222522
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/15/2024 0:32	222519
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0390**	mg/L	1	05/08/2024 17:27	222567
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/07/2024 16:58	222567
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/07/2024 16:58	222567
Boron	NELAP	0.250	1.00		**3.05**	mg/L	1	05/07/2024 16:58	222567
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/07/2024 16:58	222567
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/07/2024 16:58	222567
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/07/2024 16:58	222567
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/07/2024 16:58	222567
Molybdenum	NELAP	0.0037	0.0100		**5.21**	mg/L	1	05/07/2024 16:58	222567
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/07/2024 16:58	222567
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0273**	mg/L	5	05/09/2024 10:45	222567
Lithium	*	0.0015	0.0030		**0.0065**	mg/L	5	05/09/2024 10:45	222567
Thallium	NELAP	0.0010	0.0020	J	**0.0015**	mg/L	5	05/09/2024 10:45	222567
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 17:08	223125
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050235
Client Project: CWLP Borings
Report Date: 28-May-24
Lab ID: 24050235-002
Client Sample ID: D1 36.5-38.5
Matrix: SOLID
Collection Date: 04/29/2024 15:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	6	10		**45**	mg/L	1	05/09/2024 14:04	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.19**	mg/L	1	05/09/2024 13:44	R347045
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4	J	**1**	mg/L	1	05/09/2024 14:04	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**9.64**		1	05/06/2024 11:30	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0528**	mg/L	1	05/07/2024 17:45	222522
Barium	NELAP	0.0150	0.0450		**0.514**	mg/L	1	05/07/2024 17:45	222522
Beryllium	NELAP	0.0002	0.0010		**0.0085**	mg/L	1	05/07/2024 17:45	222522
Boron	NELAP	0.250	1.00		**10.9**	mg/L	1	05/07/2024 17:45	222522
Cadmium	NELAP	0.0005	0.0020		**0.0706**	mg/L	1	05/07/2024 17:45	222522
Chromium	NELAP	0.0034	0.0100		**0.0707**	mg/L	1	05/07/2024 17:45	222522
Cobalt	NELAP	0.0020	0.0060		**0.0116**	mg/L	1	05/07/2024 17:45	222522
Lead	NELAP	0.0040	0.0075		**0.0102**	mg/L	1	05/08/2024 13:13	222522
Molybdenum	NELAP	0.0037	0.0100		**0.0554**	mg/L	1	05/07/2024 17:45	222522
Selenium	NELAP	0.017	0.050	J	**0.037**	mg/L	1	05/07/2024 17:45	222522
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0237**	mg/L	5	05/09/2024 9:36	222522
Lithium	*	0.0015	0.0030		**0.0367**	mg/L	5	05/09/2024 9:36	222522
Thallium	NELAP	0.0010	0.0020		**0.0268**	mg/L	5	05/08/2024 14:55	222522
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/15/2024 0:39	222519
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0471**	mg/L	1	05/08/2024 17:23	222567
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/07/2024 17:03	222567
Beryllium	NELAP	0.0002	0.0010	J	**0.0002**	mg/L	1	05/07/2024 17:03	222567
Boron	NELAP	0.250	1.00		**2.94**	mg/L	1	05/07/2024 17:03	222567
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/07/2024 17:03	222567
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/07/2024 17:03	222567
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/07/2024 17:03	222567
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/07/2024 17:03	222567
Molybdenum	NELAP	0.0037	0.0100		**0.144**	mg/L	1	05/07/2024 17:03	222567
Selenium	NELAP	0.017	0.050	J	**0.021**	mg/L	1	05/07/2024 17:03	222567
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0078**	mg/L	5	05/08/2024 15:04	222567
Lithium	*	0.0015	0.0030		**0.0112**	mg/L	5	05/09/2024 10:24	222567
Thallium	NELAP	0.0010	0.0020	J	**0.0010**	mg/L	5	05/08/2024 15:04	222567
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 17:12	223125
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050235
Client Project: CWLP Borings
Report Date: 28-May-24
Lab ID: 24050235-003
Client Sample ID: D3 14.5-29.5
Matrix: SOLID
Collection Date: 04/30/2024 10:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	6	10		**31**	mg/L	1	05/09/2024 14:28	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.11**	mg/L	1	05/09/2024 13:47	R347045
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**< 4**	mg/L	1	05/09/2024 14:28	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**9.38**		1	05/06/2024 11:33	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0155**	mg/L	1	05/08/2024 13:15	222522
Barium	NELAP	0.0150	0.0450		**0.373**	mg/L	1	05/07/2024 17:46	222522
Beryllium	NELAP	0.0002	0.0010		**0.0113**	mg/L	1	05/07/2024 17:46	222522
Boron	NELAP	0.250	1.00		**8.74**	mg/L	1	05/07/2024 17:46	222522
Cadmium	NELAP	0.0005	0.0020		**0.0475**	mg/L	1	05/07/2024 17:46	222522
Chromium	NELAP	0.0034	0.0100		**0.0438**	mg/L	1	05/07/2024 17:46	222522
Cobalt	NELAP	0.0020	0.0060	J	**0.0054**	mg/L	1	05/07/2024 17:46	222522
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/07/2024 17:46	222522
Molybdenum	NELAP	0.0037	0.0100		**0.0415**	mg/L	1	05/07/2024 17:46	222522
Selenium	NELAP	0.017	0.050	J	**0.030**	mg/L	1	05/07/2024 17:46	222522
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0197**	mg/L	5	05/10/2024 7:34	222522
Lithium	*	0.0015	0.0030		**0.0100**	mg/L	5	05/09/2024 10:29	222522
Thallium	NELAP	0.0010	0.0020		**0.0185**	mg/L	5	05/08/2024 15:29	222522
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/15/2024 0:42	222519
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0173**	mg/L	1	05/08/2024 17:29	222567
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/07/2024 17:04	222567
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/07/2024 17:04	222567
Boron	NELAP	0.250	1.00		**2.34**	mg/L	1	05/07/2024 17:04	222567
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/07/2024 17:04	222567
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/07/2024 17:04	222567
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/07/2024 17:04	222567
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/07/2024 17:04	222567
Molybdenum	NELAP	0.0037	0.0100		**0.0355**	mg/L	1	05/07/2024 17:04	222567
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/07/2024 17:04	222567
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0070**	mg/L	5	05/09/2024 11:07	222567
Lithium	*	0.0015	0.0030		**0.0034**	mg/L	5	05/09/2024 11:07	222567
Thallium	NELAP	0.0010	0.0020	J	**0.0017**	mg/L	5	05/09/2024 11:07	222567
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 17:14	223125

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050235
Client Project: CWLP Borings
Report Date: 28-May-24
Lab ID: 24050235-004
Client Sample ID: D4 29.5-31.5
Matrix: SOLID
Collection Date: 04/30/2024 15:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	61	100		**102**	mg/L	10	05/09/2024 14:41	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.14**	mg/L	1	05/09/2024 13:49	R347045
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**11**	mg/L	1	05/09/2024 14:36	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**10.2**		1	05/06/2024 11:35	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0242**	mg/L	1	05/07/2024 17:49	222522
Barium	NELAP	0.0150	0.0450		**0.287**	mg/L	1	05/07/2024 17:49	222522
Beryllium	NELAP	0.0002	0.0010		**0.0012**	mg/L	1	05/07/2024 17:49	222522
Boron	NELAP	0.250	1.00		**6.25**	mg/L	1	05/07/2024 17:49	222522
Cadmium	NELAP	0.0005	0.0020		**0.0063**	mg/L	1	05/07/2024 17:49	222522
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/07/2024 17:49	222522
Cobalt	NELAP	0.0020	0.0060		**0.0089**	mg/L	1	05/07/2024 17:49	222522
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/07/2024 17:49	222522
Molybdenum	NELAP	0.0037	0.0100		**0.179**	mg/L	1	05/07/2024 17:49	222522
Selenium	NELAP	0.017	0.050	J	**0.022**	mg/L	1	05/07/2024 17:49	222522
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0376**	mg/L	5	05/09/2024 10:18	222522
Lithium	*	0.0015	0.0030		**0.0374**	mg/L	5	05/09/2024 10:18	222522
Thallium	NELAP	0.0010	0.0020		**0.0243**	mg/L	5	05/08/2024 15:00	222522
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/19/2024 16:25	223122
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0114**	mg/L	1	05/08/2024 17:31	222567
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/07/2024 17:05	222567
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/07/2024 17:05	222567
Boron	NELAP	0.250	1.00		**2.77**	mg/L	1	05/07/2024 17:05	222567
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/07/2024 17:05	222567
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/07/2024 17:05	222567
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/07/2024 17:05	222567
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/07/2024 17:05	222567
Molybdenum	NELAP	0.0037	0.0100		**0.134**	mg/L	1	05/07/2024 17:05	222567
Selenium	NELAP	0.017	0.050	J	**0.021**	mg/L	1	05/07/2024 17:05	222567
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0240**	mg/L	5	05/09/2024 11:44	222567
Lithium	*	0.0015	0.0030		**0.0059**	mg/L	5	05/09/2024 11:44	222567
Thallium	NELAP	0.0010	0.0020	J	**0.0013**	mg/L	5	05/08/2024 16:14	222567
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 17:21	223125
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050235
Report Date: 28-May-24

Carrier: Paul Reeves

Received By: NR

Completed by: Amber Dilallo
On: 03-May-24

Reviewed by: Ellie Hopkins
On: 03-May-24

Pages to follow: Chain of custody [1] Extra pages included [14]

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C **2.9**
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☐	No ☑		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	NA ☑	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Samples requiring pH should be analyzed as soon as possible after collection. Samples submitted for pH analysis are analyzed as soon as practicable upon arrival at the laboratory. - amberdilallo - 5/3/2024 10:02:55 AM

Limited volume for D3 sample; additional volume for Radium-226 and -228 was submitted on WO#24050346. SAH 5/28/24

Print PDF

CHAIN OF CUSTODY

Pg __ of __ Workorder # 24050235

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City, Water, Light & Power
Address: 3100 Stevenson Dr.
City/State/Zip: Springfield, IL 62712
Contact: Colleen Grey Phone: 217-787-2334
Email: cgrey@andrews-eng.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 2.9 °C #7
Preserved in: [ ] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES:

TEKLAB

Client Comments:
TCLP & SPLP for all metals

Courier

email results to C. Grey and datamanagement@andrews-eng.com

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [ ] No
Are these samples known to be hazardous? [ ] Yes [ ] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [ ] Yes [ ] No

PROJECT NAME/NUMBER	SAMPLE COLLECTOR'S NAME
CWLP Borings	S. Van Hook

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Rad 226 and 228	TCLP & SPLP Sb, As, Ba, Be	TCLP & SPLP B, Cd, Cr, Co, Pb, Se, Tl	TCLP & SPLP Li, Mo	TCLP & SPLP Hg	Neutral Leach Cl, F+, SO4	pH
24050235 001	D2 33.5-35.5	4/29/24 10 AM	Soil	2									✓	✓	✓	✓	✓	✓	✓
002	D1 36.5-38.5	4/29/24 3:30PM	Soil	2									✓	✓	✓	✓	✓	✓	✓
003	D3 14.5-29.5	4/30/24 10:15am	Soil	2									✓	✓	✓	✓	✓	✓	✓
004	D4 29.5-31.5	4/30/24 3:00PM	Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2									✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
[signature]	5/1/24 7:00pm	ASI Secure Storage	5/1/24 7:00P
ASI Secure Storage CWLP	5/2/24 7:40A	[signature]	5.2.24 0740
[signature]	5.2.24 1311	[signature]	5/2/24 1311

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

UM 5/2

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

May 23, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24050235

Dear Shelly Hennessy:

Order No.: 24050488

Summit Environmental Technologies, Inc. received 3 sample(s) on 5/7/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **24050488**
Date: **5/23/2024**

CLIENT: TEKLAB Inc,
Project: 24050235

WorkOrder Narrative:
24050488: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24050488**
Date: **5/23/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **24050488**

23-May-24

CLIENT: TEKLAB Inc,
Project: 24050235

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24050488-001	24050235-001		4/29/2024 10:00:00 AM	5/7/2024 11:30:00 AM	Solid
24050488-002	24050235-002		4/29/2024 3:30:00 PM	5/7/2024 11:30:00 AM	Solid
24050488-003	24050235-004		4/30/2024 3:00:00 PM	5/7/2024 11:30:00 AM	Solid

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DATES REPORT

WO#: **24050488**

23-May-24

Client: TEKLAB Inc,
Project: 24050235

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24050488-001A	24050235-001	4/29/2024 10:00:00 AM	Solid	Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050488-002A	24050235-002	4/29/2024 3:30:00 PM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050488-003A	24050235-004	4/30/2024 3:00:00 PM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM

Original

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Analytical Report

(consolidated)

WO#: **24050488**

Date Reported: **5/23/2024**

CLIENT: TEKLAB Inc,
Collection Date: 4/29/2024 10:00:00 AM

Project: 24050235

Lab ID: 24050488-001
Matrix: SOLID

Client Sample ID: 24050235-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**SW9315**	**E903-904**	Analyst: **SMZ**
RADIUM-226 ANALYSIS (9315)							
Radium-226	ND	1.00		pCi/g	± 0.100	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RAD226/228					**SW9320**	**E903-904**	Analyst: **SMZ**
RADIUM-228 ANALYSIS (9320)							
Radium-228	ND	2.00		pCi/g	± 0.330	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Report

(consolidated)

WO#: **24050488**

Date Reported: **5/23/2024**

CLIENT: TEKLAB Inc,
Collection Date: 4/29/2024 3:30:00 PM

Project: 24050235

Lab ID: 24050488-002
Matrix: SOLID

Client Sample ID: 24050235-002

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**SW9315**	**E903-904**	Analyst: **SMZ**
RADIUM-226 ANALYSIS (9315)							
Radium-226	ND	1.00		pCi/g	± 0.130	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RAD226/228					**SW9320**	**E903-904**	Analyst: **SMZ**
RADIUM-228 ANALYSIS (9320)							
Radium-228	ND	2.00		pCi/g	± 0.270	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24050488**

Date Reported: **5/23/2024**

CLIENT: TEKLAB Inc,

Collection Date: 4/30/2024 3:00:00 PM

Project: 24050235

Lab ID: 24050488-003

Matrix: SOLID

Client Sample ID: 24050235-004

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**SW9315**	**E903-904**	Analyst: **SMZ**
RADIUM-226 ANALYSIS (9315)							
Radium-226	ND	1.00		pCi/g	± 0.160	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RAD226/228					**SW9320**	**E903-904**	Analyst: **SMZ**
RADIUM-228 ANALYSIS (9320)							
Radium-228	ND	2.00		pCi/g	± 0.300	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **24050488**
23-May-24

Client: TEKLAB Inc,
Project: 24050235 **BatchID:** **75515**

Sample ID: **MB-75515**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **PBS**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	2.00									
Yield	1.00										

Sample ID: **LCS-75515**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **LCSS**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043899**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.62	2.00	5.000	0	72.4	50	130				

Sample ID: **LCSD-75515**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **LCSS02**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.01	2.00	5.000	0	60.2	50	130	3.620	18.4	20	

Sample ID: **24041932-001ADUP**	SampType: **DUP**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **BatchQC**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050488**
23-May-24

Client: TEKLAB Inc,
Project: 24050235 **BatchID:** **75515**

Sample ID: **24041932-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/g** Prep Date: **5/16/2024** RunNo: **186135**
Client ID: **BatchQC** Batch ID: **75515** TestNo: **SW9320** **E903-904** Analysis Date: **5/22/2024** SeqNo: **5043905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	8.89	2.00	10.00	0	88.9	0	0	6.490	31.2	20	RS
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24050488**
23-May-24

Client: TEKLAB Inc,
Project: 24050235 **BatchID:** **75515**

Sample ID: **MB-75515**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **PBS**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-75515**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **LCSS**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	6.20	1.00	5.000	0	124	70	130				

Sample ID: **LCSD-75515**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **LCSS02**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.76	1.00	5.000	0	115	60	140	6.200	7.36	40	

Sample ID: **24041932-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **BatchQC**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050488**
23-May-24

Client: TEKLAB Inc,
Project: 24050235 **BatchID:** **75515**

Sample ID: **24041932-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/g** Prep Date: **5/16/2024** RunNo: **186145**
Client ID: **BatchQC** Batch ID: **75515** TestNo: **SW9315** **E903-904** Analysis Date: **5/23/2024** SeqNo: **5044089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	6.51	1.00						6.960	6.68	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

20.8-0.2=

Cooler Temp: 26.6°d

Sampler: Client

QC Level: 2

Fedex, Cooler

Project# 24050235

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Contact: Shelly Hennessy
Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT
Billing/PO: 36226
Phone: (618) 344-1004 ext. 36

24050488

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228												
							CPM										
	24050235-001	4/29/24 1000	Unpres	Soil	✔		38										
	24050235-002	4/29/24 1530	Unpres	Soil	✔		34										
	24050235-004	4/30/24 1500	Unpres	Soil	✔		38										
			Other	Aqueous													
			Other	Aqueous													
			Other	Aqueous													
			Other	Aqueous													
			Other	Aqueous													
			Other	Aqueous													
			Other	Aqueous													
			Other	Aqueous													

*Relinquished By	Date/Time	Received By	Date/Time
	5/3/24 1700		5/7/24, 1130

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights.

SubCocRevA

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050488 RcptNo: 1

Logged by:	Christina N. Gemma	5/7/2024 11:30:00 AM	C. Gemma
Completed By:	Christina N. Gemma	5/7/2024 5:25:54 PM	C. Gemma
Reviewed By:	Jennifer Woolf	5/8/2024 11:11:39 AM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	20.6	Good	Not Present			

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

June 05, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: CWLP Borings **WorkOrder:** 24050346

Dear Eric Staley:

TEKLAB, INC received 10 samples on 5/3/2024 1:50:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050346
Report Date: 05-Jun-24

This reporting package includes the following:

Cover Letter	1
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Laboratory Results	7
Receiving Check List	17
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050346

Client Project: CWLP Borings **Report Date:** 05-Jun-24

Abbr Definition

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24

Qualifiers

- Unknown hydrocarbon
B - Analyte detected in associated Method Blank
C - RL shown is a Client Requested Quantitation Limit
E - Value above quantitation range
H - Holding times exceeded
I - Associated internal standard was outside method criteria
J - Analyte detected below quantitation limits
M - Manual Integration used to determine area response
ND - Not Detected at the Reporting Limit
R - RPD outside accepted recovery limits
S - Spike Recovery outside recovery limits
T - TIC(Tentatively identified compound)
X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050346
Report Date: 05-Jun-24

Cooler Receipt Temp: 3.3 °C

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-001
Client Sample ID: L4 10ft-15.3ft
Matrix: SOLID
Collection Date: 05/02/2024 8:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	61	100		**149**	mg/L	10	05/09/2024 14:49	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.42**	mg/L	1	05/09/2024 13:52	R347045
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**25**	mg/L	1	05/09/2024 14:44	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**8.49**		1	05/06/2024 11:10	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:00	222742
Barium	NELAP	0.0150	0.0450		**1.04**	mg/L	1	05/10/2024 14:00	222742
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:00	222742
Boron	NELAP	0.25	1.0	J	**0.59**	mg/L	1	05/10/2024 14:00	222742
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:00	222742
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:00	222742
Cobalt	NELAP	0.0020	0.0060		**0.0077**	mg/L	1	05/10/2024 14:00	222742
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:00	222742
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:00	222742
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:00	222742
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0012**	mg/L	5	05/14/2024 9:03	222742
Lithium	*	0.0015	0.0030		**0.0034**	mg/L	5	05/14/2024 9:03	222742
Thallium	NELAP	0.0010	0.0020	J	**0.0015**	mg/L	5	05/15/2024 12:16	222742
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/16/2024 7:17	222743
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:13	222744
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/10/2024 14:13	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:13	222744
Boron	NELAP	0.250	1.00		**< 1.00**	mg/L	1	05/10/2024 14:13	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:13	222744
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:13	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:13	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:13	222744
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:13	222744
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:13	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010	J	**0.0009**	mg/L	5	05/14/2024 12:23	222744
Lithium	*	0.0015	0.0030		**< 0.0030**	mg/L	5	05/14/2024 12:23	222744
Thallium	NELAP	0.0010	0.0020	J	**0.0011**	mg/L	5	05/15/2024 14:31	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:27	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-002
Client Sample ID: L3 29.5-32.7
Matrix: SOLID
Collection Date: 05/02/2024 11:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	307	500		**574**	mg/L	50	05/10/2024 13:21	R347112
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.20**	mg/L	1	05/09/2024 13:53	R347045
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**13**	mg/L	1	05/09/2024 14:52	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**8.79**		1	05/06/2024 11:12	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0337**	mg/L	1	05/10/2024 14:01	222742
Barium	NELAP	0.0150	0.0450		**0.470**	mg/L	1	05/10/2024 14:01	222742
Beryllium	NELAP	0.0002	0.0010		**0.0054**	mg/L	1	05/10/2024 14:01	222742
Boron	NELAP	0.250	1.00		**1.23**	mg/L	1	05/10/2024 14:01	222742
Cadmium	NELAP	0.0005	0.0020		**0.0397**	mg/L	1	05/10/2024 14:01	222742
Chromium	NELAP	0.0034	0.0100		**0.0185**	mg/L	1	05/10/2024 14:01	222742
Cobalt	NELAP	0.0020	0.0060		**0.0161**	mg/L	1	05/10/2024 14:01	222742
Lead	NELAP	0.0040	0.0075		**0.0247**	mg/L	1	05/10/2024 14:01	222742
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:01	222742
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:01	222742
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0024**	mg/L	5	05/14/2024 9:57	222742
Lithium	*	0.0015	0.0030		**0.0061**	mg/L	5	05/14/2024 9:57	222742
Thallium	NELAP	0.0010	0.0020		**0.0060**	mg/L	5	05/15/2024 12:31	222742
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/16/2024 7:20	222743
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/16/2024 17:50	222744
Barium	NELAP	0.015	0.045	J	**0.025**	mg/L	1	05/10/2024 14:14	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:14	222744
Boron	NELAP	0.25	1.0	J	**0.60**	mg/L	1	05/10/2024 14:14	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:14	222744
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:14	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:14	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:14	222744
Molybdenum	NELAP	0.0037	0.0100		**0.0169**	mg/L	1	05/10/2024 14:14	222744
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:14	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0037**	mg/L	5	05/14/2024 12:28	222744
Lithium	*	0.0015	0.0030	J	**0.0030**	mg/L	5	05/14/2024 12:28	222744
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	05/15/2024 14:36	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:29	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/31/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/31/2024 0:00	R348283

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-003
Client Sample ID: L3 19.5-21.5
Matrix: SOLID
Collection Date: 05/02/2024 11:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	61	100		**224**	mg/L	10	05/09/2024 15:05	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.20**	mg/L	1	05/09/2024 13:56	R347045
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4	J	**4**	mg/L	1	05/09/2024 15:00	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**8.14**		1	05/06/2024 11:14	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0279**	mg/L	1	05/16/2024 17:49	222740
Barium	NELAP	0.0150	0.0450		**0.635**	mg/L	1	05/10/2024 14:56	222740
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:56	222740
Boron	NELAP	0.25	1.0	J	**0.69**	mg/L	1	05/10/2024 14:56	222740
Cadmium	NELAP	0.0005	0.0020		**0.0154**	mg/L	1	05/10/2024 14:56	222740
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:56	222740
Cobalt	NELAP	0.0020	0.0060		**0.0065**	mg/L	1	05/14/2024 12:11	222740
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:56	222740
Molybdenum	NELAP	0.0037	0.0100		**0.0307**	mg/L	1	05/10/2024 14:56	222740
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:56	222740
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0066**	mg/L	5	05/14/2024 9:42	222740
Lithium	*	0.0015	0.0030		**0.0053**	mg/L	5	05/14/2024 9:42	222740
Thallium	NELAP	0.0010	0.0020		**0.0086**	mg/L	5	05/15/2024 13:21	222740
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**0.00028**	mg/L	1	05/14/2024 14:21	222612
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0195**	mg/L	1	05/10/2024 14:15	222744
Barium	NELAP	0.015	0.045	J	**0.028**	mg/L	1	05/10/2024 14:15	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:15	222744
Boron	NELAP	0.25	1.0	J	**0.32**	mg/L	1	05/10/2024 14:15	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:15	222744
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:15	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:15	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:15	222744
Molybdenum	NELAP	0.0037	0.0100		**0.0111**	mg/L	1	05/10/2024 14:15	222744
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:15	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0054**	mg/L	5	05/14/2024 12:33	222744
Lithium	*	0.0015	0.0030	J	**0.0015**	mg/L	5	05/14/2024 12:33	222744
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	05/15/2024 14:41	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:36	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-004
Client Sample ID: L1 24.5-31.5
Matrix: SOLID
Collection Date: 05/02/2024 15:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	61	100		**139**	mg/L	10	05/09/2024 15:29	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.21**	mg/L	1	05/10/2024 9:32	R347102
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**5**	mg/L	1	05/09/2024 15:24	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**9.14**		1	05/06/2024 11:15	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:56	222740
Barium	NELAP	0.0150	0.0450		**0.172**	mg/L	1	05/10/2024 14:56	222740
Beryllium	NELAP	0.0002	0.0010		**0.0015**	mg/L	1	05/10/2024 14:56	222740
Boron	NELAP	0.250	1.00		**17.2**	mg/L	1	05/10/2024 14:56	222740
Cadmium	NELAP	0.0005	0.0020		**0.0045**	mg/L	1	05/10/2024 14:56	222740
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:56	222740
Cobalt	NELAP	0.0020	0.0060	J	**0.0033**	mg/L	1	05/10/2024 14:56	222740
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:56	222740
Molybdenum	NELAP	0.0037	0.0100		**0.0118**	mg/L	1	05/10/2024 14:56	222740
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:56	222740
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0064**	mg/L	5	05/14/2024 9:47	222740
Lithium	*	0.0015	0.0030		**0.0087**	mg/L	5	05/14/2024 9:47	222740
Thallium	NELAP	0.0010	0.0020		**0.0041**	mg/L	5	05/15/2024 13:26	222740
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/15/2024 16:51	222741
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:16	222744
Barium	NELAP	0.015	0.045	J	**0.026**	mg/L	1	05/10/2024 14:16	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:16	222744
Boron	NELAP	0.250	1.00		**2.69**	mg/L	1	05/10/2024 14:16	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:16	222744
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:16	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:16	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:16	222744
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:16	222744
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:16	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0012**	mg/L	5	05/14/2024 12:39	222744
Lithium	*	0.0015	0.0030	J	**0.0030**	mg/L	5	05/14/2024 12:39	222744
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	05/15/2024 14:45	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:43	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-005
Client Sample ID: L1 14.5-21.5
Matrix: SOLID
Collection Date: 05/02/2024 14:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	61	100		**103**	mg/L	10	05/09/2024 15:37	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.37**	mg/L	1	05/10/2024 9:35	R347102
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4	J	**1**	mg/L	1	05/09/2024 15:32	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**8.13**		1	05/06/2024 11:16	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:57	222740
Barium	NELAP	0.0150	0.0450		**0.345**	mg/L	1	05/10/2024 14:57	222740
Beryllium	NELAP	0.0002	0.0010	J	**0.0007**	mg/L	1	05/10/2024 14:57	222740
Boron	NELAP	0.25	1.0	J	**0.32**	mg/L	1	05/10/2024 14:57	222740
Cadmium	NELAP	0.0005	0.0020		**0.0045**	mg/L	1	05/10/2024 14:57	222740
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:57	222740
Cobalt	NELAP	0.0020	0.0060	J	**0.0054**	mg/L	1	05/10/2024 14:57	222740
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:57	222740
Molybdenum	NELAP	0.0037	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:57	222740
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:57	222740
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0019**	mg/L	5	05/14/2024 10:18	222740
Lithium	*	0.0015	0.0030		**0.0036**	mg/L	5	05/14/2024 10:18	222740
Thallium	NELAP	0.0010	0.0020		**0.0023**	mg/L	5	05/15/2024 13:36	222740
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/15/2024 16:54	222741
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0276**	mg/L	1	05/10/2024 14:16	222744
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/10/2024 14:16	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:16	222744
Boron	NELAP	0.250	1.00		**< 1.00**	mg/L	1	05/10/2024 14:16	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:16	222744
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:16	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:16	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:16	222744
Molybdenum	NELAP	0.0037	0.0100		**0.0145**	mg/L	1	05/10/2024 14:16	222744
Selenium	NELAP	0.017	0.050	J	**0.019**	mg/L	1	05/10/2024 14:16	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0114**	mg/L	5	05/14/2024 13:05	222744
Lithium	*	0.0015	0.0030		**< 0.0030**	mg/L	5	05/14/2024 13:05	222744
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	05/15/2024 15:05	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:45	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-006
Client Sample ID: D3 9.5-11.5
Matrix: SOLID
Collection Date: 04/30/2024 10:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

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Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-007
Client Sample ID: D3 4.5-6.5
Matrix: SOLID
Collection Date: 04/30/2024 10:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	6	10		**45**	mg/L	1	05/09/2024 15:42	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10	J	**0.08**	mg/L	1	05/10/2024 9:36	R347102
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**< 4**	mg/L	1	05/09/2024 15:42	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**9.93**		1	05/06/2024 11:18	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:59	222740
Barium	NELAP	0.0150	0.0450		**0.492**	mg/L	1	05/10/2024 14:59	222740
Beryllium	NELAP	0.0002	0.0010		**0.0114**	mg/L	1	05/10/2024 14:59	222740
Boron	NELAP	0.500	2.00		**25.9**	mg/L	2	05/13/2024 11:33	222740
Cadmium	NELAP	0.0005	0.0020		**0.0302**	mg/L	1	05/10/2024 14:59	222740
Chromium	NELAP	0.0034	0.0100		**0.0692**	mg/L	1	05/10/2024 14:59	222740
Cobalt	NELAP	0.0020	0.0060		**0.0118**	mg/L	1	05/10/2024 14:59	222740
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:59	222740
Molybdenum	NELAP	0.0037	0.0100		**0.0375**	mg/L	1	05/10/2024 14:59	222740
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:59	222740
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0178**	mg/L	5	05/14/2024 9:52	222740
Lithium	*	0.0015	0.0030		**0.0131**	mg/L	5	05/14/2024 9:52	222740
Thallium	NELAP	0.0010	0.0020		**0.0252**	mg/L	5	05/15/2024 13:31	222740
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/15/2024 16:56	222741
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/16/2024 17:50	222744
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/10/2024 14:24	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:24	222744
Boron	NELAP	0.250	1.00		**2.65**	mg/L	1	05/10/2024 14:24	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:24	222744
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:24	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:24	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:24	222744
Molybdenum	NELAP	0.0037	0.0100		**0.0138**	mg/L	1	05/10/2024 14:24	222744
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:24	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0029**	mg/L	5	05/14/2024 12:44	222744
Lithium	*	0.0015	0.0030		**0.0033**	mg/L	5	05/14/2024 12:44	222744
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	05/15/2024 14:50	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:47	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-008
Client Sample ID: D1 19.5-21.5
Matrix: SOLID
Collection Date: 04/29/2024 15:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	31	50		**65**	mg/L	5	05/10/2024 13:23	R347112
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.13**	mg/L	1	05/10/2024 9:39	R347102
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4	J	**1**	mg/L	1	05/09/2024 15:50	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**10.0**		1	05/06/2024 11:20	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 15:06	222740
Barium	NELAP	0.0150	0.0450		**0.358**	mg/L	1	05/10/2024 15:06	222740
Beryllium	NELAP	0.0002	0.0010		**0.0145**	mg/L	1	05/10/2024 15:06	222740
Boron	NELAP	0.500	2.00		**26.6**	mg/L	2	05/13/2024 11:33	222740
Cadmium	NELAP	0.0005	0.0020		**0.0293**	mg/L	1	05/10/2024 15:06	222740
Chromium	NELAP	0.0034	0.0100		**0.105**	mg/L	1	05/10/2024 15:06	222740
Cobalt	NELAP	0.0020	0.0060		**0.0145**	mg/L	1	05/10/2024 15:06	222740
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 15:06	222740
Molybdenum	NELAP	0.0037	0.0100		**0.0402**	mg/L	1	05/10/2024 15:06	222740
Selenium	NELAP	0.017	0.050	J	**0.017**	mg/L	1	05/10/2024 15:06	222740
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0170**	mg/L	5	05/14/2024 11:46	222740
Lithium	*	0.0015	0.0030		**0.0112**	mg/L	5	05/14/2024 11:46	222740
Thallium	NELAP	0.0010	0.0020		**0.0229**	mg/L	5	05/15/2024 14:26	222740
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/15/2024 17:07	222741
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:25	222744
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/10/2024 14:25	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:25	222744
Boron	NELAP	0.250	1.00		**5.11**	mg/L	1	05/10/2024 14:25	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:25	222744
Chromium	NELAP	0.0034	0.010	J	**0.0049**	mg/L	1	05/10/2024 14:25	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:25	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:25	222744
Molybdenum	NELAP	0.0037	0.0100		**0.216**	mg/L	1	05/10/2024 14:25	222744
Selenium	NELAP	0.017	0.050	J	**0.030**	mg/L	1	05/10/2024 14:25	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0035**	mg/L	5	05/14/2024 12:49	222744
Lithium	*	0.0015	0.0030		**0.0033**	mg/L	5	05/14/2024 12:49	222744
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	05/15/2024 14:55	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:49	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-009
Client Sample ID: D2 19.5-21.5
Matrix: SOLID
Collection Date: 04/29/2024 9:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	61	100		**226**	mg/L	10	05/09/2024 16:20	R347057
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.20**	mg/L	1	05/10/2024 9:42	R347102
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**7**	mg/L	1	05/09/2024 16:14	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**9.25**		1	05/06/2024 11:21	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0505**	mg/L	1	05/10/2024 14:03	222742
Barium	NELAP	0.0150	0.0450		**0.556**	mg/L	1	05/10/2024 14:03	222742
Beryllium	NELAP	0.0002	0.0010		**0.0231**	mg/L	1	05/10/2024 14:03	222742
Boron	NELAP	0.250	1.00		**9.63**	mg/L	1	05/10/2024 14:03	222742
Cadmium	NELAP	0.0005	0.0020		**0.0638**	mg/L	1	05/10/2024 14:03	222742
Chromium	NELAP	0.0034	0.0100		**0.116**	mg/L	1	05/10/2024 14:03	222742
Cobalt	NELAP	0.0020	0.0060		**0.0182**	mg/L	1	05/10/2024 14:03	222742
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:03	222742
Molybdenum	NELAP	0.0037	0.0100		**0.0571**	mg/L	1	05/10/2024 14:03	222742
Selenium	NELAP	0.017	0.050	J	**0.017**	mg/L	1	05/10/2024 14:03	222742
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0163**	mg/L	5	05/14/2024 9:36	222742
Lithium	*	0.0015	0.0030		**0.0228**	mg/L	5	05/14/2024 9:36	222742
Thallium	NELAP	0.0010	0.0020		**0.0257**	mg/L	5	05/15/2024 12:11	222742
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/16/2024 7:24	222743
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:26	222744
Barium	NELAP	0.015	0.045	J	**0.021**	mg/L	1	05/10/2024 14:26	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:26	222744
Boron	NELAP	0.250	1.00		**4.20**	mg/L	1	05/10/2024 14:26	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:26	222744
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:26	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:26	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:26	222744
Molybdenum	NELAP	0.0037	0.0100		**0.155**	mg/L	1	05/10/2024 14:26	222744
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:26	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0141**	mg/L	5	05/14/2024 12:54	222744
Lithium	*	0.0015	0.0030		**0.0078**	mg/L	5	05/14/2024 12:54	222744
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	05/15/2024 15:00	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:54	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050346
Client Project: CWLP Borings
Report Date: 05-Jun-24
Lab ID: 24050346-010
Client Sample ID: D4 19.5-21.5
Matrix: SOLID
Collection Date: 04/30/2024 14:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	31	50		**70**	mg/L	5	05/10/2024 13:26	R347112
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10	J	**0.06**	mg/L	1	05/10/2024 9:52	R347102
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4	J	**2**	mg/L	1	05/09/2024 16:22	R347069
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**9.63**		1	05/06/2024 11:22	R346778
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 15:07	222740
Barium	NELAP	0.0150	0.0450		**0.238**	mg/L	1	05/10/2024 15:07	222740
Beryllium	NELAP	0.0002	0.0010		**0.0056**	mg/L	1	05/10/2024 15:07	222740
Boron	NELAP	0.500	2.00	S	**26.9**	mg/L	2	05/13/2024 11:34	222740
Cadmium	NELAP	0.0005	0.0020		**0.0422**	mg/L	1	05/10/2024 15:07	222740
Chromium	NELAP	0.0034	0.0100		**0.0151**	mg/L	1	05/10/2024 15:07	222740
Cobalt	NELAP	0.0020	0.0060		**0.0107**	mg/L	1	05/10/2024 15:07	222740
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 15:07	222740
Molybdenum	NELAP	0.0037	0.0100		**0.105**	mg/L	1	05/10/2024 15:07	222740
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 15:07	222740
Matrix spike control limits are not applicable due to high sample/spike ratio.									
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0395**	mg/L	5	05/14/2024 11:51	222740
Lithium	*	0.0015	0.0030		**0.0192**	mg/L	5	05/14/2024 11:51	222740
Thallium	NELAP	0.0010	0.0020		**0.0225**	mg/L	5	05/15/2024 13:55	222740
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**0.00029**	mg/L	1	05/15/2024 17:12	222741
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:26	222744
Barium	NELAP	0.0150	0.0450		**< 0.0450**	mg/L	1	05/10/2024 14:26	222744
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/10/2024 14:26	222744
Boron	NELAP	0.250	1.00		**3.77**	mg/L	1	05/10/2024 14:26	222744
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/10/2024 14:26	222744
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/10/2024 14:26	222744
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/10/2024 14:26	222744
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/10/2024 14:26	222744
Molybdenum	NELAP	0.0037	0.0100		**0.0495**	mg/L	1	05/10/2024 14:26	222744
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/10/2024 14:26	222744
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0034**	mg/L	5	05/14/2024 14:18	222744
Lithium	*	0.0015	0.0030		**0.0075**	mg/L	5	05/14/2024 14:18	222744
Thallium	NELAP	0.0010	0.0020	J	**0.0017**	mg/L	5	05/15/2024 16:15	222744
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 16:56	223131
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R348283

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050346
Report Date: 05-Jun-24

Carrier: Paul Reeves

Received By: LM

Completed by: Amber Dilallo
On: 03-May-24

Reviewed by: Ellie Hopkins
On: 03-May-24

Pages to follow: Chain of custody [1] Extra pages included [25]

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.3
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	NA ☑	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Samples requiring pH should be analyzed as soon as possible after collection. Samples submitted for pH analysis are analyzed as soon as practicable upon arrival at the laboratory. - amberdilallo - 5/3/2024 2:35:35 PM

CHAIN OF CUSTODY

Pg __ of __ Workorder # 24050346

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City, Water, Light & Power
Address: 3100 Stevenson Dr.
City/State/Zip: Springfield, IL 62712
Contact: Colleen Grey Phone: 217-787-2334
Email: cgrey@andrews-eng.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☐ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☐ No

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 3.3 °C LT6275
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

TEKLAB

Client Comments:
TCLP & SPLP for all metals

Courier

email results to C. Grey and datamanagement@andrews-eng.com

*Add'l volume for 24050235-003; use ID D3 9.5-11.5 per Steve Van Hook SH 5/6/24

PROJECT NAME/NUMBER: CWLP Borings
SAMPLE COLLECTOR'S NAME: S. Van Hook

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Rad 226 and 228	TCLP & SPLP Sb, As, Ba, Be	TCLP & SPLP B, Cd, Cr, Co, Pb, Se, Tl	TCLP & SPLP Li, Mo	TCLP & SPLP Hg	Neutral Leach Cl, F+, SO4	pH
24050346 001	L4 10'-15.5'	5/2/24 8:15am	Soil	2									✓	✓	✓	✓	✓	✓	✓
002	L3 29.5-32'	5/2/24 11AM	Soil	2									✓	✓	✓	✓	✓	✓	✓
003	L3 19.5-21.5	5/2/24 11:15AM	Soil	2									✓	✓	✓	✓	✓	✓	✓
004	L1 24.5-31.5	5/2/24 3:30pm	Soil	2									✓	✓	✓	✓	✓	✓	✓
005	L1 14.5-21.5	5/2/24 2:50PM	Soil	2									✓	✓	✓	✓	✓	✓	✓
* 006	D3 9.5-29.5	4/30/24 10:15AM	Soil	2									✓	✓	✓	✓	✓	✓	✓ RAD ONLY SH 5/6/24
007	D3 4.5-6.5	4/30/24 10:15AM	Soil	2									✓	✓	✓	✓	✓	✓	✓
008	D1 19.5-21.5	4/29/24 3:00PM	Soil	2									✓	✓	✓	✓	✓	✓	✓
009	D2 19.5-21.5	4/29/24 9:30am	Soil	2									✓	✓	✓	✓	✓	✓	✓
010	D4 19.5-21.5	4/30/24 2:45pm	Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	5/2/24 7:00pm	AEI Secure Storage	5/2/24 1900
AEI Secure Storage	5/3/24 07:28	[signature]	5/3/24 0728
[signature]	5/3/24 1350	[signature]	5/3/24 1350

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

NK 5/3

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

June 05, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24050346

Order No.: 24050783

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 10 sample(s) on 5/9/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24050783**
Date: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346

WorkOrder Narrative:
24050783: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24050783**
Date: **6/5/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **24050783**

05-Jun-24

CLIENT: TEKLAB Inc,
Project: 24050346

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24050783-001	24050346-001		5/2/2024 8:15:00 AM	5/9/2024 11:40:00 AM	Solid
24050783-002	24050346-002		5/2/2024 11:00:00 AM	5/9/2024 11:40:00 AM	Solid
24050783-003	24050346-003		5/2/2024 11:15:00 AM	5/9/2024 11:40:00 AM	Solid
24050783-004	24050346-004		5/2/2024 3:30:00 PM	5/9/2024 11:40:00 AM	Solid
24050783-005	24050346-005		5/2/2024 2:50:00 PM	5/9/2024 11:40:00 AM	Solid
24050783-006	24050346-006		4/30/2024 10:15:00 AM	5/9/2024 11:40:00 AM	Solid
24050783-007	24050346-007		4/30/2024 10:15:00 AM	5/9/2024 11:40:00 AM	Solid
24050783-008	24050346-008		4/30/2024 3:00:00 PM	5/9/2024 11:40:00 AM	Solid
24050783-009	24050346-009		4/30/2024 9:30:00 AM	5/9/2024 11:40:00 AM	Solid
24050783-010	24050346-010		4/30/2024 2:45:00 PM	5/9/2024 11:40:00 AM	Solid

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DATES REPORT

WO#: **24050783**

05-Jun-24

Client: TEKLAB Inc,
Project: 24050346

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24050783-001A	24050346-001	5/2/2024 8:15:00 AM	Solid	Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050783-002A	24050346-002	5/2/2024 11:00:00 AM		Radium-226 Analysis (9315)		5/28/2024 1:38:00 PM	6/3/2024 11:07:59 AM
				Radium-228 Analysis (9320)		5/28/2024 1:38:00 PM	5/31/2024 1:16:12 PM
24050783-003A	24050346-003	5/2/2024 11:15:00 AM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050783-004A	24050346-004	5/2/2024 3:30:00 PM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050783-005A	24050346-005	5/2/2024 2:50:00 PM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050783-006A	24050346-006	4/30/2024 10:15:00 AM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050783-007A	24050346-007			Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050783-008A	24050346-008	4/30/2024 3:00:00 PM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050783-009A	24050346-009	4/30/2024 9:30:00 AM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050783-010A	24050346-010	4/30/2024 2:45:00 PM		Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM

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Analytical Report

(consolidated)

WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-001
Client Sample ID: 24050346-001

Collection Date: 5/2/2024 8:15:00 AM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315** **E903-904**		Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.0700	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320** **E903-904**		Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.290	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

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WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-002
Client Sample ID: 24050346-002

Collection Date: 5/2/2024 11:00:00 AM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315** **E903-904**		Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.0800	1	6/3/2024 11:07:59 AM
Yield	1.00					1	6/3/2024 11:07:59 AM
RADIUM-228 ANALYSIS (9320)					**SW9320** **E903-904**		Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.260	1	5/31/2024 1:16:12 PM
Yield	1.00					1	5/31/2024 1:16:12 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-003
Client Sample ID: 24050346-003

Collection Date: 5/2/2024 11:15:00 AM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315** **E903-904**		Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.140	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320** **E903-904**		Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.300	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

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Analytical Report

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WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/2/2024 3:30:00 PM
Project: 24050346
Lab ID: 24050783-004
Matrix: SOLID
Client Sample ID: 24050346-004

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.100	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.250	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

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Analytical Report

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WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-005
Client Sample ID: 24050346-005

Collection Date: 5/2/2024 2:50:00 PM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315** **E903-904**		Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.0800	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320** **E903-904**		Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.210	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

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Analytical Report

(consolidated)

WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-006
Client Sample ID: 24050346-006

Collection Date: 4/30/2024 10:15:00 AM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.140	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.280	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-007
Client Sample ID: 24050346-007

Collection Date: 4/30/2024 10:15:00 AM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.100	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.380	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-008
Client Sample ID: 24050346-008

Collection Date: 4/30/2024 3:00:00 PM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.160	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.290	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-009
Client Sample ID: 24050346-009

Collection Date: 4/30/2024 9:30:00 AM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.120	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.290	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24050783**

Date Reported: **6/5/2024**

CLIENT: TEKLAB Inc,
Project: 24050346
Lab ID: 24050783-010
Client Sample ID: 24050346-010

Collection Date: 4/30/2024 2:45:00 PM
Matrix: SOLID

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)					**SW9315** **E903-904**		Analyst: **SMZ**
Radium-226	ND	1.00		pCi/g	± 0.120	1	5/23/2024 10:51:41 AM
Yield	1.00					1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)					**SW9320** **E903-904**		Analyst: **SMZ**
Radium-228	ND	2.00		pCi/g	± 0.280	1	5/22/2024 3:06:59 PM
Yield	1.00					1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24050783**
05-Jun-24

Client: TEKLAB Inc,
Project: 24050346 **BatchID:** **75515**

Sample ID: **MB-75515**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **PBS**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	2.00									
Yield	1.00										

Sample ID: **LCS-75515**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **LCSS**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043899**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.62	2.00	5.000	0	72.4	50	130				

Sample ID: **LCSD-75515**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **LCSS02**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.01	2.00	5.000	0	60.2	50	130	3.620	18.4	20	

Sample ID: **24041932-001ADUP**	SampType: **DUP**	TestCode: **Radium-228_**	Units: **pCi/g-dry**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **BatchQC**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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QC SUMMARY REPORT

WO#: **24050783**

05-Jun-24

Client: TEKLAB Inc,
Project: 24050346 **BatchID:** **75515**

Sample ID: **24041932-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/g-dry** Prep Date: **5/16/2024** RunNo: **186135**
Client ID: **BatchQC** Batch ID: **75515** TestNo: **SW9320** **E903-904** Analysis Date: **5/22/2024** SeqNo: **5043905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	10.4	2.34	11.68	0	88.9	0	0	7.583	31.2	20	RS
Yield	1.17							1.168	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050783**

05-Jun-24

Client: TEKLAB Inc,
Project: 24050346 **BatchID:** **75515**

Sample ID: **MB-75515**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **PBS**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-75515**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **LCSS**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	6.20	1.00	5.000	0	124	70	130				

Sample ID: **LCSD-75515**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **LCSS02**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.76	1.00	5.000	0	115	60	140	6.200	7.36	40	

Sample ID: **24041932-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/g-dry**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **BatchQC**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Analytical Laboratories

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050783**

05-Jun-24

Client: TEKLAB Inc,
Project: 24050346 **BatchID:** **75515**

Sample ID: **24041932-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/g-dry** Prep Date: **5/16/2024** RunNo: **186145**
Client ID: **BatchQC** Batch ID: **75515** TestNo: **SW9315** **E903-904** Analysis Date: **5/23/2024** SeqNo: **5044089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	7.61	1.17						8.133	6.68	20	
Yield	1.17							1.168	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24050783**
05-Jun-24

Client: TEKLAB Inc,
Project: 24050346 **BatchID:** **75738**

Sample ID: **MB-75738** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186695**
Client ID: **PBS** Batch ID: **75738** TestNo: **SW9320** **E903-904** Analysis Date: **5/31/2024** SeqNo: **5059001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	2.00									
Yield	1.00										

Sample ID: **LCS-75738** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186695**
Client ID: **LCSS** Batch ID: **75738** TestNo: **SW9320** **E903-904** Analysis Date: **5/31/2024** SeqNo: **5059002**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.33	2.00	5.000	0	66.6	50	130				

Sample ID: **LCSD-75738** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186695**
Client ID: **LCSS02** Batch ID: **75738** TestNo: **SW9320** **E903-904** Analysis Date: **5/31/2024** SeqNo: **5059003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.40	2.00	5.000	0	68.0	50	130	3.330	2.08	20	

Sample ID: **24050783-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186695**
Client ID: **24050346-002** Batch ID: **75738** TestNo: **SW9320** **E903-904** Analysis Date: **5/31/2024** SeqNo: **5059008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24050783**

05-Jun-24

Client: TEKLAB Inc,
Project: 24050346 **BatchID:** **75738**

Sample ID: **24050783-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186695**
Client ID: **24050346-002** Batch ID: **75738** TestNo: **SW9320** **E903-904** Analysis Date: **5/31/2024** SeqNo: **5059008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	2.00	10.00	0	0	0	0	0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050783**
05-Jun-24

Client: TEKLAB Inc,
Project: 24050346 **BatchID:** **75738**

Sample ID: **MB-75738** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186696**
Client ID: **PBS** Batch ID: **75738** TestNo: **SW9315** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5059009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-75738** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186696**
Client ID: **LCSS** Batch ID: **75738** TestNo: **SW9315** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5059010**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.94	1.00	5.000	0	98.8	70	130				

Sample ID: **LCSD-75738** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186696**
Client ID: **LCSS02** Batch ID: **75738** TestNo: **SW9315** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5059011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.81	1.00	5.000	0	96.2	60	140	4.940	2.67	40	

Sample ID: **24050783-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186696**
Client ID: **24050346-002** Batch ID: **75738** TestNo: **SW9315** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5059016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24050783**

05-Jun-24

Client: TEKLAB Inc,
Project: 24050346 **BatchID:** **75738**

Sample ID: **24050783-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/g** Prep Date: **5/28/2024** RunNo: **186696**
Client ID: **24050346-002** Batch ID: **75738** TestNo: **SW9315** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5059016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

TEKLAB, INC. Chain of Custody

Pg 1 of 1

24050783

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

18.4-0.2= Cooler Temp: 18.2c Sampler: Client QC Level: 2

Fedex, Cooler

Project# 24050346

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 36236 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228		CPM
	24050346-001	5/2/24 0815	Unpres	Soil	✔		24
	24050346-002	5/2/24 1100	Unpres	Soil	✔		36
	24050346-003	5/2/24 1115	Unpres	Soil	✔		24
	24050346-004	5/2/24 1530	Unpres	Soil	✔		24
	24050346-005	5/2/24 1450	Unpres	Soil	✔		28
	24050346-006	4/30/24 1015	Unpres	Soil	✔		20
	24050346-007	4/30/24 1015	Unpres	Soil	✔		30
	24050346-008	4/29/24 1500	Unpres	Soil	✔		24
	24050346-009	4/29/24 0930	Unpres	Soil	✔		38
	24050346-010	4/30/24 1445	Unpres	Soil	✔		34
			Other	Aqueous			

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	5/6/24 1700	[signature]	5/9/24, 1140

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

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Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050783 RcptNo: 1

Logged by:	Tegan A. Richards	5/9/2024 11:40:00 AM	Tegan Richards
Completed By:	Tegan A. Richards	5/10/2024 12:09:39 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	5/10/2024 5:04:45 PM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	18.2	Good	Not Present			

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

May 28, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: CWLP Borings **WorkOrder:** 24050428

Dear Eric Staley:

TEKLAB, INC received 2 samples on 5/6/2024 12:00:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050428
Client Project: CWLP Borings
Report Date: 28-May-24

This reporting package includes the following:

Cover Letter	1
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Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	9
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050428

Client Project: CWLP Borings **Report Date:** 28-May-24

Abbr Definition

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050428
Client Project: CWLP Borings
Report Date: 28-May-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050428
Client Project: CWLP Borings
Report Date: 28-May-24

Cooler Receipt Temp: 3.5 °C

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050428
Client Project: CWLP Borings
Report Date: 28-May-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050428
Client Project: CWLP Borings
Report Date: 28-May-24
Lab ID: 24050428-001
Client Sample ID: L5 19.5-21.5
Matrix: SOLID
Collection Date: 05/03/2024 8:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	31	50		**67**	mg/L	5	05/15/2024 13:32	R347372
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10		**0.36**	mg/L	1	05/13/2024 9:06	R347147
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**6**	mg/L	1	05/14/2024 20:03	R347274
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**8.14**		1	05/07/2024 10:21	R346852
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0276**	mg/L	1	05/15/2024 12:27	222893
Barium	NELAP	0.0150	0.0450		**0.574**	mg/L	1	05/15/2024 12:27	222893
Beryllium	NELAP	0.0002	0.0010		**0.0049**	mg/L	1	05/15/2024 12:27	222893
Boron	NELAP	0.250	1.00		**2.32**	mg/L	1	05/21/2024 8:27	223096
Cadmium	NELAP	0.0005	0.0020		**0.149**	mg/L	1	05/15/2024 12:27	222893
Chromium	NELAP	0.0034	0.010	J	**0.0082**	mg/L	1	05/15/2024 12:27	222893
Cobalt	NELAP	0.0020	0.0060		**0.0218**	mg/L	1	05/15/2024 12:27	222893
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/15/2024 12:27	222893
Molybdenum	NELAP	0.0037	0.010	J	**0.0081**	mg/L	1	05/15/2024 12:27	222893
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/15/2024 12:27	222893
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0072**	mg/L	5	05/16/2024 18:27	222893
Lithium	*	0.0015	0.0030		**0.0153**	mg/L	5	05/16/2024 18:27	222893
Thallium	NELAP	0.0010	0.0020		**0.0199**	mg/L	5	05/16/2024 18:27	222893
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/18/2024 12:42	222892
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**0.0331**	mg/L	1	05/17/2024 17:00	222963
Barium	NELAP	0.0150	0.0450		**0.0596**	mg/L	1	05/17/2024 17:00	222963
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/17/2024 17:00	222963
Boron	NELAP	0.250	1.00		**1.05**	mg/L	1	05/17/2024 17:00	222963
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/17/2024 17:00	222963
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/17/2024 17:00	222963
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/17/2024 17:00	222963
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/17/2024 17:00	222963
Molybdenum	NELAP	0.0037	0.010	J	**0.0076**	mg/L	1	05/17/2024 17:00	222963
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/17/2024 17:00	222963
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0067**	mg/L	5	05/17/2024 9:22	222963
Lithium	*	0.0015	0.0030	J	**0.0027**	mg/L	5	05/16/2024 14:37	222963
Thallium	NELAP	0.0010	0.0020		**< 0.0020**	mg/L	5	05/16/2024 14:37	222963
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 14:08	222116
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050428
Client Project: CWLP Borings
Report Date: 28-May-24
Lab ID: 24050428-002
Client Sample ID: L5 32.5-35.2
Matrix: SOLID
Collection Date: 05/03/2024 9:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
ASTM D3987, SW-846 9036, IN SHAKE EXTRACT (TOTAL)									
Sulfate, SHAKE	*	31	50		**73**	mg/L	5	05/15/2024 13:35	R347372
ASTM D3987, SW-846 9214, IN SHAKE EXTRACT									
Fluoride	*	0.04	0.10	J	**0.08**	mg/L	1	05/13/2024 9:11	R347147
ASTM D3987, SW-846 9251, IN SHAKE EXTRACT									
Chloride, SHAKE	*	1	4		**11**	mg/L	1	05/14/2024 20:11	R347274
SW-846 9045C									
pH (1:1)	NELAP	0	1.00		**8.27**		1	05/07/2024 10:22	R346852
SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/17/2024 17:06	222894
Barium	NELAP	0.0150	0.0450		**1.24**	mg/L	1	05/15/2024 12:38	222894
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/15/2024 12:38	222894
Boron	NELAP	0.250	1.00		**2.79**	mg/L	1	05/20/2024 9:22	223102
Cadmium	NELAP	0.0005	0.0020		**0.0022**	mg/L	1	05/15/2024 12:38	222894
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/15/2024 12:38	222894
Cobalt	NELAP	0.0020	0.0060	J	**0.0043**	mg/L	1	05/15/2024 12:38	222894
Lead	NELAP	0.0045	0.0075		**< 0.0075**	mg/L	1	05/15/2024 12:38	222894
Molybdenum	NELAP	0.0037	0.0100		**0.0375**	mg/L	1	05/15/2024 12:38	222894
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/15/2024 12:38	222894
SW-846 1311, 3010A, 6020A, METALS IN TCLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0004	0.0010		**0.0017**	mg/L	5	05/16/2024 18:07	222894
Lithium	*	0.0015	0.0030		**0.0183**	mg/L	5	05/16/2024 18:07	222894
Thallium	NELAP	0.0010	0.0020		**0.0021**	mg/L	5	05/16/2024 18:07	222894
SW-846 1311, 7470A IN TCLP EXTRACT									
Mercury	NELAP	0.00010	0.00020		**< 0.00020**	mg/L	1	05/18/2024 13:19	222895
SW-846 1312, 3005A, 6010B, METALS IN SPLP EXTRACT BY ICP									
Arsenic	NELAP	0.0087	0.0100		**< 0.0100**	mg/L	1	05/17/2024 17:02	222963
Barium	NELAP	0.015	0.045	J	**0.023**	mg/L	1	05/17/2024 17:02	222963
Beryllium	NELAP	0.0002	0.0010		**< 0.0010**	mg/L	1	05/17/2024 17:02	222963
Boron	NELAP	0.250	1.00		**2.15**	mg/L	1	05/17/2024 17:02	222963
Cadmium	NELAP	0.0005	0.0020		**< 0.0020**	mg/L	1	05/17/2024 17:02	222963
Chromium	NELAP	0.0034	0.0100		**< 0.0100**	mg/L	1	05/17/2024 17:02	222963
Cobalt	NELAP	0.0020	0.0060		**< 0.0060**	mg/L	1	05/17/2024 17:02	222963
Lead	NELAP	0.0040	0.0075		**< 0.0075**	mg/L	1	05/17/2024 17:02	222963
Molybdenum	NELAP	0.0037	0.0100		**0.0904**	mg/L	1	05/17/2024 17:02	222963
Selenium	NELAP	0.0170	0.0500		**< 0.0500**	mg/L	1	05/17/2024 17:02	222963
SW-846 1312, 3005A, 6020A, METALS IN SPLP EXTRACT BY ICPMS									
Antimony	NELAP	0.0005	0.0010		**0.0025**	mg/L	5	05/16/2024 14:21	222963
Lithium	*	0.0015	0.0030		**0.0033**	mg/L	5	05/16/2024 14:21	222963
Thallium	NELAP	0.0010	0.0020	J	**0.0019**	mg/L	5	05/16/2024 14:21	222963
SW-846 1312, 7470A IN SPLP EXTRACT									
Mercury	NELAP	0.00006	0.00020		**< 0.00020**	mg/L	1	05/18/2024 14:11	222116
EPA 903/904, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896
Radium-228	*	0	0		**See Attached**	pCi/Kg	1	05/22/2024 0:00	R347896

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050428
Report Date: 28-May-24

Carrier: Paul Reeves

Received By: NR

Completed by: Amber Dilallo
On: 06-May-24

Reviewed by: Ellie Hopkins
On: 06-May-24

Pages to follow: Chain of custody [1] Extra pages included [16]

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.5
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	NA ☑	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Samples requiring pH should be analyzed as soon as possible after collection. Samples submitted for pH analysis are analyzed as soon as practicable upon arrival at the laboratory. - amberdilallo - 5/6/2024 1:04:15 PM

Print PDF

CHAIN OF CUSTODY

Pg __ of __ Workorder # 24050424

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City, Water, Light & Power
Address: 3100 Stevenson Dr.
City/State/Zip: Springfield, IL 62712
Contact: Colleen Grey Phone: 217-787-2334
Email: cgrey@andrews-eng.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 3-5 °C CT6 #7
Preserved in: ☐ LAB ☐ FIELD
FOR LAB USE ONLY
LAB NOTES: TEKLAB

Client Comments: Courier
TCLP & SPLP for all metals

email results to C. Grey and datamanagement@andrews-eng.com

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☐ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☐ No

PROJECT NAME/NUMBER	SAMPLE COLLECTOR'S NAME
CWLP Borings	S. Van Hook

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Rad 226 and 228	TCLP & SPLP Sb, As, Ba, Be	TCLP & SPLP B, Cd, Cr, Co, Pb, Se, Tl	TCLP & SPLP Li, Mo	TCLP & SPLP Hg	Neutral Leach Cl, F+, SO4	pH
24050424-001	LS 19.5 - 21.5	5/3/2024 8:30AM	Soil	2									✓	✓	✓	✓	✓	✓	✓
002	LS 32.5 - 35.2	5/3/2024 9:00AM	Soil	2									✓	✓	✓	✓	✓	✓	✓
			Soil	2															
			Soil	2															
			Soil	2															
			Soil	2															
			Soil	2															
			Soil	2															
			Soil	2															
			Soil	2															
			Soil	2															

Relinquished By	Date/Time	Received By	Date/Time
Steve Van Hook	5/3/2024 12:30pm	Paul Mix	5/6/24 0820
Paul Mix	5/6/24 1200	Mick Reed	5/6/24 1200

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

MR 5/6

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

May 28, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24050428

Order No.: 24050795

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 2 sample(s) on 5/9/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24050795**
Date: **5/28/2024**

CLIENT: TEKLAB Inc,
Project: 24050428

WorkOrder Narrative:
24050795: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24050795**
Date: **5/28/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **24050795**

28-May-24

CLIENT: TEKLAB Inc,
Project: 24050428

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24050795-001	24050428-001		5/3/2024 8:30:00 AM	5/9/2024 11:40:00 AM	Solid
24050795-002	24050428-002		5/3/2024 9:00:00 AM	5/9/2024 11:40:00 AM	Solid

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
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Website: http://www.settek.com

DATES REPORT

WO#: **24050795**

28-May-24

Client: TEKLAB Inc,
Project: 24050428

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24050795-001A	24050428-001	5/3/2024 8:30:00 AM	Solid	Percent Moisture by SM2540Mod			5/25/2024 3:45:00 PM
				Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM
24050795-002A	24050428-002	5/3/2024 9:00:00 AM		Percent Moisture by SM2540Mod			5/25/2024 3:45:00 PM
				Radium-226 Analysis (9315)		5/16/2024 11:10:22 AM	5/23/2024 10:51:41 AM
				Radium-228 Analysis (9320)		5/16/2024 11:10:22 AM	5/22/2024 3:06:59 PM

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **24050795**

Date Reported: **5/28/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/3/2024 8:30:00 AM
Project: 24050428
Lab ID: 24050795-001
Matrix: SOLID
Client Sample ID: 24050428-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)				**SW9315**	**E903-904**	Analyst: **SMZ**	
Radium-226	ND	1.66		pCi/g-dry	± 0.160	1	5/23/2024 10:51:41 AM
Yield	1.66			-dry		1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)				**SW9320**	**E903-904**	Analyst: **SMZ**	
Radium-228	ND	3.31		pCi/g-dry	± 0.320	1	5/22/2024 3:06:59 PM
Yield	1.66			-dry		1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **24050795**

Date Reported: **5/28/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/3/2024 9:00:00 AM
Project: 24050428
Lab ID: 24050795-002
Matrix: SOLID
Client Sample ID: 24050428-002

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 ANALYSIS (9315)				**SW9315**	**E903-904**		Analyst: **SMZ**
Radium-226	ND	1.77		pCi/g-dry	± 0.0600	1	5/23/2024 10:51:41 AM
Yield	1.77			-dry		1	5/23/2024 10:51:41 AM
RADIUM-228 ANALYSIS (9320)				**SW9320**	**E903-904**		Analyst: **SMZ**
Radium-228	ND	3.55		pCi/g-dry	± 0.320	1	5/22/2024 3:06:59 PM
Yield	1.77			-dry		1	5/22/2024 3:06:59 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Laboratories

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(base report)

WO#: **24050795**

Date Reported: **5/28/2024**

CLIENT: TEKLAB Inc,
Matrix: SOLID
Lab ID: 24050795-001A
Project: 24050428
Client Sample ID 24050428-001

Tag Number:
Collection Date: 5/3/2024 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE BY SM2540MOD				**A2540B**		Analyst: **AAA**
Percent Moisture	39.6	0.500		%	1	5/25/2024 3:45:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Laboratories

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(base report)

WO#: **24050795**

Date Reported: **5/28/2024**

CLIENT: TEKLAB Inc,
Matrix: SOLID
Lab ID: 24050795-002A
Project: 24050428
Client Sample ID 24050428-002

Tag Number:
Collection Date: 5/3/2024 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE BY SM2540MOD				**A2540B**		Analyst: **AAA**
Percent Moisture	43.6	0.500		%	1	5/25/2024 3:45:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050795**
28-May-24

Client: TEKLAB Inc,
Project: 24050428 **BatchID:** **75515**

Sample ID: **MB-75515**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **PBS**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	2.00									
Yield	1.00										

Sample ID: **LCS-75515**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **LCSS**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043899**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.62	2.00	5.000	0	72.4	50	130				

Sample ID: **LCSD-75515**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **LCSS02**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.01	2.00	5.000	0	60.2	50	130	3.620	18.4	20	

Sample ID: **24041932-001ADUP**	SampType: **DUP**	TestCode: **Radium-228_**	Units: **pCi/g-dry**	Prep Date: **5/16/2024**	RunNo: **186135**
Client ID: **BatchQC**	Batch ID: **75515**	TestNo: **SW9320**	**E903-904**	Analysis Date: **5/22/2024**	SeqNo: **5043905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050795**
28-May-24

Client: TEKLAB Inc,
Project: 24050428 **BatchID:** **75515**

Sample ID: **24041932-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/g-dry** Prep Date: **5/16/2024** RunNo: **186135**
Client ID: **BatchQC** Batch ID: **75515** TestNo: **SW9320** **E903-904** Analysis Date: **5/22/2024** SeqNo: **5043905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	10.4	2.34	11.68	0	88.9	0	0	7.583	31.2	20	RS
Yield	1.17							1.168	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050795**
28-May-24

Client: TEKLAB Inc,
Project: 24050428 **BatchID:** **75515**

Sample ID: **MB-75515**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **PBS**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-75515**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **LCSS**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	6.20	1.00	5.000	0	124	70	130				

Sample ID: **LCSD-75515**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/g**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **LCSS02**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.76	1.00	5.000	0	115	60	140	6.200	7.36	40	

Sample ID: **24041932-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/g-dry**	Prep Date: **5/16/2024**	RunNo: **186145**
Client ID: **BatchQC**	Batch ID: **75515**	TestNo: **SW9315**	**E903-904**	Analysis Date: **5/23/2024**	SeqNo: **5044089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050795**

28-May-24

Client: TEKLAB Inc,
Project: 24050428 **BatchID:** **75515**

Sample ID: **24041932-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/g-dry** Prep Date: **5/16/2024** RunNo: **186145**
Client ID: **BatchQC** Batch ID: **75515** TestNo: **SW9315** **E903-904** Analysis Date: **5/23/2024** SeqNo: **5044089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	7.61	1.17						8.133	6.68	20	
Yield	1.17							1.168	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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QC SUMMARY REPORT

WO#: **24050795**

28-May-24

Client: TEKLAB Inc,
Project: 24050428 **BatchID:** **R186329**

Sample ID: **MB-R186329**	SampType: **MBLK**	TestCode: **PctMoist_S(2**	Units: **%**	Prep Date:	RunNo: **186329**
Client ID: **PBS**	Batch ID: **R186329**	TestNo: **A2540B**		Analysis Date: **5/25/2024**	SeqNo: **5049039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	ND	0.500									

Sample ID: **24051805-006ADUP**	SampType: **DUP**	TestCode: **PctMoist_S(2**	Units: **%**	Prep Date:	RunNo: **186329**
Client ID: **BatchQC**	Batch ID: **R186329**	TestNo: **A2540B**		Analysis Date: **5/25/2024**	SeqNo: **5049048**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.8	0.500						17.37	2.41	5	

Sample ID: **24051777-003ADUP**	SampType: **DUP**	TestCode: **PctMoist_S(2**	Units: **%**	Prep Date:	RunNo: **186329**
Client ID: **BatchQC**	Batch ID: **R186329**	TestNo: **A2540B**		Analysis Date: **5/25/2024**	SeqNo: **5049058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	7.92	0.500						7.909	0.187	5	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Pg ___ of ___ 24050795

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

18.4-0.2 = 18.2

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: 18.2 Sampler: Client QC Level: 2

Fedex, Cooler

Project# 24050428

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 36234 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228		CPM									
	24050428-001	5/3/24 0830	Unpres	Soil	✔		32									
	24050428-002	5/3/24 0900	Unpres	Soil	✔		22									
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												

*Relinquished By	Date/Time	Received By	Date/Time
Omar Rivera	5/6/24 1700		5/9/24, 1140

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights,

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

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3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050795 RcptNo: 1

Logged by:	Tegan A. Richards	5/9/2024 11:40:00 AM	Tegan Richards
Completed By:	Tegan A. Richards	5/10/2024 12:25:27 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	5/10/2024 5:06:15 PM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date: Signed By:			
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	18.2	Good	Not Present			

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

May 29, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: CWLP Borings **WorkOrder:** 24050236

Dear Eric Staley:

TEKLAB, INC received 4 samples on 5/2/2024 1:11:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050236
Report Date: 29-May-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	11
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050236

Client Project: CWLP Borings **Report Date:** 29-May-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050236
Client Project: CWLP Borings
Report Date: 29-May-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050236
Client Project: CWLP Borings
Report Date: 29-May-24

Cooler Receipt Temp: 5.9 °C

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050236
Client Project: CWLP Borings
Report Date: 29-May-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050236
Client Project: CWLP Borings
Report Date: 29-May-24
Lab ID: 24050236-001
Client Sample ID: D-2 20ft.
Matrix: GROUNDWATER
Collection Date: 04/29/2024 9:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		**1720**	mg/L	50	05/09/2024 11:05	R347057
SW-846 9040B, LABORATORY ANALYZED									
Lab pH	NELAP	0	1.00	H	**9.27**		1	05/03/2024 10:33	R346719
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.21**	mg/L	1	05/09/2024 12:19	R347045
SW-846 9251 (TOTAL)									
Chloride	NELAP	5	40		**236**	mg/L	10	05/07/2024 18:33	R346935
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.022	0.050	J	**0.024**	mg/L	250	05/10/2024 14:10	222410
Arsenic	NELAP	0.0200	0.0500		**0.279**	mg/L	250	05/10/2024 14:10	222410
Barium	NELAP	0.0350	0.0500		**1.13**	mg/L	250	05/10/2024 14:10	222410
Beryllium	NELAP	0.0125	0.0500		**0.0640**	mg/L	250	05/10/2024 14:10	222410
Boron	NELAP	0.462	1.25		**89.0**	mg/L	250	05/10/2024 14:10	222410
Cadmium	NELAP	0.0075	0.0500		**0.0541**	mg/L	250	05/13/2024 13:49	222410
Chromium	NELAP	0.0350	0.0750		**0.902**	mg/L	250	05/10/2024 14:10	222410
Cobalt	NELAP	0.0058	0.0500		**0.0579**	mg/L	250	05/13/2024 13:49	222410
Lead	NELAP	0.0300	0.0500		**0.199**	mg/L	250	05/10/2024 14:10	222410
Lithium	*	0.0725	0.150		**0.154**	mg/L	250	05/10/2024 14:10	222410
Molybdenum	NELAP	0.0300	0.0750		**8.04**	mg/L	250	05/15/2024 3:31	222410
Selenium	NELAP	0.0300	0.0500		**< 0.0500**	mg/L	250	05/10/2024 14:10	222410
Thallium	NELAP	0.048	0.10	J	**0.049**	mg/L	250	05/10/2024 14:10	222410
Elevated reporting limit due to matrix interference.									
Contamination present in the CCB for Sb. Sample results below the reporting limit are reportable per the TNI Standard.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**0.00046**	mg/L	1	05/24/2024 12:57	223373
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715
Radium-228	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050236
Client Project: CWLP Borings
Report Date: 29-May-24
Lab ID: 24050236-002
Client Sample ID: D-1 25ft.
Matrix: GROUNDWATER
Collection Date: 04/29/2024 15:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		**1740**	mg/L	50	05/09/2024 11:08	R347057
SW-846 9040B, LABORATORY ANALYZED									
Lab pH	NELAP	0	1.00	H	**9.85**		1	05/03/2024 10:34	R346719
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.32**	mg/L	1	05/09/2024 12:22	R347045
SW-846 9251 (TOTAL)									
Chloride	NELAP	5	40		**63**	mg/L	10	05/07/2024 18:41	R346935
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.060	0.10	J	**0.061**	mg/L	500	05/10/2024 13:02	222414
Arsenic	NELAP	0.0400	0.100		**1.17**	mg/L	500	05/10/2024 13:02	222414
Barium	NELAP	0.0700	0.100		**2.48**	mg/L	500	05/10/2024 13:02	222414
Beryllium	NELAP	0.0250	0.100		**0.254**	mg/L	500	05/10/2024 13:02	222414
Boron	NELAP	0.925	2.50		**78.6**	mg/L	500	05/10/2024 13:02	222414
Cadmium	NELAP	0.0150	0.100		**0.222**	mg/L	500	05/13/2024 17:43	222414
Chromium	NELAP	0.0700	0.150		**3.91**	mg/L	500	05/10/2024 13:02	222414
Cobalt	NELAP	0.0115	0.100		**0.241**	mg/L	500	05/13/2024 17:43	222414
Lead	NELAP	0.0600	0.100		**1.04**	mg/L	500	05/10/2024 13:02	222414
Lithium	*	0.145	0.300		**0.428**	mg/L	500	05/10/2024 13:02	222414
Molybdenum	NELAP	0.0600	0.150		**15.7**	mg/L	500	05/15/2024 5:53	222414
Selenium	NELAP	0.060	0.10	J	**0.10**	mg/L	500	05/10/2024 13:02	222414
Thallium	NELAP	0.095	0.20	J	**0.13**	mg/L	500	05/10/2024 13:02	222414
Elevated reporting limit due to matrix interference.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**0.00562**	mg/L	1	05/14/2024 17:39	222568
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715
Radium-228	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050236
Client Project: CWLP Borings
Report Date: 29-May-24
Lab ID: 24050236-003
Client Sample ID: D-3 20ft.
Matrix: GROUNDWATER
Collection Date: 04/30/2024 10:00

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		**1000**	mg/L	50	05/09/2024 11:13	R347057
SW-846 9040B, LABORATORY ANALYZED									
Lab pH	NELAP	0	1.00	H	**10.1**		1	05/03/2024 10:36	R346719
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.33**	mg/L	1	05/09/2024 12:23	R347045
SW-846 9251 (TOTAL)									
Chloride	NELAP	1	4		**41**	mg/L	1	05/07/2024 18:43	R346935
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0650	0.100		**0.230**	mg/L	500	05/10/2024 10:39	222461
Arsenic	NELAP	0.0800	0.200		**2.33**	mg/L	1000	05/10/2024 9:43	222461
Barium	NELAP	0.0700	0.100		**3.51**	mg/L	500	05/10/2024 10:39	222461
Beryllium	NELAP	0.0250	0.100		**0.439**	mg/L	500	05/10/2024 10:39	222461
Boron	NELAP	0.925	2.50		**105**	mg/L	500	05/10/2024 10:39	222461
Cadmium	NELAP	0.0300	0.200		**0.492**	mg/L	1000	05/14/2024 15:24	222461
Chromium	NELAP	0.140	0.300		**6.25**	mg/L	1000	05/10/2024 9:43	222461
Cobalt	NELAP	0.0230	0.200		**0.323**	mg/L	1000	05/10/2024 9:43	222461
Lead	NELAP	0.0600	0.100		**1.46**	mg/L	500	05/10/2024 10:39	222461
Lithium	*	0.145	0.300		**0.571**	mg/L	500	05/10/2024 10:39	222461
Molybdenum	NELAP	0.140	0.300		**2.61**	mg/L	1000	05/16/2024 7:35	222461
Selenium	NELAP	0.12	0.20	J	**0.13**	mg/L	1000	05/10/2024 9:43	222461
Thallium	NELAP	0.0950	0.200		**0.274**	mg/L	500	05/10/2024 10:39	222461
Elevated reporting limit due to matrix interference.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00055	0.00200	H	**0.00685**	mg/L	10	05/29/2024 12:19	223513
Sample required re-analysis out of hold time.									
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715
Radium-228	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050236
Client Project: CWLP Borings
Report Date: 29-May-24
Lab ID: 24050236-004
Client Sample ID: D-4 20ft.
Matrix: GROUNDWATER
Collection Date: 04/30/2024 14:45

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		**2050**	mg/L	50	05/09/2024 11:16	R347057
SW-846 9040B, LABORATORY ANALYZED									
Lab pH	NELAP	0	1.00	H	**9.10**		1	05/03/2024 10:37	R346719
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.43**	mg/L	1	05/09/2024 12:25	R347045
SW-846 9251 (TOTAL)									
Chloride	NELAP	5	40		**139**	mg/L	10	05/07/2024 18:57	R346935
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0180	0.0400		**0.0812**	mg/L	200	05/15/2024 10:35	222764
Arsenic	NELAP	0.0400	0.100		**0.378**	mg/L	500	05/15/2024 10:29	222764
Barium	NELAP	0.0350	0.0500		**0.975**	mg/L	250	05/16/2024 9:42	222764
Beryllium	NELAP	0.0002	0.0010		**0.0674**	mg/L	5	05/14/2024 23:46	222764
Boron	NELAP	0.462	1.25		**73.1**	mg/L	250	05/16/2024 9:42	222764
Cadmium	NELAP	0.015	0.10	J	**0.068**	mg/L	500	05/15/2024 10:29	222764
Chromium	NELAP	0.0700	0.150		**1.03**	mg/L	500	05/15/2024 10:29	222764
Cobalt	NELAP	0.012	0.10	J	**0.061**	mg/L	500	05/15/2024 10:29	222764
Lead	NELAP	0.0240	0.0400		**0.266**	mg/L	200	05/15/2024 10:35	222764
Lithium	*	0.0725	0.150		**0.228**	mg/L	250	05/16/2024 9:42	222764
Molybdenum	NELAP	0.0600	0.150		**2.30**	mg/L	500	05/15/2024 10:29	222764
Selenium	NELAP	0.060	0.10	J	**0.090**	mg/L	500	05/15/2024 10:29	222764
Thallium	NELAP	0.038	0.080	J	**0.066**	mg/L	200	05/15/2024 10:35	222764
Elevated reporting limit due to sample composition.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**0.00717**	mg/L	1	05/14/2024 17:44	222568
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715
Radium-228	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050236
Report Date: 29-May-24

Carrier: Paul Reeves

Received By: NR

Completed by: Amber Dilallo
On: 02-May-24

Reviewed by: Ellie Hopkins
On: 02-May-24

Pages to follow: Chain of custody [1] Extra pages included [18]

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	5.9		
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice	☐		
Chain of custody present?	Yes ☑	No ☐					
Chain of custody signed when relinquished and received?	Yes ☑	No ☐					
Chain of custody agrees with sample labels?	Yes ☐	No ☑					
Samples in proper container/bottle?	Yes ☑	No ☐					
Sample containers intact?	Yes ☑	No ☐					
Sufficient sample volume for indicated test?	Yes ☑	No ☐					
All samples received within holding time?	Yes ☐	No ☑					
Reported field parameters measured:	Field ☐	Lab ☑	NA ☐				

Sample analyses to be measured in the field and/or within 15 minutes of collection were analyzed in the lab as soon as practicable. These analyses include Chlorine (demand, free and/or residual), Carbon Dioxide, Dissolved Oxygen, Ferrous Iron, pH, and Sulfite.

Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

Samples were preserved with Nitric Acid (97606) upon arrival at the laboratory. - amberdilallo - 5/2/2024 3:15:00 PM

pH strip #96651. - amberdilallo - 5/2/2024 3:15:13 PM

D-1 25ft. labeled as collected at 1430 rather than 1500. Collen Grey was notified of this error via work order summary. - amberdilallo - 5/2/2024 3:15:45 PM

CHAIN OF CUSTODY

Pg __ of __ Workorder # 24050236

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City, Water, Light & Power
Address: 3100 Stevenson Dr.
City/State/Zip: Springfield, IL 62712
Contact: Colleen Grey Phone: 217-787-2334
Email: cgrey@andrews-eng.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 5.9 °C #7
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: Added HNO3 (976006) to all um 5/2 @ 14:30 on container (UNP) 976057

Client Comments:
email results to C. Grey and datamanagement@andrews-eng.com

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [ ] No
Are these samples known to be hazardous? [ ] Yes [ ] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [ ] Yes [ ] No

PROJECT NAME/NUMBER	SAMPLE COLLECTOR'S NAME
CWLP Borings	S. Van Hook

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Rad 226 and 228	Sb, As, Ba, Be	B, Cd, Cr, Co, Pb, Se, Tl	Li, Mo	Hg	Cl, F+, SO4	pH
24050236-001	D-2 20ft.	4/29/24 9:30am	Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
002	D-1 25 ft.	4/29/24 3pm*	Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
003	D-3 20 ft.	4/30/24 10am	Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
004	D-4 20ft.	4/30/24 2:45pm	Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Steven Van Hook	4/30/24 5:30pm	ASI Secure Storage	4/30/24 17:30
eurofins Custody Seal #1697609			
ASI Secure Storage cmg	5/2/24 7:40	Paul M Tr	5-2-24 0740
Paul M Tr	5-2-24 1311	Mitch Reed	5/2/24 1311

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

May 22, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24050236

Dear Shelly Hennessy:

Order No.: 24050483

Summit Environmental Technologies, Inc. received 4 sample(s) on 5/6/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24050483**
Date: **5/22/2024**

CLIENT: TEKLAB Inc,
Project: 24050236

WorkOrder Narrative:
24050483: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Sample Fraction:
Per Chain of Custody note: Analyze Aqueous layer only.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-44
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24050483**
Date: **5/22/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **24050483**

22-May-24

CLIENT: TEKLAB Inc,
Project: 24050236

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24050483-001	24050236-001		4/29/2024 9:30:00 AM	5/6/2024 10:00:00 AM	Non-Potable Water
24050483-002	24050236-002		4/29/2024 3:00:00 PM	5/6/2024 10:00:00 AM	Non-Potable Water
24050483-003	24050236-003		4/30/2024 10:00:00 AM	5/6/2024 10:00:00 AM	Non-Potable Water
24050483-004	24050236-004		4/30/2024 2:45:00 PM	5/6/2024 10:00:00 AM	Non-Potable Water

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DATES REPORT

WO#: **24050483**

22-May-24

Client: TEKLAB Inc,
Project: 24050236

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24050483-001A	24050236-001	4/29/2024 9:30:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		5/9/2024 12:47:56 PM	5/21/2024 10:28:00 AM
				Radium-228 (EPA 904.0)		5/9/2024 12:47:56 PM	5/20/2024 3:04:00 PM
24050483-002A	24050236-002	4/29/2024 3:00:00 PM		Radium-226 (EPA 903.0)		5/9/2024 12:47:56 PM	5/21/2024 10:28:00 AM
				Radium-228 (EPA 904.0)		5/9/2024 12:47:56 PM	5/20/2024 3:04:00 PM
24050483-003A	24050236-003	4/30/2024 10:00:00 AM		Radium-226 (EPA 903.0)		5/9/2024 12:47:56 PM	5/21/2024 10:28:00 AM
				Radium-228 (EPA 904.0)		5/9/2024 12:47:56 PM	5/20/2024 3:04:00 PM
24050483-004A	24050236-004	4/30/2024 2:45:00 PM		Radium-226 (EPA 903.0)		5/9/2024 12:47:56 PM	5/21/2024 10:28:00 AM
				Radium-228 (EPA 904.0)		5/9/2024 12:47:56 PM	5/20/2024 3:04:00 PM

Original

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Analytical Report

(consolidated)

WO#: **24050483**

Date Reported: **5/22/2024**

CLIENT: TEKLAB Inc,
Collection Date: 4/29/2024 9:30:00 AM
Project: 24050236
Lab ID: 24050483-001
Matrix: NON-POTABLE WATER
Client Sample ID: 24050236-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	4.63	1.67		pCi/L	± 0.590	1	5/21/2024 10:28:00 AM
Yield	1.00					1	5/21/2024 10:28:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	2.18	1.67		pCi/L	± 0.800	1	5/20/2024 3:04:00 PM
Yield	1.00					1	5/20/2024 3:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Report

(consolidated)

WO#: **24050483**

Date Reported: **5/22/2024**

CLIENT: TEKLAB Inc,
Collection Date: 4/29/2024 3:00:00 PM
Project: 24050236
Lab ID: 24050483-002
Matrix: NON-POTABLE WATER
Client Sample ID: 24050236-002

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.43		pCi/L	± 0.250	1	5/21/2024 10:28:00 AM
Yield	1.00					1	5/21/2024 10:28:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.43		pCi/L	± 0.570	1	5/20/2024 3:04:00 PM
Yield	1.00					1	5/20/2024 3:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Report

(consolidated)

WO#: **24050483**

Date Reported: **5/22/2024**

CLIENT: TEKLAB Inc,
Collection Date: 4/30/2024 10:00:00 AM
Project: 24050236
Lab ID: 24050483-003
Matrix: NON-POTABLE WATER
Client Sample ID: 24050236-003

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	2.50		pCi/L	± 0.470	1	5/21/2024 10:28:00 AM
Yield	1.00					1	5/21/2024 10:28:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	2.50		pCi/L	± 0.800	1	5/20/2024 3:04:00 PM
Yield	1.00					1	5/20/2024 3:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24050483**

Date Reported: **5/22/2024**

CLIENT: TEKLAB Inc,
Collection Date: 4/30/2024 2:45:00 PM
Project: 24050236
Lab ID: 24050483-004
Matrix: NON-POTABLE WATER
Client Sample ID: 24050236-004

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	3.34		pCi/L	± 0.580	1	5/21/2024 10:28:00 AM
Yield	1.00					1	5/21/2024 10:28:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	3.34		pCi/L	± 1.24	1	5/20/2024 3:04:00 PM
Yield	1.00					1	5/20/2024 3:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24050483**
22-May-24

Client: TEKLAB Inc,
Project: 24050236 **BatchID:** **75217**

Sample ID: **24050495-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **BatchQC** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	1.00			0	0			1.000	0		

Sample ID: **24050495-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **BatchQC** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24050483**
22-May-24

Client: TEKLAB Inc,
Project: 24050236 **BatchID:** **75217**

Sample ID: **MB-75217** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **PBW** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-75217** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **LCSW** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.36	1.00	5.000	0	67.2	50	130				QLR
Yield	1.00			0	0						

Sample ID: **LCSD-75217** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **LCSS02** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.00	1.00	5.000	0	100	50	130	3.360	39.2	20	R
Yield	0.960			0	0			1.000	4.08		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24050483**
22-May-24

Client: TEKLAB Inc,
Project: 24050236 **BatchID:** **75217**

Sample ID: **RLC-75217**	SampType: **RLC**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185962**
Client ID: **BatchQC**	Batch ID: **75217**	TestNo: **E904.0**	**E903-904**	Analysis Date: **5/20/2024**	SeqNo: **5040008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.14	1.00	1.000	0	114	50	150				
Yield	1.00			0	0						

Sample ID: **RLCD-75217**	SampType: **RLC**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185962**
Client ID: **BatchQC**	Batch ID: **75217**	TestNo: **E904.0**	**E903-904**	Analysis Date: **5/20/2024**	SeqNo: **5040009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	87.0	50	150				
Yield	1.00			0	0						

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24050483**
22-May-24

Client: TEKLAB Inc,
Project: 24050236 **BatchID:** **75217**

Sample ID: **24050495-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185975**
Client ID: **BatchQC** Batch ID: **75217** TestNo: **E903.0** **E903-904** Analysis Date: **5/21/2024** SeqNo: **5040150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	1.00							1.000	0	0	

Sample ID: **24050495-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185975**
Client ID: **BatchQC** Batch ID: **75217** TestNo: **E903.0** **E903-904** Analysis Date: **5/21/2024** SeqNo: **5040152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24050483**
22-May-24

Client: TEKLAB Inc,
Project: 24050236 **BatchID:** **75217**

Sample ID: **MB-75217**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **PBW**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	0.980										

Sample ID: **LCS-75217**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **LCSW**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040144**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.38	1.00	5.000	0	87.6	70	130				

Sample ID: **LCSD-75217**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **LCSS02**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.67	1.00	5.000	0	93.4	70	130	4.380	6.41	20	

Sample ID: **RLC-75217**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **BatchQC**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24050483**
22-May-24

Client: TEKLAB Inc,
Project: 24050236 **BatchID:** **75217**

Sample ID: **RLC-75217**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **BatchQC**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	95.0	50	150				

Sample ID: **RLCD-75217**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **BatchQC**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040148**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	99.0	50	150				

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Pg ___ of 24050483

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: 19.5°C Sampler: Client QC Level: 2

19.7-0.2= Fedex, cooler

Project# 24050236

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site. Analyze aqueous layers only.

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 36223 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	CDM					PH				
	24050236-001	4/29/24 0930	HNO3	Groundwater	✔	42, 22					1,3				
	24050236-002	4/29/24 1500	HNO3	Groundwater	✔	34, 38					1,2				
	24050236-003	4/30/24 1000	HNO3	Groundwater	✔	16, ~~3~~ TR 5/7/24					4,				
	24050236-004	4/30/24 1445	HNO3	Groundwater	✔	34, 22					4,5				
			Other	Aqueous											
			Other	Aqueous											
			Other	Aqueous											
			Other	Aqueous											
			Other	Aqueous											
			Other	Aqueous											
			Other	Aqueous											

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	5/2/24 1700	[signature]	5/6/24 1000

One container -003 arrived broken

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA 3/2/2016

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050483 RcptNo: 1

Logged by:	Tegan A. Richards	5/6/2024 10:00:00 AM	Tegan Richards
Completed By:	Tegan A. Richards	5/7/2024 5:18:50 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	5/8/2024 10:44:21 AM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date:	Signed By:		
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☐	No ☑	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☑	No ☐	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

pH for all but 2 containers >2, one container -003 received broken

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By

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Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050483 RcptNo: 1

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

May 23, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: CWLP Borings **WorkOrder:** 24050347

Dear Eric Staley:

TEKLAB, INC received 3 samples on 5/3/2024 1:50:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050347
Report Date: 23-May-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	10
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050347

Client Project: CWLP Borings **Report Date:** 23-May-24

Abbr Definition

*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050347
Client Project: CWLP Borings
Report Date: 23-May-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050347
Report Date: 23-May-24

Cooler Receipt Temp: 3.7 °C

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050347
Client Project: CWLP Borings
Report Date: 23-May-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050347
Client Project: CWLP Borings
Report Date: 23-May-24
Lab ID: 24050347-001
Client Sample ID: L4 18ft.
Matrix: GROUNDWATER
Collection Date: 05/02/2024 8:40

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		**1050**	mg/L	50	05/09/2024 11:21	R347057
SW-846 9040B, LABORATORY ANALYZED									
Lab pH	NELAP	0	1.00	H	**7.35**		1	05/06/2024 14:09	R346778
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**1.19**	mg/L	1	05/10/2024 14:31	R347102
SW-846 9251 (TOTAL)									
Chloride	NELAP	5	40		**154**	mg/L	10	05/07/2024 19:05	R346935
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0004	0.0010		**0.0020**	mg/L	5	05/16/2024 10:42	222862
Arsenic	NELAP	0.0004	0.0010		**0.0512**	mg/L	5	05/08/2024 20:10	222470
Barium	NELAP	0.0008	0.0010		**0.308**	mg/L	5	05/08/2024 20:10	222470
Beryllium	NELAP	0.0002	0.0010		**0.0024**	mg/L	5	05/08/2024 20:10	222470
Boron	NELAP	0.0092	0.0250		**2.15**	mg/L	5	05/08/2024 20:10	222470
Cadmium	NELAP	0.0002	0.0010		**0.0019**	mg/L	5	05/14/2024 4:27	222470
Chromium	NELAP	0.0009	0.0015		**0.0632**	mg/L	5	05/08/2024 20:10	222470
Cobalt	NELAP	0.0002	0.0010		**0.0213**	mg/L	5	05/08/2024 20:10	222470
Lead	NELAP	0.0006	0.0010		**0.0526**	mg/L	5	05/15/2024 14:55	222862
Lithium	*	0.0015	0.0030		**0.0288**	mg/L	5	05/08/2024 20:10	222470
Molybdenum	NELAP	0.0006	0.0015		**0.0218**	mg/L	5	05/10/2024 18:38	222470
Selenium	NELAP	0.0006	0.0010		**0.0066**	mg/L	5	05/08/2024 20:10	222470
Thallium	NELAP	0.0010	0.0020	J	**0.0012**	mg/L	5	05/08/2024 20:10	222470
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**0.00050**	mg/L	1	05/20/2024 14:24	223152
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715
Radium-228	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050347
Client Project: CWLP Borings
Report Date: 23-May-24
Lab ID: 24050347-002
Client Sample ID: L3-20ft.
Matrix: GROUNDWATER
Collection Date: 05/02/2024 10:15

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)									
Sulfate	NELAP	614	1000		**2660**	mg/L	100	05/10/2024 12:35	R347112
SW-846 9040B, LABORATORY ANALYZED									
Lab pH	NELAP	0	1.00	H	**8.10**		1	05/06/2024 14:10	R346778
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**1.07**	mg/L	1	05/10/2024 10:26	R347102
SW-846 9251 (TOTAL)									
Chloride	NELAP	5	40		**269**	mg/L	10	05/07/2024 19:26	R346935
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0180	0.0400	B	**0.0655**	mg/L	200	05/14/2024 15:36	222470
Arsenic	NELAP	0.0080	0.0200		**2.43**	mg/L	100	05/10/2024 19:03	222470
Barium	NELAP	0.0140	0.0200		**1.49**	mg/L	100	05/10/2024 19:03	222470
Beryllium	NELAP	0.0050	0.0200		**0.102**	mg/L	100	05/14/2024 4:33	222470
Boron	NELAP	0.370	1.00		**25.8**	mg/L	200	05/14/2024 15:36	222470
Cadmium	NELAP	0.0060	0.0400		**0.260**	mg/L	200	05/17/2024 13:03	222470
Chromium	NELAP	0.0280	0.0600		**2.08**	mg/L	200	05/17/2024 13:03	222470
Cobalt	NELAP	0.0046	0.0400		**0.336**	mg/L	200	05/17/2024 13:03	222470
Lead	NELAP	0.0120	0.0200	B	**3.40**	mg/L	100	05/10/2024 19:03	222470
Lithium	*	0.0290	0.0600		**0.621**	mg/L	100	05/14/2024 4:33	222470
Molybdenum	NELAP	0.0240	0.0600		**0.218**	mg/L	200	05/17/2024 13:03	222470
Selenium	NELAP	0.0120	0.0200		**0.158**	mg/L	100	05/10/2024 19:03	222470
Thallium	NELAP	0.0190	0.0400		**0.0433**	mg/L	100	05/10/2024 19:03	222470
Sample result for Sb exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.									
Sample result for Pb exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.									
SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**0.00926**	mg/L	1	05/20/2024 15:07	223152
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715
Radium-228	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050347
Client Project: CWLP Borings
Report Date: 23-May-24
Lab ID: 24050347-003
Client Sample ID: L1-20ft.
Matrix: GROUNDWATER
Collection Date: 05/02/2024 14:50

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)									
Sulfate	NELAP	307	500		**1080**	mg/L	50	05/09/2024 11:29	R347057
SW-846 9040B, LABORATORY ANALYZED									
Lab pH	NELAP	0	1.00	H	**7.86**		1	05/06/2024 14:12	R346778
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**0.50**	mg/L	1	05/10/2024 10:28	R347102
SW-846 9251 (TOTAL)									
Chloride	NELAP	5	40		**122**	mg/L	10	05/07/2024 19:34	R346935
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.018	0.040	BJ	**0.027**	mg/L	200	05/14/2024 15:42	222470
Arsenic	NELAP	0.0080	0.0200		**0.717**	mg/L	100	05/10/2024 19:09	222470
Barium	NELAP	0.0140	0.0200		**3.48**	mg/L	100	05/10/2024 19:09	222470
Beryllium	NELAP	0.0050	0.0200		**0.0542**	mg/L	100	05/14/2024 4:39	222470
Boron	NELAP	0.370	1.00		**4.91**	mg/L	200	05/14/2024 15:42	222470
Cadmium	NELAP	0.0060	0.0400		**0.0776**	mg/L	200	05/14/2024 15:42	222470
Chromium	NELAP	0.0280	0.0600		**0.993**	mg/L	200	05/14/2024 15:42	222470
Cobalt	NELAP	0.0046	0.0400		**0.154**	mg/L	200	05/14/2024 15:42	222470
Lead	NELAP	0.0120	0.0200	B	**0.655**	mg/L	100	05/10/2024 19:09	222470
Lithium	*	0.0290	0.0600		**0.172**	mg/L	100	05/14/2024 4:39	222470
Molybdenum	NELAP	0.0120	0.0300		**0.161**	mg/L	100	05/17/2024 12:28	222470
Selenium	NELAP	0.0120	0.0200		**0.0906**	mg/L	100	05/10/2024 19:09	222470
Thallium	NELAP	0.0190	0.0400		**< 0.0400**	mg/L	100	05/10/2024 19:09	222470

Elevated reporting limit for Sb & Tl due to matrix interference.
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.
Sample result for Pb exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.

SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**0.00198**	mg/L	1	05/20/2024 15:09	223152
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715
Radium-228	*	0	0		**See Attached**	pci/L	1	05/20/2024 0:00	R347715

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050347
Report Date: 23-May-24

Carrier: Paul Reeves

Received By: LM

Completed by: Amber Dilallo
On: 03-May-24

Reviewed by: Ellie Hopkins
On: 03-May-24

Pages to follow: Chain of custody [1] Extra pages included [15]

Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present	☐	Temp °C 3.7
Type of thermal preservation?	None	☐	Ice	☑	Blue Ice	☐	Dry Ice ☐
Chain of custody present?	Yes	☑	No	☐			
Chain of custody signed when relinquished and received?	Yes	☑	No	☐			
Chain of custody agrees with sample labels?	Yes	☑	No	☐			
Samples in proper container/bottle?	Yes	☑	No	☐			
Sample containers intact?	Yes	☑	No	☐			
Sufficient sample volume for indicated test?	Yes	☑	No	☐			
All samples received within holding time?	Yes	☐	No	☑			
Reported field parameters measured:	Field	☐	Lab	☑	NA	☐	

Sample analyses to be measured in the field and/or within 15 minutes of collection were analyzed in the lab as soon as practicable. These analyses include Chlorine (demand, free and/or residual), Carbon Dioxide, Dissolved Oxygen, Ferrous Iron, pH, and Sulfite.

Container/Temp Blank temperature in compliance?	Yes	☑	No	☐			

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes	☐	No	☐	No VOA vials	☑	
Water - TOX containers have zero headspace?	Yes	☐	No	☐	No TOX containers	☑	
Water - pH acceptable upon receipt?	Yes	☐	No	☑	NA	☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes	☐	No	☐	NA	☑	

Any No responses must be detailed below or on the COC.

pH strip #96651. - amberdilallo - 5/3/2024 2:40:59 PM

Samples were preserved with Nitric Acid (97606) upon arrival at the laboratory. - amberdilallo - 5/3/2024 2:47:30 PM

Print PDF

CHAIN OF CUSTODY

Pg __ of __ Workorder # 24050347

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City, Water, Light & Power
Address: 3100 Stevenson Dr.
City/State/Zip: Springfield, IL 62712
Contact: Colleen Grey Phone: 217-787-2334
Email: cgrey@andrews-eng.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 3.7 °C LG#7
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: Added HNO_3 (97606) 96651

Client Comments:
email results to C. Grey and datamanagement@andrews-eng.com

TEKLAB Courier

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [ ] No
Are these samples known to be hazardous? [ ] Yes [ ] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [ ] Yes [ ] No

PROJECT NAME/NUMBER: CWLP Borings
SAMPLE COLLECTOR'S NAME: S. Van Hook

RESULTS REQUESTED: [✓] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Rad 226 and 228	Sb, As, Ba, Be	B, Cd, Cr, Co, Pb, Se, Ti	Li, Mo	Hg	Cl, F+, SO4	pH
24050347-001	L4 18ft	5/2/24 8:40am	Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
002	L3-20ft	5/2/24 10:15am	Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
003	L1-20ft	5/2/24 2:50pm	Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														

Relinquished By	Date/Time	Received By	Date/Time
[signature]	5/2/24 7:00pm	AEI Secure Storage	5/2/24 19:00
AEI Secure Storage	5/3/24 07:28	[signature]	5.3.24 0728
[signature]	5.3.24 1350	[signature]	5/3/24 1350

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

May 22, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24050347

Order No.: 24050485

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 3 sample(s) on 5/7/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **24050485**
Date: **5/22/2024**

CLIENT: TEKLAB Inc,
Project: 24050347

WorkOrder Narrative:
24050485: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence QC Notes:
LCS/LCSD-75217 Radium-228_DW(904.0): LCS and LCSD exhibited a high RPD, individually each LCS/LCSD meets the required criteria.

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Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24050485**
Date: **5/22/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **24050485**

22-May-24

CLIENT: TEKLAB Inc,
Project: 24050347

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24050485-001	24050347-001		5/2/2024 8:40:00 AM	5/7/2024 11:30:00 AM	Non-Potable Water
24050485-002	24050347-002		5/2/2024 10:15:00 AM	5/7/2024 11:30:00 AM	Non-Potable Water
24050485-003	24050347-003		5/2/2024 2:50:00 PM	5/7/2024 11:30:00 AM	Non-Potable Water

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DATES REPORT

WO#: **24050485**

22-May-24

Client: TEKLAB Inc,
Project: 24050347

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24050485-001A	24050347-001	5/2/2024 8:40:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		5/9/2024 12:47:56 PM	5/21/2024 10:28:00 AM
				Radium-228 (EPA 904.0)		5/9/2024 12:47:56 PM	5/20/2024 3:04:00 PM
24050485-002A	24050347-002	5/2/2024 10:15:00 AM		Radium-226 (EPA 903.0)		5/9/2024 12:47:56 PM	5/21/2024 10:28:00 AM
				Radium-228 (EPA 904.0)		5/9/2024 12:47:56 PM	5/20/2024 3:04:00 PM
24050485-003A	24050347-003	5/2/2024 2:50:00 PM		Radium-226 (EPA 903.0)		5/9/2024 12:47:56 PM	5/21/2024 10:28:00 AM
				Radium-228 (EPA 904.0)		5/9/2024 12:47:56 PM	5/20/2024 3:04:00 PM

Original

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Analytical Report

(consolidated)

WO#: **24050485**

Date Reported: **5/22/2024**

CLIENT: TEKLAB Inc,

Collection Date: 5/2/2024 8:40:00 AM

Project: 24050347

Lab ID: 24050485-001

Matrix: NON-POTABLE WATER

Client Sample ID: 24050347-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.170	1	5/21/2024 10:28:00 AM
Yield	0.980					1	5/21/2024 10:28:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	1.05	1.00		pCi/L	± 0.400	1	5/20/2024 3:04:00 PM
Yield	1.00					1	5/20/2024 3:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

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Analytical Report

(consolidated)

WO#: **24050485**

Date Reported: **5/22/2024**

CLIENT: TEKLAB Inc,

Collection Date: 5/2/2024 10:15:00 AM

Project: 24050347

Lab ID: 24050485-002

Matrix: NON-POTABLE WATER

Client Sample ID: 24050347-002

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	2.50	2.00		pCi/L	± 0.480	1	5/21/2024 10:28:00 AM
Yield	1.00					1	5/21/2024 10:28:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	2.00		pCi/L	± 0.720	1	5/20/2024 3:04:00 PM
Yield	1.00					1	5/20/2024 3:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

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Analytical Report

(consolidated)

WO#: **24050485**

Date Reported: **5/22/2024**

CLIENT: TEKLAB Inc,

Collection Date: 5/2/2024 2:50:00 PM

Project: 24050347

Lab ID: 24050485-003

Matrix: NON-POTABLE WATER

Client Sample ID: 24050347-003

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.25		pCi/L	± 0.230	1	5/21/2024 10:28:00 AM
Yield	1.00					1	5/21/2024 10:28:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.25		pCi/L	± 0.380	1	5/20/2024 3:04:00 PM
Yield	1.00					1	5/20/2024 3:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050485**
22-May-24

Client: TEKLAB Inc,
Project: 24050347 **BatchID:** **75217**

Sample ID: **24050495-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **BatchQC** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	1.00			0	0			1.000	0		

Sample ID: **24050495-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **BatchQC** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050485**
22-May-24

Client: TEKLAB Inc,
Project: 24050347 **BatchID:** **75217**

Sample ID: **MB-75217** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **PBW** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-75217** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **LCSW** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.36	1.00	5.000	0	67.2	50	130				QLR
Yield	1.00			0	0						

Sample ID: **LCSD-75217** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185962**
Client ID: **LCSS02** Batch ID: **75217** TestNo: **E904.0** **E903-904** Analysis Date: **5/20/2024** SeqNo: **5040006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.00	1.00	5.000	0	100	50	130	3.360	39.2	20	R
Yield	0.960			0	0			1.000	4.08		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24050485**
22-May-24

Client: TEKLAB Inc,
Project: 24050347 **BatchID:** **75217**

Sample ID: **24050495-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185975**
Client ID: **BatchQC** Batch ID: **75217** TestNo: **E903.0** **E903-904** Analysis Date: **5/21/2024** SeqNo: **5040150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	1.00							1.000	0	0	

Sample ID: **24050495-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/9/2024** RunNo: **185975**
Client ID: **BatchQC** Batch ID: **75217** TestNo: **E903.0** **E903-904** Analysis Date: **5/21/2024** SeqNo: **5040152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24050485**
22-May-24

Client: TEKLAB Inc,
Project: 24050347 **BatchID:** **75217**

Sample ID: **MB-75217**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **PBW**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	0.980										

Sample ID: **LCS-75217**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **LCSW**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040144**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.38	1.00	5.000	0	87.6	70	130				

Sample ID: **LCSD-75217**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/9/2024**	RunNo: **185975**
Client ID: **LCSS02**	Batch ID: **75217**	TestNo: **E903.0**	**E903-904**	Analysis Date: **5/21/2024**	SeqNo: **5040145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.67	1.00	5.000	0	93.4	70	130	4.380	6.41	20	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Client | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 24050347

Contact: Shelly Hennessy | Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT | Billing/PO: 36229 | Phone: (618) 344-1004 ext. 43

24050485

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	COM	pH									
	24050347-001	05/02/2024 0840	HNO3	Groundwater	☑	32	4									
	24050347-002	05/02/2024 1015	HNO3	Groundwater	☑	20.26	7.7									
	24050347-003	05/02/2024 1450	HNO3	Groundwater	☑	26	5									
			Other	Aqueous	☐											
			Other	Aqueous	☐											
			Other	Aqueous	☐											
			Other	Aqueous	☐											
			Other	Aqueous	☐											
			Other	Aqueous	☐											
			Other	Aqueous	☐											
			Other	Aqueous	☐											

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	5/3/24	[signature] 5/7/24 1130 FedEx ground cooler, no ice 19.9-0.2=19.7	

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights.

SubCocRevA

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050485 RcptNo: 1

Logged by:	Christina N. Gemma	5/7/2024 11:30:00 AM	C. Gemma
Completed By:	Christina N. Gemma	5/7/2024 5:22:56 PM	C. Gemma
Reviewed By:	Jennifer Woolf	5/8/2024 10:54:58 AM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date:	Signed By:		
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☑	No ☐	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

pH received >2, one of two containers of 003 received broken (no volume remains).

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050485 RcptNo: 1

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

June 18, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: CWLP Borings **WorkOrder:** 24050429

Dear Eric Staley:

TEKLAB, INC received 1 sample on 5/6/2024 12:00:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050429
Report Date: 18-Jun-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	8
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050429

Client Project: CWLP Borings **Report Date:** 18-Jun-24

Abbr Definition

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050429
Client Project: CWLP Borings
Report Date: 18-Jun-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050429
Report Date: 18-Jun-24

Cooler Receipt Temp: 3.5 °C

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050429
Client Project: CWLP Borings
Report Date: 18-Jun-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050429
Client Project: CWLP Borings
Report Date: 18-Jun-24
Lab ID: 24050429-001
Client Sample ID: L5 20ft.
Matrix: GROUNDWATER
Collection Date: 05/03/2024 8:30

Analyses	Certification	MDL	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 9036 (TOTAL)									
Sulfate	NELAP	614	1000		**2620**	mg/L	100	05/10/2024 12:38	R347112
SW-846 9040B, LABORATORY ANALYZED									
Lab pH	NELAP	0	1.00	H	**7.62**		1	05/07/2024 13:01	R346852
SW-846 9214 (TOTAL)									
Fluoride	NELAP	0.04	0.10		**1.32**	mg/L	1	05/10/2024 11:43	R347102
SW-846 9251 (TOTAL)									
Chloride	NELAP	5	40		**202**	mg/L	10	05/07/2024 19:42	R346935
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)									
Antimony	NELAP	0.0450	0.100	B	**< 0.100**	mg/L	500	05/14/2024 4:45	222636
Arsenic	NELAP	0.0400	0.100		**2.58**	mg/L	500	05/14/2024 4:45	222636
Barium	NELAP	0.0350	0.0500		**1.60**	mg/L	250	05/14/2024 4:51	222636
Beryllium	NELAP	0.0125	0.0500		**0.0911**	mg/L	250	05/14/2024 4:51	222636
Boron	NELAP	0.925	2.50		**28.9**	mg/L	500	05/14/2024 15:30	222636
Cadmium	*	0.0150	0.100		**0.296**	mg/L	500	05/14/2024 4:45	222636
Chromium	NELAP	0.0750	0.150		**1.81**	mg/L	500	05/14/2024 4:45	222636
Cobalt	NELAP	0.0115	0.100		**0.296**	mg/L	500	05/14/2024 4:45	222636
Lead	NELAP	0.0300	0.0500		**2.78**	mg/L	250	05/14/2024 4:51	222636
Lithium	*	0.145	0.300		**0.613**	mg/L	500	05/14/2024 15:30	222636
Molybdenum	NELAP	0.0600	0.150		**0.282**	mg/L	500	05/14/2024 4:45	222636
Selenium	NELAP	0.0600	0.100		**0.205**	mg/L	500	05/14/2024 4:45	222636
Thallium	NELAP	0.0475	0.100		**< 0.100**	mg/L	250	05/14/2024 4:51	222636

Sample result for Sb exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

SW-846 7470A (TOTAL)									
Mercury	NELAP	0.00006	0.00020		**0.00559**	mg/L	1	05/15/2024 15:55	222725
EPA 903.0/904.0, RADIUM 226/228									
Radium-226	*	0	0		**See Attached**	pci/L	1	06/13/2024 0:00	R348957
Radium-228	*	0	0		**See Attached**	pci/L	1	06/13/2024 0:00	R348957

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: CWLP Borings

Work Order: 24050429
Report Date: 18-Jun-24

Carrier: Paul Reeves

Received By: NR

Completed by: Amber Dilallo
On: 06-May-24

Reviewed by: Ellie Hopkins
On: 06-May-24

Pages to follow: Chain of custody 1 Extra pages included 15

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.5
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☐	No ☑		
Reported field parameters measured:	Field ☐	Lab ☑	NA ☐	

Sample analyses to be measured in the field and/or within 15 minutes of collection were analyzed in the lab as soon as practicable. These analyses include Chlorine (demand, free and/or residual), Carbon Dioxide, Dissolved Oxygen, Ferrous Iron, pH, and Sulfite.

Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Any No responses must be detailed below or on the COC.

Sample was preserved with Nitric Acid (97606) upon arrival at the laboratory. - amberdilallo - 5/6/2024 1:07:35 PM

pH strip #96651. - amberdilallo - 5/6/2024 1:07:37 PM

Print PDF

CHAIN OF CUSTODY

Pg __ of __ Workorder # 24050429

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City, Water, Light & Power
Address: 3100 Stevenson Dr.
City/State/Zip: Springfield, IL 62712
Contact: Colleen Grey Phone: 217-787-2334
Email: cgrey@andrews-eng.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 3-5 °C LTG#7
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: Added HNO3 (pH < 2) pH ✓ per client 5/6/24

TEKLAB

Client Comments: Courier
email results to C. Grey and datamanagement@andrews-eng.com

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [ ] No
Are these samples known to be hazardous? [ ] Yes [ ] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [ ] Yes [ ] No

PROJECT NAME/NUMBER	SAMPLE COLLECTOR'S NAME
CWLP Borings	S. Van Hook

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Rad 226 and 228	Sb, As, Ba, Be	B, Cd, Cr, Co, Pb, Se, Tl	Li, Mo	Hg	Cl, F+, SO4	pH
24050429-001	LS 20ft.	5/3/24 8:30AM	Groundwater	3	1								✓	✓	✓	✓	✓	✓	✓
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														
			Groundwater	3	1														

Relinquished By	Date/Time	Received By	Date/Time
Steve Van Fall MM, IL	5/3/2024 12:30 pm	Paul MM IL	5.6.24 0820
	5.6.24 1200	Mitch Reed	5/6/24 1200

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

MC 5/6

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

June 18, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24050429

Order No.: 24050786

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 1 sample(s) on 5/9/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24050786**
Date: **6/18/2024**

CLIENT: TEKLAB Inc,
Project: 24050429

WorkOrder Narrative:
24050786: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24050786**
Date: **6/18/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **24050786**

18-Jun-24

CLIENT: TEKLAB Inc,
Project: 24050429

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24050786-001	24050429-001		5/3/2024 8:30:00 AM	5/9/2024 11:40:00 AM	Non-Potable Water

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Website: http://www.settek.com

DATES REPORT

WO#: **24050786**

18-Jun-24

Client: TEKLAB Inc,
Project: 24050429

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24050786-001A	24050429-001	5/3/2024 8:30:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		6/10/2024 3:03:24 PM	6/14/2024 11:38:39 AM
				Radium-226 (EPA 903.0)		5/29/2024 12:23:00 PM	6/5/2024 10:01:00 AM
				Radium-228 (EPA 904.0)		6/10/2024 3:03:24 PM	6/13/2024 2:27:54 PM
				Radium-228 (EPA 904.0)		5/29/2024 12:23:00 PM	6/4/2024 2:54:00 PM

Original

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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **24050786**

Date Reported: **6/18/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/3/2024 8:30:00 AM
Project: 24050429
Lab ID: 24050786-001
Matrix: NON-POTABLE WATER
Client Sample ID: 24050429-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	12.3	5.00	*	pCi/L	± 1.15	1	6/14/2024 11:38:39 AM
Yield	1.00					1	6/14/2024 11:38:39 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	5.44	5.00	*	pCi/L	± 3.56	1	6/13/2024 2:27:54 PM
Yield	0.580					1	6/13/2024 2:27:54 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050786**
18-Jun-24

Client: TEKLAB Inc,
Project: 24050429 **BatchID:** **75975**

Sample ID: **MB-75975** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187502**
Client ID: **PBW** Batch ID: **75975** TestNo: **E904.0** **E903-904** Analysis Date: **6/13/2024** SeqNo: **5081626**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-75975** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187502**
Client ID: **LCSW** Batch ID: **75975** TestNo: **E904.0** **E903-904** Analysis Date: **6/13/2024** SeqNo: **5081627**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.51	1.00	5.000	0	70.2	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-75975** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187502**
Client ID: **LCSS02** Batch ID: **75975** TestNo: **E904.0** **E903-904** Analysis Date: **6/13/2024** SeqNo: **5081628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.55	1.00	5.000	0	71.0	50	130	3.510	1.13	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050786**
18-Jun-24

Client: TEKLAB Inc,
Project: 24050429 **BatchID:** **75975**

Sample ID: **RLC-75975** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187502**
Client ID: **BatchQC** Batch ID: **75975** TestNo: **E904.0** **E903-904** Analysis Date: **6/13/2024** SeqNo: **5081630**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.97	1.00	1.000	0	197	50	150				S

Sample ID: **RLCD-75975** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187502**
Client ID: **BatchQC** Batch ID: **75975** TestNo: **E904.0** **E903-904** Analysis Date: **6/13/2024** SeqNo: **5081631**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	0	50	150				S

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050786**

18-Jun-24

Client: TEKLAB Inc,
Project: 24050429 **BatchID:** **75975**

Sample ID: **24060255-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187502**
Client ID: **BatchQC** Batch ID: **75975** TestNo: **E904.0** **E903-904** Analysis Date: **6/13/2024** SeqNo: **5081633**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24050786**

18-Jun-24

Client: TEKLAB Inc,
Project: 24050429 **BatchID:** **75975**

Sample ID: **MB-75975**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/10/2024**	RunNo: **187509**
Client ID: **PBW**	Batch ID: **75975**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/14/2024**	SeqNo: **5081731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-75975**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/10/2024**	RunNo: **187509**
Client ID: **LCSW**	Batch ID: **75975**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/14/2024**	SeqNo: **5081732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.85	1.00	5.000	0	97.0	70	130				

Sample ID: **LCSD-75975**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/10/2024**	RunNo: **187509**
Client ID: **LCSS02**	Batch ID: **75975**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/14/2024**	SeqNo: **5081733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.36	1.00	5.000	0	107	70	130	4.850	9.99	20	

Sample ID: **RLC-75975**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/10/2024**	RunNo: **187509**
Client ID: **BatchQC**	Batch ID: **75975**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/14/2024**	SeqNo: **5081735**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050786**
18-Jun-24

Client: TEKLAB Inc,
Project: 24050429 **BatchID:** **75975**

Sample ID: **RLC-75975** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187509**
Client ID: **BatchQC** Batch ID: **75975** TestNo: **E903.0** **E903-904** Analysis Date: **6/14/2024** SeqNo: **5081735**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.10	1.00	1.000	0	110	50	150				

Sample ID: **RLCD-75975** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187509**
Client ID: **BatchQC** Batch ID: **75975** TestNo: **E903.0** **E903-904** Analysis Date: **6/14/2024** SeqNo: **5081736**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.07	1.00	1.000	0	107	50	150				

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24050786**

18-Jun-24

Client: TEKLAB Inc,
Project: 24050429 **BatchID:** **75975**

Sample ID: **24060255-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187509**
Client ID: **BatchQC** Batch ID: **75975** TestNo: **E903.0** **E903-904** Analysis Date: **6/14/2024** SeqNo: **5081738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **24060255-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/10/2024** RunNo: **187509**
Client ID: **BatchQC** Batch ID: **75975** TestNo: **E903.0** **E903-904** Analysis Date: **6/14/2024** SeqNo: **5081740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

240507866

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

18.4-0.2: Cooler Temp: 18.2 Sampler: Client QC Level: 2

Fedex, cooler

Project# 24050429

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 36235 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228											
							cpm				pH					
	24050429-001	5/3/24 0830	Unpres	Groundwater	✔		32, 40				1, 1					
			Unpres	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												

*Relinquished By	Date/Time	Received By	Date/Time
Umbe. Ovalle	5/6/24 1200		5/9/24, 1140

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050786 RcptNo: 1

Logged by:	Tegan A. Richards	5/9/2024 11:40:00 AM	Tegan Richards
Completed By:	Tegan A. Richards	5/10/2024 12:21:48 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	5/10/2024 2:48:57 PM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☐	No ☑	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date:	Signed By:		
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Containers are preserved, CoC states unpreserved

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By

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Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24050786 RcptNo: 1

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

May 28, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: CWLP Borings **WorkOrder:** 24050235

Dear Eric Staley:

TEKLAB, INC received 4 samples on 5/2/2024 1:11:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Impoundment Monitoring and Assessment Wells

First Quarter 2022

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 16, 2022

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 22011434

Dear Eric Staley:

TEKLAB, INC received 15 samples on 2/17/2022 6:23:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22011434
Report Date: 16-Mar-22

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	22
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 22011434

Client Project: Ash Pond Monitoring Wells **Report Date:** 16-Mar-22

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011434
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Mar-22

Qualifiers

- Unknown hydrocarbon
B - Analyte detected in associated Method Blank
C - RL shown is a Client Requested Quantitation Limit
E - Value above quantitation range
H - Holding times exceeded
I - Associated internal standard was outside method criteria
J - Analyte detected below quantitation limits
M - Manual Integration used to determine area response
ND - Not Detected at the Reporting Limit
R - RPD outside accepted recovery limits
S - Spike Recovery outside recovery limits
T - TIC(Tentatively identified compound)
X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011434
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Mar-22

Cooler Receipt Temp: 2.8 °C

An employee of Teklab, Inc. collected the sample(s). AP-10 could not be collected; the sampling point was frozen.

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
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Kansas City

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Lenexa, KS 66214
Phone (913) 541-1998
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Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
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Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22011434
Report Date: 16-Mar-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011434
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Mar-22
Lab ID: 22011434-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 02/16/2022 13:34

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	02/16/2022 13:34	R307535
Depth to water	*	-5.00		**7.16**	ft	1	02/16/2022 13:34	R307535
Depth to water from measuring point	*	0		**9.86**	ft	1	02/16/2022 13:34	R307535
Elevation of groundwater surface	*	0		**529.64**	ft	1	02/16/2022 13:34	R307535
Measuring Point Elevation	*	0		**539.50**	ft	1	02/16/2022 13:34	R307535
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	02/16/2022 13:34	R307535
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**5.6**	NTU	1	02/16/2022 13:34	R307535
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.4**	°F	1	02/16/2022 13:34	R307535
SW-846 9040B								
pH, Field	*	1.00		**7.27**		1	02/16/2022 13:34	R307535
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1090**	µmhos/cm @25C	1	02/16/2022 13:34	R307535
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	*	20		**408**	mg/L	1	02/17/2022 12:54	R307297
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**10**	mg/L	1	02/22/2022 19:39	R307405
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.47**	mg/L	1	02/17/2022 9:55	R307231
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**29**	mg/L	1	02/22/2022 19:39	R307406
Sample result exceeds 10 times the CCB contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.178**	mg/L	1	02/18/2022 15:35	187816
Barium	NELAP	0.0025		**0.154**	mg/L	1	02/18/2022 15:35	187816
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/18/2022 15:35	187816
Boron	NELAP	0.0200		**0.179**	mg/L	1	02/18/2022 15:35	187816
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/18/2022 15:35	187816
Calcium	NELAP	0.100		**72.7**	mg/L	1	02/18/2022 15:35	187816
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 15:35	187816
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 15:35	187816
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/18/2022 15:35	187816
Lithium	NELAP	0.0050		**0.0066**	mg/L	1	02/18/2022 15:35	187816
Molybdenum	NELAP	0.0100		**0.0103**	mg/L	1	02/18/2022 15:35	187816
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/05/2022 3:09	187816
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2022 2:56	187816
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2022 2:56	187816
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/17/2022 14:07	187817
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076
Radium-228	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011434
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Mar-22
Lab ID: 22011434-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 02/15/2022 11:31

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	02/15/2022 11:31	R307535
Depth to water	*	-5.00		**3.71**	ft	1	02/15/2022 11:31	R307535
Depth to water from measuring point	*	0		**6.21**	ft	1	02/15/2022 11:31	R307535
Elevation of groundwater surface	*	0		**529.89**	ft	1	02/15/2022 11:31	R307535
Measuring Point Elevation	*	0		**536.10**	ft	1	02/15/2022 11:31	R307535
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	02/15/2022 11:31	R307535
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**5.9**	NTU	1	02/15/2022 11:31	R307535
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.2**	°F	1	02/15/2022 11:31	R307535
SW-846 9040B								
pH, Field	*	1.00		**6.43**		1	02/15/2022 11:31	R307535
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2320**	µmhos/cm @25C	1	02/15/2022 11:31	R307535
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	*	20		**1310**	mg/L	1	02/17/2022 12:56	R307297
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**583**	mg/L	20	02/22/2022 19:56	R307405
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.24**	mg/L	1	02/17/2022 9:58	R307231
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**36**	mg/L	1	02/22/2022 19:49	R307406
Sample result exceeds 10 times the CCB contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	02/18/2022 15:38	187816
Barium	NELAP	0.0025		**0.0721**	mg/L	1	02/18/2022 15:38	187816
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/18/2022 15:38	187816
Boron	NELAP	0.0200		**4.68**	mg/L	1	02/18/2022 15:38	187816
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/18/2022 15:38	187816
Calcium	NELAP	0.100		**265**	mg/L	1	02/18/2022 15:38	187816
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 15:38	187816
Cobalt	NELAP	0.0050		**0.0102**	mg/L	1	02/18/2022 15:38	187816
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/18/2022 15:38	187816
Lithium	NELAP	0.0050		**0.0057**	mg/L	1	02/18/2022 15:38	187816
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/18/2022 15:38	187816
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/05/2022 3:23	187816
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2022 3:11	187816
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2022 3:11	187816
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/17/2022 14:12	187817
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076
Radium-228	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011434
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Mar-22
Lab ID: 22011434-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 02/15/2022 11:08

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	02/15/2022 11:08	R307535
Depth to water	*	-5.00		**6.72**	ft	1	02/15/2022 11:08	R307535
Depth to water from measuring point	*	0		**8.42**	ft	1	02/15/2022 11:08	R307535
Elevation of groundwater surface	*	0		**526.98**	ft	1	02/15/2022 11:08	R307535
Measuring Point Elevation	*	0		**535.40**	ft	1	02/15/2022 11:08	R307535
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	02/15/2022 11:08	R307535
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.3**	NTU	1	02/15/2022 11:08	R307535
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.2**	°F	1	02/15/2022 11:08	R307535
SW-846 9040B								
pH, Field	*	1.00		**6.60**		1	02/15/2022 11:08	R307535
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1590**	µmhos/cm @25C	1	02/15/2022 11:08	R307535
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	*	20		**882**	mg/L	1	02/17/2022 12:57	R307297
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**410**	mg/L	10	02/22/2022 20:02	R307405
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.21**	mg/L	1	02/17/2022 10:00	R307231
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**42**	mg/L	1	02/22/2022 19:57	R307406
Sample result exceeds 10 times the CCB contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	02/18/2022 15:40	187816
Barium	NELAP	0.0025		**0.0802**	mg/L	1	02/18/2022 15:40	187816
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/18/2022 15:40	187816
Boron	NELAP	0.0200		**15.8**	mg/L	1	02/18/2022 15:40	187816
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/18/2022 15:40	187816
Calcium	NELAP	0.100		**150**	mg/L	1	02/18/2022 15:40	187816
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 15:40	187816
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 15:40	187816
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/18/2022 15:40	187816
Lithium	NELAP	0.0050		**0.0053**	mg/L	1	02/18/2022 15:40	187816
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/18/2022 15:40	187816
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/05/2022 3:29	187816
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2022 3:19	187816
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2022 3:19	187816
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/17/2022 14:14	187817
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076
Radium-228	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011434
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Mar-22
Lab ID: 22011434-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 02/15/2022 14:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	02/15/2022 14:33	R307535
Depth to water	*	-5.00		**8.23**	ft	1	02/15/2022 14:33	R307535
Depth to water from measuring point	*	0		**10.89**	ft	1	02/15/2022 14:33	R307535
Elevation of groundwater surface	*	0		**528.13**	ft	1	02/15/2022 14:33	R307535
Measuring Point Elevation	*	0		**539.02**	ft	1	02/15/2022 14:33	R307535
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	02/15/2022 14:33	R307535
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.1**	NTU	1	02/15/2022 14:33	R307535
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.1**	°F	1	02/15/2022 14:33	R307535
SW-846 9040B								
pH, Field	*	1.00		**7.20**		1	02/15/2022 14:33	R307535
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1140**	µmhos/cm @25C	1	02/15/2022 14:33	R307535
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	*	20		**440**	mg/L	1	02/21/2022 14:46	R307467
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	02/22/2022 20:40	R307405
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.55**	mg/L	1	02/17/2022 10:07	R307231
SW-846 9251 (TOTAL)								
Chloride	NELAP	2		**64**	mg/L	2	02/22/2022 20:45	R307406
Sample result exceeds 10 times the CCB contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	02/18/2022 15:59	187816
Barium	NELAP	0.0025		**0.125**	mg/L	1	02/18/2022 15:59	187816
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/18/2022 15:59	187816
Boron	NELAP	0.0200		**0.381**	mg/L	1	02/18/2022 15:59	187816
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/18/2022 15:59	187816
Calcium	NELAP	0.100		**62.9**	mg/L	1	02/18/2022 15:59	187816
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 15:59	187816
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 15:59	187816
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/18/2022 15:59	187816
Lithium	NELAP	0.0050		**0.0090**	mg/L	1	02/18/2022 15:59	187816
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/18/2022 15:59	187816
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/05/2022 3:56	187816
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2022 4:34	187816
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2022 4:34	187816
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/17/2022 14:33	187817
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076
Radium-228	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011434
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Mar-22
Lab ID: 22011434-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 02/15/2022 13:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	02/15/2022 13:12	R307535
Depth to water	*	-5.00		**3.51**	ft	1	02/15/2022 13:12	R307535
Depth to water from measuring point	*	0		**6.41**	ft	1	02/15/2022 13:12	R307535
Elevation of groundwater surface	*	0		**530.79**	ft	1	02/15/2022 13:12	R307535
Measuring Point Elevation	*	0		**537.20**	ft	1	02/15/2022 13:12	R307535
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	02/15/2022 13:12	R307535
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.0**	NTU	1	02/15/2022 13:12	R307535
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.1**	°F	1	02/15/2022 13:12	R307535
SW-846 9040B								
pH, Field	*	1.00		**6.91**		1	02/15/2022 13:12	R307535
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1320**	µmhos/cm @25C	1	02/15/2022 13:12	R307535
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	*	20		**502**	mg/L	1	02/21/2022 14:59	R307467
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	02/22/2022 20:48	R307405
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.29**	mg/L	1	02/17/2022 10:30	R307231
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**26**	mg/L	1	02/22/2022 20:48	R307406
Sample result exceeds 10 times the CCB contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0319**	mg/L	1	02/18/2022 16:21	187816
Barium	NELAP	0.0025		**0.355**	mg/L	1	02/18/2022 16:21	187816
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/18/2022 16:21	187816
Boron	NELAP	0.0200		**0.125**	mg/L	1	02/18/2022 16:21	187816
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/18/2022 16:21	187816
Calcium	NELAP	0.100	S	**100**	mg/L	1	02/18/2022 16:21	187816
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 16:21	187816
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/18/2022 16:21	187816
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/18/2022 16:21	187816
Lithium	NELAP	0.0050		**0.0068**	mg/L	1	02/18/2022 16:21	187816
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/18/2022 16:21	187816
Matrix spike control limits for Ca are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/05/2022 4:02	187816
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2022 4:41	187816
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2022 4:41	187816
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/17/2022 14:35	187817
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011434
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Mar-22
Lab ID: 22011434-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 02/15/2022 13:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-228	*	0		**See attached**	pci/L	1	03/03/2022 0:00	R308076

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22011434
Report Date: 16-Mar-22

Carrier: Joe Riley

Received By: EAH

Completed by: Mary E. Kemp
On: 17-Feb-22
Mary E. Kemp

Reviewed by: Elizabeth A. Hurley
On: 17-Feb-22
Elizabeth A. Hurley

Pages to follow: Chain of custody 2 Extra pages included 52

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 2.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #78011. - PRY/MKemp - 2/17/2022 8:32:35 AM

Additional nitric acid (80456) was needed for one container each in AP-4, AP-13, and AP-14 upon arrival at the laboratory. - MKemp - 2/17/2022 8:32:57 AM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 22011434

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 2.8 °C LTG 1
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: PHV 7801. RNY 2/17/22
Additional HNO3 (80456) to 1of 2 AP-4, AP-13, AP-14 MEK 2/17/22

Client Comments: AP10-Ice stuck near top; Needs to thaw
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [✓] No Permit on file

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
J. RILEY A. BRIDGES

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
22011434-001	RW-3	02/16/22 1334	Groundwater	1	3								✓	✓	✓	✓	✓	✓
002	AP-1	02/15/22 1155	Groundwater	1	3								✓	✓	✓	✓	✓	✓
003	AP-2	02/15/22 1137	Groundwater	1	3								✓	✓	✓	✓	✓	✓
004	AP-3	02/15/22 1108	Groundwater	1	3								✓	✓	✓	✓	✓	✓
005	AP-4	02/16/22 1005	Groundwater	1	3								✓	✓	✓	✓	✓	✓
006	AP-5	02/16/22 1037	Groundwater	1	3								✓	✓	✓	✓	✓	✓
007	AP-6	02/15/22 1346	Groundwater	1	3								✓	✓	✓	✓	✓	✓
008	AP-7	02/15/22 1433	Groundwater	1	3								✓	✓	✓	✓	✓	✓
009	AP-8	02/15/22 1312	Groundwater	1	3								✓	✓	✓	✓	✓	✓
010	AP-9	02/15/22 1507	Groundwater	1	3								✓	✓	✓	✓	✓	✓
011	AP-10	NA	Groundwater	1	3								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	02/17/22 0623		2/17/22 0623

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

RNY 2/17/22

Print PDF

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 22011434

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
22011434-012	AP-11	02/16/22 1251	Groundwater	1	3								✔	✔	✔	✔	✔	✔
013	AP-12	02/16/22 1257	Groundwater	1	3								✔	✔	✔	✔	✔	✔
014	AP-13	02/16/22 1134	Groundwater	1	3								✔	✔	✔	✔	✔	✔
015	AP-14	02/16/22 0934	Groundwater	1	3								✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	02/17/22 0623		2/17/22 0623

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Well ID							Final	Units
RW3	DTW	9.86	14.98	16.05	17.05		9.86	ft
	DTB							ft
	MP Elev							ft
	Time	1313	1328	1331	1334		1334	
	Temp		13.1	13	13		13	C
	D.O.		0.49	0.74	0.72		0.72	Mg/l
	Cond		1087	1090	1094		1094	uS/cm
	pH		7.28	7.28	7.27		7.27	
	Orp		-136.2	-138	-140.2		-140.2	mV
	Turbidity		9.99	6.96	5.63		5.63	NTU
	Drawdn		5.12	1.07	1		1	ft
	Volume		0.65	0.78	0.91		0.91	Gallon

CLEAR Field Filtered
NO COLOR
NO ODOR

Bladder Pump

Well ID						Final	Units
AP2	DTW	6.21	6.85	6.85	6.85	6.85	ft
	DTB						ft
	MP Elev						ft
	Time	1116	1125	1128	1131	1131	
	Temp		12.8	12.9	12.9	12.9	C
	D.O.		0.26	0.21	0.18	0.18	Mg/l
	Cond		2241	2281	2319	2319	uS/cm
	pH		6.45	6.45	6.43	6.43	
	Orp		-5.6	-11.1	-13.5	-13.5	mV
	Turbidity		6.78	3.55	5.92	5.92	NTU
	Drawdn		0.64	0	0	0	ft
	Volume		0.39	0.52	0.65	0.65	Gallon

CLEAR
NO COLOR
NO ODOR

Bladder Pump

Well ID						Final	Units
AP3	DTW	8.42	8.42	8.42	8.42	8.42	ft
	DTB						ft
	MP Elev						ft
	Time	1044	1102	1105	1108	1108	
	Temp		12.8	12.4	12.9	12.9	C
	D.O.		0.43	0.46	0.41	0.41	Mg/l
	Cond		1595	1597	1594	1594	uS/cm
	pH		6.62	6.62	6.6	6.6	
	Orp		-53.9	-58.4	-61.5	-61.5	mV
	Turbidity		13.76	13.98	8.29	8.29	NTU
	Drawdn		0	0	0	0	ft
	Volume		0.78	0.91	1.04	1.04	Gallon

CLEAR
NO COLOR
NO ODOR

Bladder Pump

Well ID						Final	Units
AP7	DTW	10.89	14.32	15.35	16.2	16.2	ft
	DTB						ft
	MP Elev						ft
	Time	1421	1427	1430	1433	1433	
	Temp		12.1	12.2	12.3	12.3	C
	D.O.		0.5	0.38	0.31	0.31	Mg/l
	Cond		1131	1134	1136	1136	uS/cm
	pH		7.23	7.21	7.2	7.2	
	Orp		-53.8	-72.1	-84	-84	mV
	Turbidity		8.11	7.23	6.13	6.13	NTU
	Drawdn		3.43	1.03	0.85	0.85	ft
	Volume		0.26	0.39	0.52	0.52	Gallon

CLEAR
NO COLOR
NO ODOR

Sub Pump

Well ID						Final	Units
AP8	DTW	6.41	9.89	9.89	9.89	9.89	ft
	DTB						ft
	MP Elev						ft
	Time	1254	1306	1309	1312	1312	
	Temp		13.4	13.4	13.4	13.4	C
	D.O.		0.19	0.16	0.14	0.14	Mg/l
	Cond		1321	1321	1322	1322	uS/cm
	pH		6.92	6.91	6.91	6.91	
	Orp		-108.2	-115.4	-119.9	-119.9	mV
	Turbidity		10.87	12.9	8.01	8.01	NTU
	Drawdn		3.48	0	0	0	ft
	Volume		0.52	0.65	0.78	0.78	Gallon

CLEAR
NO COLOR
NO ODOR
Bladder Pump

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

March 09, 2022

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 22011434

Dear Shelly Hennessy:

Order No.: 22021386

Summit Environmental Technologies, Inc. received 14 sample(s) on 2/21/2022 for the analyses presented in the following report.

Jennifer Woolf
Project Manager
3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 011, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **22021386**
Date: **3/9/2022**

CLIENT: TEKLAB Inc,
Project: 22011434

WorkOrder Narrative:
22021386: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Sample Notes:
22011434-014: One sample matrix is clear, the other sample has a "dirty" appearance through the bottle . The ID numbers on the the bottles both indicate 22011434-014B and both lids indicate "AP-13". Composite both bottles per client.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **22021386**
Date: **3/9/2022**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **22021386**
09-Mar-22

CLIENT: TEKLAB Inc,
Project: 22011434

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
22021386-001	22011434-001		2/16/2022 1:34:00 PM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-002	22011434-002		2/15/2022 11:55:00 AM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-003	22011434-003		2/15/2022 11:31:00 AM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-004	22011434-004		2/15/2022 11:08:00 AM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-005	22011434-005		2/16/2022 10:05:00 AM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-006	22011434-006		2/16/2022 10:37:00 AM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-007	22011434-007		2/15/2022 1:46:00 PM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-008	22011434-008		2/15/2022 2:33:00 PM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-009	22011434-009		2/15/2022 1:12:00 PM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-010	22011434-010		2/15/2022 3:01:00 PM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-011	22011434-012		2/16/2022 12:51:00 PM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-012	22011434-013		2/16/2022 12:17:00 PM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-013	22011434-014		2/16/2022 11:34:00 AM	2/21/2022 1:15:00 PM	Non-Potable Water
22021386-014	22011434-015		2/16/2022 9:34:00 AM	2/21/2022 1:15:00 PM	Non-Potable Water

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DATES REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
22021386-001A	22011434-001	2/16/2022 1:34:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-002A	22011434-002	2/15/2022 11:55:00 AM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-003A	22011434-003	2/15/2022 11:31:00 AM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-004A	22011434-004	2/15/2022 11:08:00 AM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-005A	22011434-005	2/16/2022 10:05:00 AM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-006A	22011434-006	2/16/2022 10:37:00 AM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
				Radium-228 (EPA 904.0)		3/7/2022 1:09:18 PM	3/8/2022 4:26:09 PM
22021386-007A	22011434-007	2/15/2022 1:46:00 PM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-008A	22011434-008	2/15/2022 2:33:00 PM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-009A	22011434-009	2/15/2022 1:12:00 PM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-010A	22011434-010	2/15/2022 3:01:00 PM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-011A	22011434-012	2/16/2022 12:51:00 PM		Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM

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Website: http://www.settek.com

DATES REPORT

WO#: **22021386**

09-Mar-22

Client: TEKLAB Inc,

Project: 22011434

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
22021386-012A	22011434-013	2/16/2022 12:17:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		2/24/2022 12:36:54 PM	3/3/2022 1:27:09 PM
				Radium-228 (EPA 904.0)		2/24/2022 12:36:54 PM	3/3/2022 1:07:31 PM
22021386-013A	22011434-014	2/16/2022 11:34:00 AM		Radium-226 (EPA 903.0)		2/25/2022 12:41:09 PM	3/4/2022 3:02:37 PM
				Radium-228 (EPA 904.0)		2/25/2022 12:41:09 PM	3/4/2022 2:38:33 PM
22021386-014A	22011434-015	2/16/2022 9:34:00 AM		Radium-226 (EPA 903.0)		2/25/2022 12:41:09 PM	3/4/2022 3:02:37 PM
				Radium-228 (EPA 904.0)		2/25/2022 12:41:09 PM	3/4/2022 2:38:33 PM

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Analytical Report

(consolidated)

WO#: **22021386**

Date Reported: **3/9/2022**

CLIENT: TEKLAB Inc,

Collection Date: 2/16/2022 1:34:00 PM

Project: 22011434

Lab ID: 22021386-001

Matrix: NON-POTABLE WATER

Client Sample ID: 22011434-001

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **JEB**
Radium-226	ND	1.00		pCi/L	± 0.13	1	3/3/2022 1:27:09 PM
Yield	0.880					1	3/3/2022 1:27:09 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **JEB**
Radium-228	ND	1.00		pCi/L	± 0.84	1	3/3/2022 1:07:31 PM
Yield	0.990					1	3/3/2022 1:07:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22021386**

Date Reported: **3/9/2022**

CLIENT: TEKLAB Inc,

Collection Date: 2/15/2022 11:31:00 AM

Project: 22011434

Lab ID: 22021386-003

Matrix: NON-POTABLE WATER

Client Sample ID: 22011434-003

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **JEB**
Radium-226	ND	1.00		pCi/L	± 0.14	1	3/3/2022 1:27:09 PM
Yield	0.970					1	3/3/2022 1:27:09 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **JEB**
Radium-228	ND	1.00		pCi/L	± 0.8	1	3/3/2022 1:07:31 PM
Yield	0.990					1	3/3/2022 1:07:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22021386**

Date Reported: **3/9/2022**

CLIENT: TEKLAB Inc,

Collection Date: 2/15/2022 11:08:00 AM

Project: 22011434

Lab ID: 22021386-004

Matrix: NON-POTABLE WATER

Client Sample ID: 22011434-004

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **JEB**
Radium-226	ND	1.00		pCi/L	± 0.08	1	3/3/2022 1:27:09 PM
Yield	0.910					1	3/3/2022 1:27:09 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **JEB**
Radium-228	ND	1.00		pCi/L	± 0.83	1	3/3/2022 1:07:31 PM
Yield	0.880					1	3/3/2022 1:07:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22021386**

Date Reported: **3/9/2022**

CLIENT: TEKLAB Inc,

Collection Date: 2/15/2022 2:33:00 PM

Project: 22011434

Lab ID: 22021386-008

Matrix: NON-POTABLE WATER

Client Sample ID: 22011434-008

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **JEB**
Radium-226	ND	1.00		pCi/L	± 0.19	1	3/3/2022 1:27:09 PM
Yield	0.650					1	3/3/2022 1:27:09 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **JEB**
Radium-228	ND	1.00		pCi/L	± 1.16	1	3/3/2022 1:07:31 PM
Yield	0.640					1	3/3/2022 1:07:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22021386**

Date Reported: **3/9/2022**

CLIENT: TEKLAB Inc,
Collection Date: 2/15/2022 1:12:00 PM
Project: 22011434
Lab ID: 22021386-009
Matrix: NON-POTABLE WATER
Client Sample ID: 22011434-009

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **JEB**
Radium-226	ND	1.00		pCi/L	± 0.19	1	3/3/2022 1:27:09 PM
Yield	0.640					1	3/3/2022 1:27:09 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **JEB**
Radium-228	ND	1.00		pCi/L	± 1	1	3/3/2022 1:07:31 PM
Yield	0.720					1	3/3/2022 1:07:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55267**

Sample ID: **22021386-004ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140953**
Client ID: **22011434-004** Batch ID: **55267** TestNo: **E904.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717136**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.01	1.00		0	0			0.7900	24.4	30	
Yield	0.940			0	0			0.8800	6.59		

Sample ID: **22021386-003AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140953**
Client ID: **22011434-003** Batch ID: **55267** TestNo: **E904.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	6.13	1.00	5.000	0	123	70	130				
Yield	0.740			0.9900	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55267**

Sample ID: **MB-55267** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140953**
Client ID: **PBW** Batch ID: **55267** TestNo: **E904.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-55267** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140953**
Client ID: **LCSW** Batch ID: **55267** TestNo: **E904.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.81	1.00	5.000	0	76.2	70	130				QLR
Yield	1.00			0	0						

Sample ID: **LCSD-55267** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140953**
Client ID: **LCSS02** Batch ID: **55267** TestNo: **E904.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.57	1.00	5.000	0	111	70	130	3.810	37.5	20	R
Yield	0.910			0	0			1.000	9.42		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55267**

Sample ID: **RLC-55267** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140953**
Client ID: **BatchQC** Batch ID: **55267** TestNo: **E904.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.33	1.00	1.000	0	133	50	150				
Yield	1.00			0	0						

Sample ID: **RLCD-55267** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140953**
Client ID: **BatchQC** Batch ID: **55267** TestNo: **E904.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717148**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.12	1.00	1.000	0	112	50	150				
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55267**

Sample ID: **22021386-003AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140954**
Client ID: **22011434-003** Batch ID: **55267** TestNo: **E903.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.95	1.00	5.000	0	99.0	70	130				

Sample ID: **22021386-004ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140954**
Client ID: **22011434-004** Batch ID: **55267** TestNo: **E903.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717164**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	0.870							0.9100	4.49	0	

Sample ID: **22021386-006ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140954**
Client ID: **22011434-006** Batch ID: **55267** TestNo: **E903.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717167**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	0.990							0.8900	10.6	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55267**

Sample ID: **MB-55267** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140954**
Client ID: **PBW** Batch ID: **55267** TestNo: **E903.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-55267** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140954**
Client ID: **LCSW** Batch ID: **55267** TestNo: **E903.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.03	1.00	5.000	0	101	70	130				

Sample ID: **LCSD-55267** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140954**
Client ID: **LCSS02** Batch ID: **55267** TestNo: **E903.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.90	1.00	5.000	0	118	70	130	5.030	15.9	20	

Sample ID: **RLC-55267** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/24/2022** RunNo: **140954**
Client ID: **BatchQC** Batch ID: **55267** TestNo: **E903.0** **E903-904** Analysis Date: **3/3/2022** SeqNo: **3717154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55267**

Sample ID: **RLC-55267**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/24/2022**	RunNo: **140954**
Client ID: **BatchQC**	Batch ID: **55267**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/3/2022**	SeqNo: **3717154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.20	1.00	1.000	0	120	50	150				

Sample ID: **RLCD-55267**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/24/2022**	RunNo: **140954**
Client ID: **BatchQC**	Batch ID: **55267**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/3/2022**	SeqNo: **3717155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.02	1.00	1.000	0	102	50	150				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55268**

Sample ID: **MB-55268** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141026**
Client ID: **PBW** Batch ID: **55268** TestNo: **E904.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-55268** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141026**
Client ID: **LCSW** Batch ID: **55268** TestNo: **E904.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718897**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.87	1.00	5.000	0	97.4	70	130				QLR
Yield	1.00			0	0						

Sample ID: **LCSD-55268** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141026**
Client ID: **LCSS02** Batch ID: **55268** TestNo: **E904.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.85	1.00	5.000	0	77.0	70	130	4.870	23.4	20	R
Yield	0.960			0	0			1.000	4.08		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55268**

Sample ID: **RLCD-55268**	SampType: **RLC**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **2/25/2022**	RunNo: **141026**
Client ID: **BatchQC**	Batch ID: **55268**	TestNo: **E904.0**	**E903-904**	Analysis Date: **3/4/2022**	SeqNo: **3718900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	92.0	50	150				

Sample ID: **RLC-55268**	SampType: **RLC**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **2/25/2022**	RunNo: **141026**
Client ID: **BatchQC**	Batch ID: **55268**	TestNo: **E904.0**	**E903-904**	Analysis Date: **3/4/2022**	SeqNo: **3718919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	78.0	50	150				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55268**

Sample ID: **22021112-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141026**
Client ID: **BatchQC** Batch ID: **55268** TestNo: **E904.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Sample ID: **22021114-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141026**
Client ID: **BatchQC** Batch ID: **55268** TestNo: **E904.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			0.8900	11.6		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55268**

Sample ID: **MB-55268** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141033**
Client ID: **PBW** Batch ID: **55268** TestNo: **E903.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-55268** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141033**
Client ID: **LCSW** Batch ID: **55268** TestNo: **E903.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.26	1.00	5.000	0	85.2	70	130				

Sample ID: **LCSD-55268** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141033**
Client ID: **LCSS02** Batch ID: **55268** TestNo: **E903.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.14	1.00	5.000	0	103	70	130	4.260	18.7	20	

Sample ID: **RLC-55268** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/25/2022** RunNo: **141033**
Client ID: **BatchQC** Batch ID: **55268** TestNo: **E903.0** **E903-904** Analysis Date: **3/4/2022** SeqNo: **3718974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55268**

Sample ID: **RLC-55268**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/25/2022**	RunNo: **141033**
Client ID: **BatchQC**	Batch ID: **55268**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/4/2022**	SeqNo: **3718974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	67.0	50	150				

Sample ID: **RLCD-55268**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/25/2022**	RunNo: **141033**
Client ID: **BatchQC**	Batch ID: **55268**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/4/2022**	SeqNo: **3719007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	61.0	50	150				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55391**

Sample ID: **RLCD-55391** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/7/2022** RunNo: **141176**
Client ID: **BatchQC** Batch ID: **55391** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2022** SeqNo: **3722587**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.06	1.00	1.000	0	106	50	150				
Yield	1.00			0	0						

Sample ID: **22021558-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/7/2022** RunNo: **141176**
Client ID: **BatchQC** Batch ID: **55391** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2022** SeqNo: **3722588**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.63	1.00	5.000	0.8400	95.8	70	130				
Yield	1.00			1.000	0						

Sample ID: **22021789-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/7/2022** RunNo: **141176**
Client ID: **BatchQC** Batch ID: **55391** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2022** SeqNo: **3722594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.05	1.00		0	0			0.9300	12.1	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22021386**
09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55391**

Sample ID: **22030062-003ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/7/2022** RunNo: **141176**
Client ID: **BatchQC** Batch ID: **55391** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2022** SeqNo: **3722596**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **MB-55391** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/7/2022** RunNo: **141176**
Client ID: **PBW** Batch ID: **55391** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2022** SeqNo: **3722603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	0.940			0	0						

Sample ID: **LCS-55391** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/7/2022** RunNo: **141176**
Client ID: **LCSW** Batch ID: **55391** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2022** SeqNo: **3722604**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.99	1.00	5.000	0	99.8	70	130				
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22021386**

09-Mar-22

Client: TEKLAB Inc,
Project: 22011434 **BatchID:** **55391**

Sample ID: **RLC-55391** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/7/2022** RunNo: **141176**
Client ID: **BatchQC** Batch ID: **55391** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2022** SeqNo: **3722605**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.41	1.00	1.000	0	141	50	150				
Yield	0.910			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

TEKLAB, INC. Chain of Custody

22021386

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: J.Riley/A Bridges | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 22/228 by EPA 903.0/904.0 on your standard turn around time.
Batch QC is required for all analyses requested.

Project# 22011434

Contact: Shelly A. Hennessy | Email: shennessy@teklabinc.com
Requested Due Date: STD TAT | Billing/PO: 32473

Any changes to analysis/methods must be approved by Teklab, Inc.
Phone: (618) 344-1004 ext 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228											
-	22011434-001	2/16/22 1334	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 30, 25	pH 1, 1			
-	22011434-002	2/15/22 1155	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 6, 23	pH 1, 1			
	22011434-003	2/15/22 1131	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 30, 40	pH 1, 1			
	22011434-004	2/15/22 1108	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 27, 30	pH 1, 1			
	22011434-005	2/16/22 1005	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 33, 33	pH 1, 1			
	22011434-006	2/16/22 1037	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 27, 27	pH 1, 1			
	22011434-007	2/15/22 1346	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 23, 37	pH 1, 1			
	22011434-008	2/15/22 1433	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 27, 30	pH 1, 1			
	22011434-009	2/15/22 1312	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 37, 16	pH 1, 1			
	22011434-010	2/15/22 1501	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 27, 10	pH 1, 1			
	22011434-012	2/16/22 1251	HNO3	Groundwater	☑	☐	☐	☐	☐	☐	☐	cpm 14, 23	pH 1, 1			

*Relinquished By	Date/Time	Received By	Date/Time
Mary Kupp	2/17/22 10:00		2/21/22 13:15

13.4-1.0=12.4°C #1
6.7-1.0=5.7°C #2
4.5-1.0=3.5°C #3
8.0-1.0=7.0°C #4

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SubCoCRevA 3/2/2016

TEKLAB, INC. Chain of Custody

22021386

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: J.Riley/A Bridges | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 22/228 by EPA 903.0/904.0 on your standard turn around time.
Batch QC is required for all analyses requested.

Project# 22011434

Contact: Shelly A. Hennessy | Email: shennessy@teklabinc.com
Requested Due Date: STD TAT | Billing/PO: 32473

Any changes to analysis/methods must be approved by Teklab, Inc.

Phone: (618) 344-1004 ext 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228												
	22011434-013	2/16/22 1217	HNO3	Groundwater	✔								clm	30,33	pH	1	
	22011434-014	2/16/22 1134	HNO3	Groundwater	✔								clm	16,4	pH	1	
	22011434-015	2/16/22 0934	HNO3	Groundwater	✔								clm	30,40	pH	1	
			HNO3	Groundwater													
			HNO3	Groundwater													
			HNO3	Groundwater													
			HNO3	Groundwater													
			HNO3	Groundwater													
			HNO3	Groundwater													
			HNO3	Groundwater													
			HNO3	Groundwater													

*Relinquished By	Date/Time	Received By	Date/Time
Mary Kemp	2/17/22 1600		2/21/22 13:15

13.4-1.0=12.4°c #1
6.7-1.0=5.7°c #2
4.5-1.0=3.5°c #3
8.0-1.0=7.0°c #4

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRev 3/2/2016

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **22021386** RcptNo: **1**

Logged by:	**John T. Woolf**	**2/21/2022 1:15:00 PM**	John T. Woolf
Completed By:	**John T. Woolf**	**2/21/2022 4:04:18 PM**	John T. Woolf
Reviewed By:	**Jennifer Woolf**	**2/21/2022 4:27:41 PM**	Jennifer Woolf

Chain of Custody

1.	Were seals intact?	Yes ☑	No ☐	Not Present ☐
2.	Is Chain of Custody complete?	Yes ☐	No ☑	Not Present ☐
3.	How was the sample delivered?	FedEx		

Log In

4.	Coolers are present?	Yes ☐	No ☑	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☐	No ☑	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☐	No ☑	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

18. Additional remarks:

no
project address not included
combined?

Cooler Information

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **22021386** RcptNo: **1**

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	5.7	Good	Not Present			
3	3.5	Good	Not Present			
4	7.0	Good	Not Present			
cooler	12.4	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 04, 2022

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells **WorkOrder:** 22011433

Dear Eric Staley:

TEKLAB, INC received 12 samples on 2/17/2022 11:26:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 22011433
Report Date: 04-Mar-22

This reporting package includes the following:

Cover Letter	1
Report Contents	2
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Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 22011433

Client Project: Landfill Monitoring Wells **Report Date:** 04-Mar-22

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011433
Client Project: Landfill Monitoring Wells
Report Date: 04-Mar-22

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 22011433
Report Date: 04-Mar-22

Cooler Receipt Temp: 5.6 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 22011433
Report Date: 04-Mar-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2022	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22011433
Client Project: Landfill Monitoring Wells
Report Date: 04-Mar-22
Lab ID: 22011433-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 02/16/2022 15:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	02/16/2022 15:28	R307533
Depth to water	*	-5.00		**11.39**	ft	1	02/16/2022 15:28	R307533
Depth to water from measuring point	*	0		**14.14**	ft	1	02/16/2022 15:28	R307533
Elevation of groundwater surface	*	0		**541.46**	ft	1	02/16/2022 15:28	R307533
Measuring Point Elevation	*	0		**555.60**	ft	1	02/16/2022 15:28	R307533
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.5**	°F	1	02/16/2022 15:28	R307533
SW-846 9040B								
pH, Field	*	1.00		**6.67**		1	02/16/2022 15:28	R307533
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2210**	µmhos/cm @25C	1	02/16/2022 15:28	R307533
EPA 600 350.1 (DISSOLVED)								
Nitrogen, Ammonia (as N)	NELAP	0.10		**1.76**	mg/L	1	02/18/2022 18:16	R307238
EPA 600 353.2 R2.0 (DISSOLVED)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**0.102**	mg/L	1	02/18/2022 12:07	R307256
STANDARD METHODS 2540 C (DISSOLVED) 1997, 2011								
Total Dissolved Solids	*	50		**1080**	mg/L	2.5	02/22/2022 10:32	R307500
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.005		**< 0.005**	mg/L	1	02/22/2022 11:17	187884
SW-846 9036 (DISSOLVED)								
Sulfate	NELAP	100		**340**	mg/L	10	02/22/2022 19:02	R307405
SW-846 9251 (DISSOLVED)								
Chloride	NELAP	1		**40**	mg/L	1	02/22/2022 18:56	R307406
Sample result exceeds 10 times the CCB contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**7570**	µg/L	1	02/21/2022 14:06	187851
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	02/21/2022 14:06	187851
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	02/21/2022 14:06	187851
Magnesium	NELAP	0.050		**80.5**	mg/L	1	02/21/2022 14:06	187851
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	02/21/2022 14:06	187851
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**140**	µg/L	5	02/25/2022 7:12	187851
Lead	NELAP	1.0		**< 1.0**	µg/L	5	02/25/2022 7:12	187851
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	02/21/2022 15:37	187888

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 22011433

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 2.6 °C
Preserved in: ☑ LAB ☐ FIELD FOR LAB USE ONLY LT63
LAB NOTES: PH+V 78011/75846, Added HNO3 80456/H2SO4 80796/NaOH 78408, PH+ 2/17/22

Client Comments: * Dup ⊗ Filter in Lab
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn Additional NaOH(78408) to all, Nitric acid (80456) R101 MEK 2/17/22

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
J. RILEY A. BRIDGES

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (O)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	
22011433-001	R101	02/17/22 0730	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
002	G110	02/17/22 0744	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
003	R111	02/17/22 0845	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
004	G112	02/17/22 0856	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
005	G113 ⊗	02/17/22 0917	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
006	G120	02/16/22 1450	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
007	G121 * ⊗ JR	02/16/22 1406	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
008	G122	02/16/22 1434	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
009	AW-1	02/16/22 1528	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
010	AW-2	02/16/22 1506	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	
011	RW-3	02/16/22 1334	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	

Relinquished By	Date/Time	Received By	Date/Time
	02/17/22 1126		2/17/22 1126

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

PM+ 2/17/22

Well ID							Final	Units
AW1	DTW	14.14					14.14	ft
	DTB							ft
	MP Elev							ft
	Time	1513	1522	1525	1528		1528	
	Temp		13.6	13.6	13.6		13.6	C
	D.O.							Mg/l
	Cond		2203	2211	2210		2210	uS/cm
	pH		6.67	6.66	6.67		6.67	
	Orp							mV
	Turbidity							NTU
	Drawdn							ft
	Volume		0.39	0.52	0.65		0.65	Gallon

HIGH TURB
SUB PUMP
GREYISH
CLOUDY
NO ODOR

Field Filtered

Second Quarter 2022

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

July 13, 2022

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 22051753

Dear Eric Staley:

TEKLAB, INC received 15 samples on 6/2/2022 7:33:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22051753
Report Date: 13-Jul-22

This reporting package includes the following:

Cover Letter	1
Report Contents	2
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Accreditations	6
Laboratory Results	7
Receiving Check List	23
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 22051753

Client Project: Ash Pond Monitoring Wells **Report Date:** 13-Jul-22

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
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LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
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MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
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RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051753
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Jul-22

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051753
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Jul-22

Cooler Receipt Temp: 2.0 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
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Email KKlostermann@teklabinc.com

Kansas City

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Lenexa, KS 66214
Phone (913) 541-1998
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Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22051753
Report Date: 13-Jul-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051753
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Jul-22
Lab ID: 22051753-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 06/01/2022 13:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	06/01/2022 13:45	R313064
Depth to water	*	-5.00		**6.50**	ft	1	06/01/2022 13:45	R313064
Depth to water from measuring point	*	0		**9.20**	ft	1	06/01/2022 13:45	R313064
Elevation of groundwater surface	*	0		**530.30**	ft	1	06/01/2022 13:45	R313064
Measuring Point Elevation	*	0		**539.50**	ft	1	06/01/2022 13:45	R313064
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	06/01/2022 13:45	R313064
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	06/01/2022 13:45	R313064
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.5**	°F	1	06/01/2022 13:45	R313064
SW-846 9040B								
pH, Field	*	1.00		**7.20**		1	06/01/2022 13:45	R313064
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**783**	µmhos/cm @25C	1	06/01/2022 13:45	R313064
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**428**	mg/L	1	06/02/2022 12:01	R312777
SW-846 9036 (TOTAL)								
Sulfate	NELAP	20		**< 20**	mg/L	2	06/07/2022 13:55	R312927
Elevated reporting limit due to matrix interference.								
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.49**	mg/L	1	06/08/2022 9:27	R312973
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**31**	mg/L	1	06/07/2022 13:29	R312931
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.138**	mg/L	1	06/03/2022 14:21	193267
Barium	NELAP	0.0025		**0.148**	mg/L	1	06/03/2022 14:21	193267
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	06/03/2022 14:21	193267
Boron	NELAP	0.0200		**0.174**	mg/L	1	06/03/2022 14:21	193267
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	06/03/2022 14:21	193267
Calcium	NELAP	0.100		**71.7**	mg/L	1	06/03/2022 14:21	193267
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:21	193267
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:21	193267
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	06/03/2022 14:21	193267
Lithium	NELAP	0.0050		**0.0064**	mg/L	1	06/03/2022 14:21	193267
Molybdenum	NELAP	0.0100		**0.0106**	mg/L	1	06/03/2022 14:21	193267
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 22:17	193267
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 22:17	193267
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	06/03/2022 22:17	193267
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	06/03/2022 10:29	193269
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	06/20/2022 0:00	R314337
Radium-228	*	0		**See attached**	pci/L	1	06/20/2022 0:00	R314337

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051753
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Jul-22
Lab ID: 22051753-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 05/31/2022 12:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	05/31/2022 12:12	R313064
Depth to water	*	-5.00		**5.46**	ft	1	05/31/2022 12:12	R313064
Depth to water from measuring point	*	0		**7.96**	ft	1	05/31/2022 12:12	R313064
Elevation of groundwater surface	*	0		**528.14**	ft	1	05/31/2022 12:12	R313064
Measuring Point Elevation	*	0		**536.10**	ft	1	05/31/2022 12:12	R313064
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	05/31/2022 12:12	R313064
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.9**	NTU	1	05/31/2022 12:12	R313064
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.9**	°F	1	05/31/2022 12:12	R313064
SW-846 9040B								
pH, Field	*	1.00		**6.43**		1	05/31/2022 12:12	R313064
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1430**	µmhos/cm @25C	1	05/31/2022 12:12	R313064
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1270**	mg/L	1	06/02/2022 12:02	R312777
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**532**	mg/L	20	06/07/2022 14:20	R312927
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.24**	mg/L	1	06/08/2022 9:31	R312973
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**35**	mg/L	1	06/07/2022 14:14	R312931
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	06/03/2022 14:24	193267
Barium	NELAP	0.0025		**0.0730**	mg/L	1	06/03/2022 14:24	193267
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	06/03/2022 14:24	193267
Boron	NELAP	0.0200		**4.25**	mg/L	1	06/03/2022 14:24	193267
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	06/03/2022 14:24	193267
Calcium	NELAP	0.100		**236**	mg/L	1	06/03/2022 14:24	193267
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:24	193267
Cobalt	NELAP	0.0050		**0.0089**	mg/L	1	06/03/2022 14:24	193267
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	06/03/2022 14:24	193267
Lithium	NELAP	0.0050		**0.0056**	mg/L	1	06/03/2022 14:24	193267
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	06/03/2022 14:24	193267
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 22:28	193267
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 22:28	193267
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	06/03/2022 22:28	193267
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	06/03/2022 10:34	193269
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	06/20/2022 0:00	R314337
Radium-228	*	0		**See attached**	pci/L	1	06/20/2022 0:00	R314337

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051753
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Jul-22
Lab ID: 22051753-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 05/31/2022 11:47

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	05/31/2022 11:47	R313064
Depth to water	*	-5.00		**7.94**	ft	1	05/31/2022 11:47	R313064
Depth to water from measuring point	*	0		**9.64**	ft	1	05/31/2022 11:47	R313064
Elevation of groundwater surface	*	0		**525.76**	ft	1	05/31/2022 11:47	R313064
Measuring Point Elevation	*	0		**535.40**	ft	1	05/31/2022 11:47	R313064
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	05/31/2022 11:47	R313064
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.1**	NTU	1	05/31/2022 11:47	R313064
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.2**	°F	1	05/31/2022 11:47	R313064
SW-846 9040B								
pH, Field	*	1.00		**6.58**		1	05/31/2022 11:47	R313064
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1070**	µmhos/cm @25C	1	05/31/2022 11:47	R313064
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**942**	mg/L	1	06/02/2022 12:02	R312777
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**408**	mg/L	10	06/07/2022 14:27	R312927
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.24**	mg/L	1	06/08/2022 9:33	R312973
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**42**	mg/L	1	06/07/2022 14:22	R312931
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	06/03/2022 14:26	193267
Barium	NELAP	0.0025		**0.0849**	mg/L	1	06/03/2022 14:26	193267
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	06/03/2022 14:26	193267
Boron	NELAP	0.0200		**14.7**	mg/L	1	06/03/2022 14:26	193267
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	06/03/2022 14:26	193267
Calcium	NELAP	0.100		**152**	mg/L	1	06/03/2022 14:26	193267
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:26	193267
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:26	193267
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	06/03/2022 14:26	193267
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:26	193267
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	06/03/2022 14:26	193267
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 22:34	193267
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 22:34	193267
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	06/03/2022 22:34	193267
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	06/03/2022 10:36	193269
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	06/20/2022 0:00	R314337
Radium-228	*	0		**See attached**	pci/L	1	06/20/2022 0:00	R314337

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051753
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Jul-22
Lab ID: 22051753-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 06/01/2022 10:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	06/01/2022 10:19	R313064
Depth to water	*	-5.00		**7.24**	ft	1	06/01/2022 10:19	R313064
Depth to water from measuring point	*	0		**9.90**	ft	1	06/01/2022 10:19	R313064
Elevation of groundwater surface	*	0		**529.12**	ft	1	06/01/2022 10:19	R313064
Measuring Point Elevation	*	0		**539.02**	ft	1	06/01/2022 10:19	R313064
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	06/01/2022 10:19	R313064
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.8**	NTU	1	06/01/2022 10:19	R313064
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.9**	°F	1	06/01/2022 10:19	R313064
SW-846 9040B								
pH, Field	*	1.00		**6.92**		1	06/01/2022 10:19	R313064
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**923**	µmhos/cm @25C	1	06/01/2022 10:19	R313064
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**480**	mg/L	1	06/02/2022 12:04	R312777
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	06/09/2022 9:39	R313062
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.56**	mg/L	1	06/08/2022 9:41	R312973
SW-846 9251 (TOTAL)								
Chloride	NELAP	2		**66**	mg/L	2	06/07/2022 15:10	R312931
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0468**	mg/L	1	06/03/2022 14:33	193267
Barium	NELAP	0.0025		**0.130**	mg/L	1	06/03/2022 14:33	193267
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	06/03/2022 14:33	193267
Boron	NELAP	0.0200		**0.339**	mg/L	1	06/03/2022 14:33	193267
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	06/03/2022 14:33	193267
Calcium	NELAP	0.100		**64.9**	mg/L	1	06/03/2022 14:33	193267
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:33	193267
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:33	193267
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	06/03/2022 14:33	193267
Lithium	NELAP	0.0050		**0.0079**	mg/L	1	06/03/2022 14:33	193267
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	06/03/2022 14:33	193267
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 22:56	193267
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 22:56	193267
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	06/03/2022 22:56	193267
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	06/03/2022 10:54	193269
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	06/29/2022 0:00	R314337
Radium-228	*	0		**See attached**	pci/L	1	06/29/2022 0:00	R314337

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051753
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Jul-22
Lab ID: 22051753-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 05/31/2022 13:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	05/31/2022 13:57	R313064
Depth to water	*	-5.00		**2.13**	ft	1	05/31/2022 13:57	R313064
Depth to water from measuring point	*	0		**5.03**	ft	1	05/31/2022 13:57	R313064
Elevation of groundwater surface	*	0		**532.17**	ft	1	05/31/2022 13:57	R313064
Measuring Point Elevation	*	0		**537.20**	ft	1	05/31/2022 13:57	R313064
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	05/31/2022 13:57	R313064
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.0**	NTU	1	05/31/2022 13:57	R313064
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.7**	°F	1	05/31/2022 13:57	R313064
SW-846 9040B								
pH, Field	*	1.00		**6.90**		1	05/31/2022 13:57	R313064
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**864**	µmhos/cm @25C	1	05/31/2022 13:57	R313064
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**552**	mg/L	1	06/02/2022 12:04	R312777
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	06/07/2022 15:17	R312927
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.31**	mg/L	1	06/08/2022 9:51	R312973
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**28**	mg/L	1	06/07/2022 15:18	R312931
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0352**	mg/L	1	06/03/2022 14:35	193267
Barium	NELAP	0.0025		**0.356**	mg/L	1	06/03/2022 14:35	193267
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	06/03/2022 14:35	193267
Boron	NELAP	0.0200		**0.0877**	mg/L	1	06/03/2022 14:35	193267
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	06/03/2022 14:35	193267
Calcium	NELAP	0.100		**96.5**	mg/L	1	06/03/2022 14:35	193267
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:35	193267
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2022 14:35	193267
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	06/03/2022 14:35	193267
Lithium	NELAP	0.0050		**0.0065**	mg/L	1	06/03/2022 14:35	193267
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	06/03/2022 14:35	193267
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 23:40	193267
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2022 23:40	193267
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	06/03/2022 23:40	193267
CCV recovered outside the upper control limits for Se and Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	06/03/2022 10:56	193269
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	06/28/2022 0:00	R314337
Radium-228	*	0		**See attached**	pci/L	1	06/28/2022 0:00	R314337

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22051753
Report Date: 13-Jul-22

Carrier: Joe Riley

Received By: EAH

Completed by: Payton Yoch
On: 02-Jun-22

Reviewed by: Shelly A Hennessy
On: 06-Jun-22

Pages to follow: Chain of custody 2 Extra pages included 43

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 2.0
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip 78198 - pyoch - 6/2/2022 8:57:41 AM

Additional Nitric Acid (82107) was needed for all 2L bottles (Radium 226-228) upon arrival at the laboratory. - pyoch - 6/2/2022 8:57:57 AM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 22051753

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 2.0 °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY LTGS
LAB NOTES: PH/Z 198, Added HNO3 (821077) to all 2 liters. CET ~~6-6-~~ 6-2-22

Client Comments: TE CET 6-6-22
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☑ No Permit on file

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells
SAMPLE COLLECTOR'S NAME: J. RILEY

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
22051753-001	RW-3	06/01/22 1345	Groundwater	1	3								✔	✔	✔	✔	✔	✔
002	AP-1	05/31/22 1330	Groundwater	1	3								✔	✔	✔	✔	✔	✔
003	AP-2	1212	Groundwater	1	3								✔	✔	✔	✔	✔	✔
004	AP-3	1147	Groundwater	1	3								✔	✔	✔	✔	✔	✔
005	AP-4	1628	Groundwater	1	3								✔	✔	✔	✔	✔	✔
006	AP-5	1655	Groundwater	1	3								✔	✔	✔	✔	✔	✔
007	AP-6	1422	Groundwater	1	3								✔	✔	✔	✔	✔	✔
008	AP-7	06/01/22 1018	Groundwater	1	3								✔	✔	✔	✔	✔	✔
009	AP-8	05/31/22 1357	Groundwater	1	3								✔	✔	✔	✔	✔	✔
010	AP-9	06/01/22 1047	Groundwater	1	3								✔	✔	✔	✔	✔	✔
011	AP-10	05/31/22 1301	Groundwater	1	3								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
[signature]	06/02/22 0733	[signature]	6/2/22 0733

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

[signature] 6/7/22

Print PDF

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 22051753

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
22051753-012	AP-11	06/01/22 1302	Groundwater	1	3								✔	✔	✔	✔	✔	✔
013	AP-12	06/01/22 1234	Groundwater	1	3								✔	✔	✔	✔	✔	✔
014	AP-13	06/01/22 1204	Groundwater	1	3								✔	✔	✔	✔	✔	✔
015	AP-14	05/31/22 1543	Groundwater	1	3								✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	06/02/22 0733	[signature]	6/2/22 0733

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

July 12, 2022

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 22051753

Dear Shelly Hennessy:

Order No.: 22060560

Summit Environmental Technologies, Inc. received 15 sample(s) on 6/8/2022 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 011, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **22060560**
Date: **7/12/2022**

CLIENT: TEKLAB Inc,
Project: 22051753

WorkOrder Narrative:
22060560: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Run Comments:
145867: 22060887-001A is 22060877-001a in attached spreadsheet

Analytical Sequence Sample Notes:
22060560-013A Radium-228_NPW(904.0): Sample and Sample Duplicate exhibited high RPD for Radium-228 due to possible sample matrix interference.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **22060560**
Date: **7/12/2022**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **22060560**

12-Jul-22

CLIENT: TEKLAB Inc,
Project: 22051753

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
22060560-001	22051753-001		6/1/2022 1:45:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-002	22051753-002		5/31/2022 1:30:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-003	22051753-003		5/31/2022 12:12:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-004	22051753-004		5/31/2022 11:47:00 AM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-005	22051753-005		5/31/2022 4:28:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-006	22051753-006		5/31/2022 4:55:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-007	22051753-007		5/31/2022 2:22:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-008	22051753-008		6/1/2022 10:19:00 AM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-009	22051753-009		5/31/2022 1:57:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-010	22051753-010		6/1/2022 10:47:00 AM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-011	22051753-011		5/31/2022 1:01:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-012	22051753-012		6/1/2022 1:02:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-013	22051753-013		6/1/2022 12:34:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-014	22051753-014		6/1/2022 12:04:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water
22060560-015	22051753-015		5/31/2022 3:43:00 PM	6/8/2022 4:00:00 PM	Non-Potable Water

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Website: http://www.settek.com

DATES REPORT

WO#: **22060560**
12-Jul-22

Client: TEKLAB Inc,
Project: 22051753

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
22060560-001A	22051753-001	6/1/2022 1:45:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		6/15/2022 2:39:00 PM	6/21/2022 9:38:00 AM
				Radium-228 (EPA 904.0)		6/15/2022 2:39:00 PM	6/20/2022 2:31:00 PM
22060560-002A	22051753-002	5/31/2022 1:30:00 PM		Radium-226 (EPA 903.0)		6/15/2022 2:39:00 PM	6/21/2022 9:38:00 AM
				Radium-228 (EPA 904.0)		6/15/2022 2:39:00 PM	6/20/2022 2:31:00 PM
22060560-003A	22051753-003	5/31/2022 12:12:00 PM		Radium-226 (EPA 903.0)		6/15/2022 2:39:00 PM	6/21/2022 9:38:00 AM
				Radium-228 (EPA 904.0)		6/15/2022 2:39:00 PM	6/20/2022 2:31:00 PM
22060560-004A	22051753-004	5/31/2022 11:47:00 AM		Radium-226 (EPA 903.0)		6/15/2022 2:39:00 PM	6/21/2022 9:38:00 AM
				Radium-228 (EPA 904.0)		6/15/2022 2:39:00 PM	6/20/2022 2:31:00 PM
22060560-005A	22051753-005	5/31/2022 4:28:00 PM		Radium-226 (EPA 903.0)		6/20/2022 9:25:00 AM	6/29/2022 9:21:00 AM
				Radium-228 (EPA 904.0)		6/20/2022 9:25:00 AM	6/28/2022 2:04:00 PM
22060560-006A	22051753-006	5/31/2022 4:55:00 PM		Radium-226 (EPA 903.0)		6/20/2022 9:25:00 AM	6/29/2022 9:21:00 AM
				Radium-228 (EPA 904.0)		6/20/2022 9:25:00 AM	6/28/2022 2:04:00 PM
22060560-007A	22051753-007	5/31/2022 2:22:00 PM		Radium-226 (EPA 903.0)		6/20/2022 9:25:00 AM	6/29/2022 9:21:00 AM
				Radium-228 (EPA 904.0)		6/20/2022 9:25:00 AM	6/28/2022 2:04:00 PM
22060560-008A	22051753-008	6/1/2022 10:19:00 AM		Radium-226 (EPA 903.0)		6/20/2022 9:25:00 AM	6/29/2022 9:21:00 AM
				Radium-228 (EPA 904.0)		7/5/2022 2:13:00 PM	7/8/2022 3:48:00 PM
				Radium-228 (EPA 904.0)		6/20/2022 9:25:00 AM	6/28/2022 2:04:00 PM
22060560-009A	22051753-009	5/31/2022 1:57:00 PM		Radium-226 (EPA 903.0)		6/20/2022 9:25:00 AM	6/29/2022 9:21:00 AM
				Radium-228 (EPA 904.0)		6/20/2022 9:25:00 AM	6/28/2022 2:04:00 PM
22060560-010A	22051753-010	6/1/2022 10:47:00 AM		Radium-226 (EPA 903.0)		6/20/2022 9:25:00 AM	6/29/2022 9:21:00 AM
				Radium-228 (EPA 904.0)		6/20/2022 9:25:00 AM	6/28/2022 2:04:00 PM
22060560-011A	22051753-011	5/31/2022 1:01:00 PM		Radium-226 (EPA 903.0)		6/20/2022 9:25:00 AM	6/29/2022 9:21:00 AM
				Radium-228 (EPA 904.0)		6/20/2022 9:25:00 AM	6/28/2022 2:04:00 PM

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

DATES REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
22060560-012A	22051753-012	6/1/2022 1:02:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		6/20/2022 9:25:00 AM	6/29/2022 9:21:00 AM
				Radium-228 (EPA 904.0)		6/20/2022 9:25:00 AM	6/28/2022 2:04:00 PM
				Radium-228 (EPA 904.0)		7/5/2022 2:13:00 PM	7/8/2022 3:48:00 PM
22060560-013A	22051753-013	6/1/2022 12:34:00 PM		Radium-226 (EPA 903.0)		7/5/2022 11:10:00 AM	7/12/2022 10:23:00 AM
				Radium-228 (EPA 904.0)		7/5/2022 11:10:00 AM	7/11/2022 3:26:00 PM
22060560-014A	22051753-014	6/1/2022 12:04:00 PM		Radium-226 (EPA 903.0)		7/5/2022 11:10:00 AM	7/12/2022 10:23:00 AM
				Radium-228 (EPA 904.0)		7/5/2022 11:10:00 AM	7/11/2022 3:26:00 PM
22060560-015A	22051753-015	5/31/2022 3:43:00 PM		Radium-226 (EPA 903.0)		7/5/2022 11:10:00 AM	7/12/2022 10:23:00 AM
				Radium-228 (EPA 904.0)		7/5/2022 11:10:00 AM	7/11/2022 3:26:00 PM

Original

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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **22060560**

Date Reported: **7/12/2022**

CLIENT: TEKLAB Inc,
Collection Date: 6/1/2022 1:45:00 PM
Project: 22051753
Lab ID: 22060560-001
Matrix: NON-POTABLE WATER
Client Sample ID: 22051753-001

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.08	1	6/21/2022 9:38:00 AM
Yield	1.00					1	6/21/2022 9:38:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.47	1	6/20/2022 2:31:00 PM
Yield	1.00					1	6/20/2022 2:31:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22060560**

Date Reported: **7/12/2022**

CLIENT: TEKLAB Inc,

Collection Date: 5/31/2022 12:12:00 PM

Project: 22051753

Lab ID: 22060560-003

Matrix: NON-POTABLE WATER

Client Sample ID: 22051753-003

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.12	1	6/21/2022 9:38:00 AM
Yield	0.970					1	6/21/2022 9:38:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.43	1	6/20/2022 2:31:00 PM
Yield	0.940					1	6/20/2022 2:31:00 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22060560**

Date Reported: **7/12/2022**

CLIENT: TEKLAB Inc,
Collection Date: 5/31/2022 11:47:00 AM
Project: 22051753
Lab ID: 22060560-004
Matrix: NON-POTABLE WATER
Client Sample ID: 22051753-004

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.1	1	6/21/2022 9:38:00 AM
Yield	1.00					1	6/21/2022 9:38:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.56	1	6/20/2022 2:31:00 PM
Yield	1.00					1	6/20/2022 2:31:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22060560**

Date Reported: **7/12/2022**

CLIENT: TEKLAB Inc,
Collection Date: 6/1/2022 10:19:00 AM
Project: 22051753
Lab ID: 22060560-008
Matrix: NON-POTABLE WATER
Client Sample ID: 22051753-008

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.14	1	6/29/2022 9:21:00 AM
Yield	1.00					1	6/29/2022 9:21:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.68	1	7/8/2022 3:48:00 PM
Yield	1.00					1	7/8/2022 3:48:00 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22060560**

Date Reported: **7/12/2022**

CLIENT: TEKLAB Inc,

Collection Date: 5/31/2022 1:57:00 PM

Project: 22051753

Lab ID: 22060560-009

Matrix: NON-POTABLE WATER

Client Sample ID: 22051753-009

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.2	1	6/29/2022 9:21:00 AM
Yield	1.00					1	6/29/2022 9:21:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	1.16	1.00		pCi/L	± 0.61	1	6/28/2022 2:04:00 PM
Yield	0.980					1	6/28/2022 2:04:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57497**

Sample ID: **MB-57497**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **6/15/2022**	RunNo: **145859**
Client ID: **PBW**	Batch ID: **57497**	TestNo: **E904.0**	**E903-904**	Analysis Date: **6/20/2022**	SeqNo: **3856765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-57497**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **6/15/2022**	RunNo: **145859**
Client ID: **LCSW**	Batch ID: **57497**	TestNo: **E904.0**	**E903-904**	Analysis Date: **6/20/2022**	SeqNo: **3856766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.01	1.00	5.000	0	80.2	70	130				
Yield	1.00			0	0						

Sample ID: **LCSD-57497**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **6/15/2022**	RunNo: **145859**
Client ID: **LCSS02**	Batch ID: **57497**	TestNo: **E904.0**	**E903-904**	Analysis Date: **6/20/2022**	SeqNo: **3856767**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.82	1.00	5.000	0	76.4	70	130	4.010	4.85	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57497**

Sample ID: **RLC-57497** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145859**
Client ID: **BatchQC** Batch ID: **57497** TestNo: **E904.0** **E903-904** Analysis Date: **6/20/2022** SeqNo: **3856769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.41	1.00	1.000	0	141	50	150				
Yield	1.00			0	0						

Sample ID: **RLCD-57497** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145859**
Client ID: **BatchQC** Batch ID: **57497** TestNo: **E904.0** **E903-904** Analysis Date: **6/20/2022** SeqNo: **3856770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	90.0	50	150				
Yield	1.00			0	0						

Sample ID: **22060815-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145859**
Client ID: **BatchQC** Batch ID: **57497** TestNo: **E904.0** **E903-904** Analysis Date: **6/20/2022** SeqNo: **3856777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57497**

Sample ID: **22060655-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145859**
Client ID: **BatchQC** Batch ID: **57497** TestNo: **E904.0** **E903-904** Analysis Date: **6/20/2022** SeqNo: **3856778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	6.31	1.00	5.000	1.750	91.2	70	130				
Yield	1.00			1.000	0						

Sample ID: **22060818-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145859**
Client ID: **BatchQC** Batch ID: **57497** TestNo: **E904.0** **E903-904** Analysis Date: **6/20/2022** SeqNo: **3856781**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57497**

Sample ID: **MB-57497** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145867**
Client ID: **PBW** Batch ID: **57497** TestNo: **E903.0** **E903-904** Analysis Date: **6/21/2022** SeqNo: **3856875**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-57497** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145867**
Client ID: **LCSW** Batch ID: **57497** TestNo: **E903.0** **E903-904** Analysis Date: **6/21/2022** SeqNo: **3856876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.93	1.00	5.000	0	119	70	130				

Sample ID: **LCSD-57497** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145867**
Client ID: **LCSS02** Batch ID: **57497** TestNo: **E903.0** **E903-904** Analysis Date: **6/21/2022** SeqNo: **3856877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.99	1.00	5.000	0	99.8	70	130	5.930	17.2	20	

Sample ID: **RLC-57497** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145867**
Client ID: **BatchQC** Batch ID: **57497** TestNo: **E903.0** **E903-904** Analysis Date: **6/21/2022** SeqNo: **3856879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**
12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57497**

Sample ID: **RLC-57497**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/15/2022**	RunNo: **145867**
Client ID: **BatchQC**	Batch ID: **57497**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/21/2022**	SeqNo: **3856879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	91.0	50	150				

Sample ID: **RLCD-57497**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/15/2022**	RunNo: **145867**
Client ID: **BatchQC**	Batch ID: **57497**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/21/2022**	SeqNo: **3856880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	64.0	50	150				

Sample ID: **22060655-001AMS**	SampType: **MS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/15/2022**	RunNo: **145867**
Client ID: **BatchQC**	Batch ID: **57497**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/21/2022**	SeqNo: **3856881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.99	1.00	5.000	0	99.8	70	130				

Sample ID: **22060815-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/15/2022**	RunNo: **145867**
Client ID: **BatchQC**	Batch ID: **57497**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/21/2022**	SeqNo: **3856886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	R

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**
12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57497**

Sample ID: **22060815-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145867**
Client ID: **BatchQC** Batch ID: **57497** TestNo: **E903.0** **E903-904** Analysis Date: **6/21/2022** SeqNo: **3856886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Yield	1.00							1.000	0	0	

Sample ID: **22060818-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/15/2022** RunNo: **145867**
Client ID: **BatchQC** Batch ID: **57497** TestNo: **E903.0** **E903-904** Analysis Date: **6/21/2022** SeqNo: **3856890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57568**

Sample ID: **MB-57568** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146400**
Client ID: **PBW** Batch ID: **57568** TestNo: **E904.0** **E903-904** Analysis Date: **6/28/2022** SeqNo: **3872590**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-57568** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146400**
Client ID: **LCSW** Batch ID: **57568** TestNo: **E904.0** **E903-904** Analysis Date: **6/28/2022** SeqNo: **3872591**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.51	1.00	5.000	0	110	70	130				QLR
Yield	1.00			0	0						

Sample ID: **LCSD-57568** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146400**
Client ID: **LCSS02** Batch ID: **57568** TestNo: **E904.0** **E903-904** Analysis Date: **6/28/2022** SeqNo: **3872592**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.83	1.00	5.000	0	76.6	70	130	5.510	36.0	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22060560**
12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57568**

Sample ID: **RLC-57568** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146400**
Client ID: **BatchQC** Batch ID: **57568** TestNo: **E904.0** **E903-904** Analysis Date: **6/28/2022** SeqNo: **3872594**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	68.0	50	150				
Yield	1.00			0	0						

Sample ID: **22060953-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146400**
Client ID: **BatchQC** Batch ID: **57568** TestNo: **E904.0** **E903-904** Analysis Date: **6/28/2022** SeqNo: **3872596**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.81	1.00	5.000	0	76.2	70	130				
Yield	1.00			1.000	0						

Sample ID: **22061131-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146400**
Client ID: **BatchQC** Batch ID: **57568** TestNo: **E904.0** **E903-904** Analysis Date: **6/28/2022** SeqNo: **3872599**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,

Project: 22051753 **BatchID:** **57568**

Sample ID: **22061131-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146400**

Client ID: **BatchQC** Batch ID: **57568** TestNo: **E904.0** **E903-904** Analysis Date: **6/28/2022** SeqNo: **3872602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.56	1.00		0	0			1.510	3.26	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57568**

Sample ID: **MB-57568** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146405**
Client ID: **PBW** Batch ID: **57568** TestNo: **E903.0** **E903-904** Analysis Date: **6/29/2022** SeqNo: **3872696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-57568** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146405**
Client ID: **LCSW** Batch ID: **57568** TestNo: **E903.0** **E903-904** Analysis Date: **6/29/2022** SeqNo: **3872697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.31	1.00	5.000	0	106	70	130				

Sample ID: **LCSD-57568** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146405**
Client ID: **LCSS02** Batch ID: **57568** TestNo: **E903.0** **E903-904** Analysis Date: **6/29/2022** SeqNo: **3872698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	6.39	1.00	5.000	0	128	70	130	5.310	18.5	20	

Sample ID: **RLC-57568** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **6/20/2022** RunNo: **146405**
Client ID: **BatchQC** Batch ID: **57568** TestNo: **E903.0** **E903-904** Analysis Date: **6/29/2022** SeqNo: **3872700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57568**

Sample ID: **RLC-57568**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/20/2022**	RunNo: **146405**
Client ID: **BatchQC**	Batch ID: **57568**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/29/2022**	SeqNo: **3872700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	93.0	50	150				

Sample ID: **RLCD-57568**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/20/2022**	RunNo: **146405**
Client ID: **BatchQC**	Batch ID: **57568**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/29/2022**	SeqNo: **3872701**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.07	1.00	1.000	0	107	50	150				

Sample ID: **22060953-001AMS**	SampType: **MS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **6/20/2022**	RunNo: **146405**
Client ID: **BatchQC**	Batch ID: **57568**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/29/2022**	SeqNo: **3875994**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.07	1.00	5.000	0	101	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**
12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57915**

Sample ID: **22060560-015AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146893**
Client ID: **22051753-015** Batch ID: **57915** TestNo: **E904.0** **E903-904** Analysis Date: **7/11/2022** SeqNo: **3890091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	6.34	1.00	5.000	1.350	99.8	70	130				
Yield	1.00			1.000	0						

Sample ID: **22060560-013ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146893**
Client ID: **22051753-013** Batch ID: **57915** TestNo: **E904.0** **E903-904** Analysis Date: **7/11/2022** SeqNo: **3890098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			1.460	200	30	R
Yield	1.00			0	0			1.000	0		

Sample ID: **22060560-014ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146893**
Client ID: **22051753-014** Batch ID: **57915** TestNo: **E904.0** **E903-904** Analysis Date: **7/11/2022** SeqNo: **3890100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**
12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57915**

Sample ID: **MB-57915**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **7/5/2022**	RunNo: **146893**
Client ID: **PBW**	Batch ID: **57915**	TestNo: **E904.0**	**E903-904**	Analysis Date: **7/11/2022**	SeqNo: **3890085**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-57915**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **7/5/2022**	RunNo: **146893**
Client ID: **LCSW**	Batch ID: **57915**	TestNo: **E904.0**	**E903-904**	Analysis Date: **7/11/2022**	SeqNo: **3890086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.90	1.00	5.000	0	98.0	70	130				QLR
Yield	1.00			0	0						

Sample ID: **LCSD-57915**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **7/5/2022**	RunNo: **146893**
Client ID: **LCSS02**	Batch ID: **57915**	TestNo: **E904.0**	**E903-904**	Analysis Date: **7/11/2022**	SeqNo: **3890087**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	6.04	1.00	5.000	0	121	70	130	4.900	20.8	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57915**

Sample ID: **RLC-57915**	SampType: **RLC**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **7/5/2022**	RunNo: **146893**
Client ID: **BatchQC**	Batch ID: **57915**	TestNo: **E904.0**	**E903-904**	Analysis Date: **7/11/2022**	SeqNo: **3890089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	86.0	50	150				
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57915**

Sample ID: **22060560-015AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146899**
Client ID: **22051753-015** Batch ID: **57915** TestNo: **E903.0** **E903-904** Analysis Date: **7/12/2022** SeqNo: **3890536**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.33	1.00	5.000	0	86.6	70	130				

Sample ID: **22060560-013ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146899**
Client ID: **22051753-013** Batch ID: **57915** TestNo: **E903.0** **E903-904** Analysis Date: **7/12/2022** SeqNo: **3890543**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	1.00							1.000	0	0	

Sample ID: **22060560-014ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146899**
Client ID: **22051753-014** Batch ID: **57915** TestNo: **E903.0** **E903-904** Analysis Date: **7/12/2022** SeqNo: **3890545**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	1.00							1.000	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57915**

Sample ID: **MB-57915** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146899**
Client ID: **PBW** Batch ID: **57915** TestNo: **E903.0** **E903-904** Analysis Date: **7/12/2022** SeqNo: **3890530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-57915** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146899**
Client ID: **LCSW** Batch ID: **57915** TestNo: **E903.0** **E903-904** Analysis Date: **7/12/2022** SeqNo: **3890531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.04	1.00	5.000	0	101	70	130				

Sample ID: **LCSD-57915** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146899**
Client ID: **LCSS02** Batch ID: **57915** TestNo: **E903.0** **E903-904** Analysis Date: **7/12/2022** SeqNo: **3890532**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.44	1.00	5.000	0	109	70	130	5.040	7.63	20	

Sample ID: **RLC-57915** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146899**
Client ID: **BatchQC** Batch ID: **57915** TestNo: **E903.0** **E903-904** Analysis Date: **7/12/2022** SeqNo: **3890534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**
12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57915**

Sample ID: **RLC-57915**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **7/5/2022**	RunNo: **146899**
Client ID: **BatchQC**	Batch ID: **57915**	TestNo: **E903.0**	**E903-904**	Analysis Date: **7/12/2022**	SeqNo: **3890534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.20	1.00	1.000	0	120	50	150				

Sample ID: **RLCD-57915**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **7/5/2022**	RunNo: **146899**
Client ID: **BatchQC**	Batch ID: **57915**	TestNo: **E903.0**	**E903-904**	Analysis Date: **7/12/2022**	SeqNo: **3890535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.14	1.00	1.000	0	114	50	150				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22060560**

12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57916**

Sample ID: **MB-57916** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146844**
Client ID: **PBW** Batch ID: **57916** TestNo: **E904.0** **E903-904** Analysis Date: **7/8/2022** SeqNo: **3888527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-57916** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146844**
Client ID: **LCSW** Batch ID: **57916** TestNo: **E904.0** **E903-904** Analysis Date: **7/8/2022** SeqNo: **3888528**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.67	1.00	5.000	0	73.4	70	130				
Yield	1.00			0	0						

Sample ID: **LCSD-57916** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146844**
Client ID: **LCSS02** Batch ID: **57916** TestNo: **E904.0** **E903-904** Analysis Date: **7/8/2022** SeqNo: **3888529**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.81	1.00	5.000	0	76.2	70	130	3.670	3.74	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22060560**
12-Jul-22

Client: TEKLAB Inc,
Project: 22051753 **BatchID:** **57916**

Sample ID: **RLC-57916** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146844**
Client ID: **BatchQC** Batch ID: **57916** TestNo: **E904.0** **E903-904** Analysis Date: **7/8/2022** SeqNo: **3888531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	50.0	50	150				
Yield	1.00			0	0						

Sample ID: **22060954-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146844**
Client ID: **BatchQC** Batch ID: **57916** TestNo: **E904.0** **E903-904** Analysis Date: **7/8/2022** SeqNo: **3888533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.00	1.00	5.000	1.000	80.0	70	130				
Yield	1.00			1.000	0						

Sample ID: **22060957-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/5/2022** RunNo: **146844**
Client ID: **BatchQC** Batch ID: **57916** TestNo: **E904.0** **E903-904** Analysis Date: **7/8/2022** SeqNo: **3888538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

22060560

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Cooler Temp: Sampler: Joseph Riley QC Level: 2

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Comments: **Please issue reports and invoices via email only**
Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 22051753

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 32888 Phone: (618) 344-1004

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228	PH
CPM 13, 17	22051753-001	6/1/22 1345	HNO3	Groundwater	☑	1, 1
20, 23	22051753-002	5/31/22 1330	HNO3	Groundwater	☑	1, 1
27, 25	22051753-003	5/31/22 1212	HNO3	Groundwater	☑	1, 1
23, 28	22051753-004	5/31/22 1147	HNO3	Groundwater	☑	1, 1
20, 26	22051753-005	5/31/22 1628	HNO3	Groundwater	☑	1, 1
16, 21	22051753-006	5/31/22 1655	HNO3	Groundwater	☑	1, 1
16, 18	22051753-007	5/31/22 1422	HNO3	Groundwater	☑	1, 1
33, 39	22051753-008	6/1/22 1019	HNO3	Groundwater	☑	1, 1
23, 28	22051753-009	5/31/22 1357	HNO3	Groundwater	☑	1, 1
20, 21	22051753-010	6/1/22 1047	HNO3	Groundwater	☑	1, 1
37, 41	22051753-011	5/31/22 1301	HNO3	Groundwater	☑	1, 1

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	(FedEx) 6/3/22 1600	[signature]	06/08/22 1600

19.7-0.1=19.6 Fedex Cooler 1600 2 cont pc Sample

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

 22060560

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Joseph Riley QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 22051753

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 32888 Phone: (618) 344-1004

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228												
CPM 37,40	22051753-012	6/1/22 1302	HNO3	Groundwater	✔												PH 1,1
16,20	22051753-013	6/1/22 1234	HNO3	Groundwater	✔												1,1
23,29	22051753-014	6/1/22 1204	HNO3	Groundwater	✔												1,1
16,19	22051753-015	5/31/22 1543	HNO3	Groundwater	✔												1,1
			HNO3	Groundwater	✔												
			HNO3	Groundwater	✔												
			HNO3	Groundwater	✔												
			HNO3	Groundwater	✔												
			HNO3	Groundwater	✔												
			HNO3	Groundwater	✔												
			HNO3	Groundwater	✔												

*Relinquished By	Date/Time	Received By	Date/Time
[signature] (FedEx)	6/3/22 1600	[signature]	06/08/22 1600

19.7-0.1 = 19.6 Fedex cooler 1600 2 cont per sample

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SubCocRevA
3/2/2016

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **22060560** RcptNo: **1**

Logged by:	**Anthony W. Britton**	**6/8/2022 4:00:00 PM**	Anthony Britton
Completed By:	**Anthony W. Britton**	**6/9/2022 9:11:31 AM**	Anthony Britton
Reviewed By:	**Jennifer Woolf**	**6/10/2022 6:39:39 PM**	Jennifer Woolf

Chain of Custody

1.	Were seals intact?	Yes ☑	No ☐	Not Present ☐
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?	FedEx		

Log In

4.	Coolers are present?	Yes ☐	No ☑	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
box	19.6	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

June 17, 2022

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells G1-G2-G3 **WorkOrder:** 22051752

Dear Eric Staley:

TEKLAB, INC received 12 samples on 6/3/2022 7:42:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells G1-G2-G3

Work Order: 22051752
Report Date: 17-Jun-22

This reporting package includes the following:

Cover Letter	1
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Laboratory Results	7
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Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 22051752

Client Project: Landfill Monitoring Wells G1-G2-G3 **Report Date:** 17-Jun-22

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22

Cooler Receipt Temp: 0.4 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22
Lab ID: 22051752-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 06/02/2022 12:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	06/02/2022 12:32	R313095
Depth to water	*	-5.00		**11.30**	ft	1	06/02/2022 12:32	R313095
Depth to water from measuring point	*	0		**14.05**	ft	1	06/02/2022 12:32	R313095
Elevation of groundwater surface	*	0		**541.55**	ft	1	06/02/2022 12:32	R313095
Measuring Point Elevation	*	0		**555.60**	ft	1	06/02/2022 12:32	R313095
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.0**	°F	1	06/02/2022 12:32	R313095
SW-846 9040B								
pH, Field	*	1.00		**6.66**		1	06/02/2022 12:32	R313095
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1490**	µmhos/cm @25C	1	06/02/2022 12:32	R313095
EPA 1664A								
Hexane Extractable Material	NELAP	6		**23**	mg/L	1	06/07/2022 13:07	R312918
EPA 600 350.1 (DISSOLVED)								
Nitrogen, Ammonia (as N)	NELAP	0.10		**1.89**	mg/L	1	06/08/2022 23:38	R312968
EPA 600 350.1 (TOTAL)								
Nitrogen, Ammonia (as N)	NELAP	0.10	S	**1.87**	mg/L	1	06/08/2022 22:24	R312968
Matrix spike did not recover within control limits due to matrix interference.								
EPA 600 353.2 R2.0 (DISSOLVED)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**< 0.050**	mg/L	1	06/03/2022 18:49	R312831
EPA 600 353.2 R2.0 (TOTAL)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**< 0.050**	mg/L	1	06/03/2022 18:01	R312831
STANDARD METHODS 2540 C (DISSOLVED) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1060**	mg/L	2.5	06/06/2022 9:03	R312900
STANDARD METHODS 5210 B 2001, 2011								
Biochemical Oxygen Demand	NELAP	10		**< 10**	mg/L	1	06/03/2022 13:59	193313
STANDARD METHODS 5220 D (TOTAL) 1997								
Chemical Oxygen Demand	NELAP	50		**< 50**	mg/L	1	06/10/2022 15:18	R313098
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.005		**< 0.005**	mg/L	1	06/06/2022 14:14	193326
SW-846 9036 (DISSOLVED)								
Sulfate	NELAP	100		**343**	mg/L	10	06/08/2022 15:54	R312990
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**344**	mg/L	10	06/08/2022 16:56	R312990
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	1.0		**2.9**	mg/L	1	06/06/2022 20:01	R312819
SW-846 9066 (TOTAL)								
Phenols	NELAP	5		**7**	µg/L	1	06/07/2022 9:53	R312896
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	06/08/2022 10:51	R312973
SW-846 9251 (DISSOLVED)								
Chloride	NELAP	1		**39**	mg/L	1	06/07/2022 18:46	R312931
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**40**	mg/L	1	06/07/2022 21:26	R312931

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22
Lab ID: 22051752-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 06/02/2022 12:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	100		**7720**	µg/L	5	06/09/2022 18:01	193316
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	06/08/2022 16:54	193316
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	06/08/2022 16:54	193316
Magnesium	NELAP	0.050		**77.4**	mg/L	1	06/08/2022 16:54	193316
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	06/08/2022 16:54	193316
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**1690**	µg/L	1	06/07/2022 15:18	193395
Barium	NELAP	2.5		**640**	µg/L	1	06/07/2022 15:18	193395
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	06/07/2022 15:18	193395
Boron	NELAP	20.0		**8240**	µg/L	1	06/07/2022 15:18	193395
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	06/07/2022 15:18	193395
Calcium	NELAP	0.100		**195**	mg/L	1	06/07/2022 15:18	193395
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	06/07/2022 15:18	193395
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	06/07/2022 15:18	193395
Copper	NELAP	5.0		**< 5.0**	µg/L	1	06/07/2022 15:18	193395
Iron	NELAP	40.0		**41900**	µg/L	1	06/07/2022 15:18	193395
Magnesium	NELAP	0.050		**84.6**	mg/L	1	06/07/2022 15:18	193395
Manganese	NELAP	7.0		**204**	µg/L	1	06/07/2022 15:18	193395
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	06/07/2022 15:18	193395
Potassium	NELAP	0.100		**2.29**	mg/L	1	06/07/2022 15:18	193395
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	06/07/2022 15:18	193395
Silver	NELAP	7.0		**< 7.0**	µg/L	1	06/07/2022 15:18	193395
Sodium	NELAP	0.050		**32.3**	mg/L	1	06/07/2022 15:18	193395
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	06/07/2022 15:18	193395
Zinc	NELAP	10.0		**11.2**	µg/L	1	06/07/2022 15:18	193395
Sample result(s) for B exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**143**	µg/L	5	06/09/2022 23:39	193316
Lead	NELAP	1.0		**< 1.0**	µg/L	5	06/09/2022 23:39	193316
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	06/09/2022 22:42	193395
Arsenic	NELAP	1.0		**148**	µg/L	5	06/08/2022 0:42	193395
Lead	NELAP	1.0		**1.8**	µg/L	5	06/08/2022 0:42	193395
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	06/09/2022 22:42	193395
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	06/09/2022 9:44	193455
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	06/08/2022 11:59	193411
EPA 600 548.1, ENDOTHALL BY GC/MS								
Endothall	*	10		**ND**	µg/L	1	06/08/2022 20:54	193425
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDT	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477
Alachlor	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477
Aldrin	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477
Dieldrin	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477
Endrin	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22
Lab ID: 22051752-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 06/02/2022 12:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
gamma-BHC	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477
Heptachlor	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477
Heptachlor epoxide	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477
Methoxychlor	NELAP	0.05		**ND**	µg/L	1	06/09/2022 17:47	193477
Toxaphene	NELAP	1.00		**ND**	µg/L	1	06/09/2022 17:47	193477
Chlordane	NELAP	0.10		**ND**	µg/L	1	06/09/2022 17:47	193477
Surr: Decachlorobiphenyl	*	5-135		**63.3**	%REC	1	06/09/2022 17:47	193477
Surr: Tetrachloro-m-xylene	*	12-145		**118.1**	%REC	1	06/09/2022 17:47	193477
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Polychlorinated Biphenyls (Total)	NELAP	0.500		**ND**	µg/L	1	06/09/2022 18:09	193477
Surr: Decachlorobiphenyl	*	5-174		**62.2**	%REC	1	06/09/2022 18:09	193477
Surr: Tetrachloro-meta-xylene	*	22.2-139		**115.6**	%REC	1	06/09/2022 18:09	193477
SW-846 3510C, 8151A, CHLORINATED HERBICIDES BY GC/ECD								
2,4,5-TP (Silvex)	NELAP	0.20		**ND**	µg/L	1	06/10/2022 19:06	193385
2,4-D	NELAP	0.20		**ND**	µg/L	1	06/10/2022 19:06	193385
Dalapon	NELAP	1.30		**ND**	µg/L	1	06/10/2022 19:06	193385
Dinoseb	NELAP	0.20		**ND**	µg/L	1	06/10/2022 19:06	193385
Pentachlorophenol	NELAP	0.10		**ND**	µg/L	1	06/10/2022 19:06	193385
Picloram	NELAP	0.20		**ND**	µg/L	1	06/10/2022 19:06	193385
Surr: 2,4-Dichlorophenylacetic acid	*	18.4-136		**80.1**	%REC	1	06/10/2022 19:06	193385
SW-846 3510C, 8270C SIMS, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Aldicarb	*	1.00		**ND**	µg/L	1	06/09/2022 16:22	193448
Atrazine	NELAP	0.08		**ND**	µg/L	1	06/09/2022 16:22	193448
Benzo(a)pyrene	NELAP	0.20		**ND**	µg/L	1	06/09/2022 16:22	193448
Carbofuran	NELAP	0.60		**ND**	µg/L	1	06/09/2022 16:22	193448
Simazine	NELAP	0.55		**ND**	µg/L	1	06/09/2022 16:22	193448
Surr: 2-Fluorobiphenyl	*	20.6-86.8		**66.8**	%REC	1	06/09/2022 16:22	193448
Surr: 2-Fluorophenol	*	13.8-63		**51.8**	%REC	1	06/09/2022 16:22	193448
Surr: Nitrobenzene-d5	*	22.7-90.9		**74.4**	%REC	1	06/09/2022 16:22	193448
Surr: Phenol-d5	*	7.73-44.6		**35.4**	%REC	1	06/09/2022 16:22	193448
Surr: p-Terphenyl-d14	*	38-99.7		**75.0**	%REC	1	06/09/2022 16:22	193448
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS (TOTAL)								
Bis(2-ethylhexyl)phthalate	NELAP	6.0		**ND**	µg/L	1	06/09/2022 14:55	193430
Bis(chloromethyl)ether	*	10.0		**ND**	µg/L	1	06/09/2022 14:55	193430
Butyl benzyl phthalate	NELAP	5.0		**ND**	µg/L	1	06/09/2022 14:55	193430
Diethyl phthalate	NELAP	10.0		**ND**	µg/L	1	06/09/2022 14:55	193430
Dimethyl phthalate	NELAP	10.0		**ND**	µg/L	1	06/09/2022 14:55	193430
Di-n-butyl phthalate	NELAP	10.0		**ND**	µg/L	1	06/09/2022 14:55	193430
Isophorone	NELAP	10.0		**ND**	µg/L	1	06/09/2022 14:55	193430
m,p-Cresol	NELAP	10.0		**ND**	µg/L	1	06/09/2022 14:55	193430
Parathion	NELAP	5.0		**ND**	µg/L	1	06/09/2022 14:55	193430
Surr: 2,4,6-Tribromophenol	*	28.4-122		**72.5**	%REC	1	06/09/2022 14:55	193430
Surr: 2-Fluorobiphenyl	*	36.3-102		**63.4**	%REC	1	06/09/2022 14:55	193430
Surr: 2-Fluorophenol	*	12.3-72.5		**40.8**	%REC	1	06/09/2022 14:55	193430
Surr: Nitrobenzene-d5	*	32.3-100		**57.3**	%REC	1	06/09/2022 14:55	193430
Surr: Phenol-d5	*	10-62.5		**35.3**	%REC	1	06/09/2022 14:55	193430
Surr: p-Terphenyl-d14	*	10-112		**31.7**	%REC	1	06/09/2022 14:55	193430

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22
Lab ID: 22051752-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 06/02/2022 12:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 8011, DBCP & EDB BY GC/ECD								
1,2-Dibromo-3-chloropropane	*	0.05		ND	µg/L	1	06/07/2022 19:25	193386
1,2-Dibromoethane	*	0.05		ND	µg/L	1	06/07/2022 19:25	193386
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,1,1-Trichloroethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,1,2,2-Tetrachloroethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,1,2-Trichloroethane	NELAP	0.50		ND	µg/L	1	06/04/2022 0:04	193354
1,1-Dichloroethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,1-Dichloroethene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,2,3-Trichlorobenzene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,2,3-Trichloropropane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,2,4-Trimethylbenzene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,2-Dichlorobenzene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,2-Dichloroethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,2-Dichloropropane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,3,5-Trimethylbenzene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,3-Dichlorobenzene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,3-Dichloropropane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
1,4-Dichlorobenzene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
2,2-Dichloropropane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
2-Butanone	NELAP	5.00		ND	µg/L	1	06/04/2022 0:04	193354
2-Chlorotoluene	NELAP	1.00		ND	µg/L	1	06/04/2022 0:04	193354
2-Hexanone	NELAP	10.0		ND	µg/L	1	06/04/2022 0:04	193354
4-Chlorotoluene	NELAP	1.00		ND	µg/L	1	06/04/2022 0:04	193354
4-Methyl-2-pentanone	NELAP	5.00		ND	µg/L	1	06/04/2022 0:04	193354
Acetone	NELAP	5.00		ND	µg/L	1	06/04/2022 0:04	193354
Acrolein	NELAP	5.00		ND	µg/L	1	06/04/2022 0:04	193354
Acrylonitrile	NELAP	5.00		ND	µg/L	1	06/04/2022 0:04	193354
Benzene	NELAP	0.50		ND	µg/L	1	06/04/2022 0:04	193354
Bromobenzene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Bromochloromethane	NELAP	1.00		ND	µg/L	1	06/04/2022 0:04	193354
Bromodichloromethane	NELAP	1.00		ND	µg/L	1	06/04/2022 0:04	193354
Bromoform	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Bromomethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Carbon disulfide	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Carbon tetrachloride	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Chlorobenzene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Chloroethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Chloroform	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Chloromethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
cis-1,2-Dichloroethene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
cis-1,3-Dichloropropene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Dibromochloromethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Dibromomethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Dichlorodifluoromethane	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354
Ethylbenzene	NELAP	1.00		ND	µg/L	1	06/04/2022 0:04	193354
Hexachlorobutadiene	NELAP	2.00		ND	µg/L	1	06/04/2022 0:04	193354

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22
Lab ID: 22051752-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 06/02/2022 12:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Iodomethane	NELAP	3.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Isopropylbenzene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
m,p-Xylenes	NELAP	1.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Methylene chloride	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Naphthalene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
n-Butylbenzene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
n-Propylbenzene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
o-Xylene	NELAP	1.00		**ND**	µg/L	1	06/04/2022 0:04	193354
p-Isopropyltoluene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
sec-Butylbenzene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Styrene	NELAP	1.00		**ND**	µg/L	1	06/04/2022 0:04	193354
tert-Butylbenzene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Tetrachloroethene	NELAP	0.50		**ND**	µg/L	1	06/04/2022 0:04	193354
Tetrahydrofuran	NELAP	5.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Toluene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
trans-1,2-Dichloroethene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
trans-1,3-Dichloropropene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
trans-1,4-Dichloro-2-butene	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Trichloroethene	NELAP	1.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Trichlorofluoromethane	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Vinyl acetate	NELAP	5.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Vinyl chloride	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Xylenes, Total	NELAP	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
1,3-Dichloropropene, Total	*	2.00		**ND**	µg/L	1	06/04/2022 0:04	193354
Surr: 1,2-Dichloroethane-d4	*	80-120		**97.4**	%REC	1	06/04/2022 0:04	193354
Surr: 4-Bromofluorobenzene	*	80-120		**100.4**	%REC	1	06/04/2022 0:04	193354
Surr: Dibromofluoromethane	*	80-120		**102.3**	%REC	1	06/04/2022 0:04	193354
Surr: Toluene-d8	*	80-120		**97.4**	%REC	1	06/04/2022 0:04	193354

Allowable Marginal Exceedance of trans-1,4-dichloro-2-butene and 1,2,3-trichloropropane in the laboratory control sample duplicate is verified per the TNI Standard.

Allowable Marginal Exceedance of trans-1,4-dichloro-2-butene in the laboratory control sample is verified per the TNI Standard.

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22051752
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 17-Jun-22

Carrier: Joe Riley

Received By: EAH

Completed by: Payton Yoch
On: 03-Jun-22

Reviewed by: Shelly A Hennessy
On: 06-Jun-22

Pages to follow: Chain of custody 2 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 0.4
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Additional Nitric Acid (82107), Sulfuric Acid (80586), and Sodium Hydroxide (81662) preservatives were needed upon arrival at the laboratory. - pyoch - 6/3/2022 9:27:50 AM

pH strip 78198/75846. - pyoch - 6/3/2022 9:29:22 AM

1250 amber glass jar for G113 was damaged in transit. - pyoch - 6/3/2022 9:37:25 AM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 22051752

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☐ No

Are these samples known to be hazardous? ☐ Yes ☐ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☐ No

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 0.4 °c LIG3

Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES: Added HNO3 (82107) to sample R101 and dup. Added H2SO4 (80586) to sample R101. Added NaOH (81662) to Samples bllo, G113 and G120 that did not preserve. CEK 6-3-2022

Client Comments: #1 bup missing sample G113 1250 amber glass unpreserved. Added H2SO4 (80586) to bup. Added NaOH to samples bllo, G113 and G120 that did not preserve from DUP and MW3. CEK 6-3-22

Quarter 2 (even number years)

*elevations, pH, conductivity, temperature

**As B Cd Cr Pb Mg Hg Zn

***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER	SAMPLE COLLECTOR'S NAME
Landfill Monitoring Wells G1-G2-G3	TRTLEY

RESULTS REQUESTED

☐ Standard ☐ 1-2 Day (100% Surcharge)

☐ Other ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide O&G OOH	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)	VOC Pest-PCB	SVOC-PSIMS	Herbicides	Endothall EDB-DBCP
22051752-001	R101 *	06/2/22 1492	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
002	G110 *	1515	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
003	R111 *	1302	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
004	G112 *	1326	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
005	G113 *	1408	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
006	G120 (*)	1144	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
007	G121	0956	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
008	G122	1025	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
009	AW-1	1232	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
010	AW-2 *	1059	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
011	RW-3 *	06/01/22 1345	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
	06/03/22 0942		6/3/22 0745

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CEK 6-3-2022

Third Quarter 2022

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

October 11, 2022

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 22081061

Dear Eric Staley:

TEKLAB, INC received 15 samples on 8/26/2022 8:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22081061
Report Date: 11-Oct-22

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	22
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 22081061

Client Project: Ash Pond Monitoring Wells **Report Date:** 11-Oct-22

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081061
Client Project: Ash Pond Monitoring Wells
Report Date: 11-Oct-22

Qualifiers

# -	Unknown hydrocarbon
B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit
E -	Value above quantitation range
H -	Holding times exceeded
I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081061
Client Project: Ash Pond Monitoring Wells
Report Date: 11-Oct-22

Cooler Receipt Temp: 3.0 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22081061
Report Date: 11-Oct-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081061
Client Project: Ash Pond Monitoring Wells
Report Date: 11-Oct-22
Lab ID: 22081061-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 08/23/2022 11:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	08/23/2022 11:45	R316831
Depth to water	*	-5.00		**7.08**	ft	1	08/23/2022 11:45	R316831
Depth to water from measuring point	*	0		**9.78**	ft	1	08/23/2022 11:45	R316831
Elevation of groundwater surface	*	0		**529.72**	ft	1	08/23/2022 11:45	R316831
Measuring Point Elevation	*	0		**539.50**	ft	1	08/23/2022 11:45	R316831
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	08/23/2022 11:45	R316831
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	08/23/2022 11:45	R316831
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.4**	°F	1	08/23/2022 11:45	R316831
SW-846 9040B								
pH, Field	*	1.00		**7.11**		1	08/23/2022 11:45	R316831
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**744**	µmhos/cm @25C	1	08/23/2022 11:45	R316831
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**428**	mg/L	1	08/26/2022 12:12	R316361
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10	S	**< 10**	mg/L	1	08/29/2022 13:31	R316392
Matrix spike did not recover within control limits due to matrix interference.								
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.48**	mg/L	1	08/30/2022 16:45	R316443
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**31**	mg/L	1	08/29/2022 13:31	R316398
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.110**	mg/L	1	08/29/2022 16:00	196039
Barium	NELAP	0.0025		**0.158**	mg/L	1	08/29/2022 16:00	196039
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/29/2022 16:00	196039
Boron	NELAP	0.0200		**0.177**	mg/L	1	08/29/2022 16:00	196039
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/29/2022 16:00	196039
Calcium	NELAP	0.100		**72.3**	mg/L	1	08/29/2022 16:00	196039
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:00	196039
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:00	196039
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	08/29/2022 16:00	196039
Lithium	NELAP	0.0050		**0.0064**	mg/L	1	08/29/2022 16:00	196039
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/29/2022 16:00	196039
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 17:30	196039
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 17:30	196039
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/30/2022 17:30	196039
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/29/2022 10:52	196051
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286
Radium-228	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081061
Client Project: Ash Pond Monitoring Wells
Report Date: 11-Oct-22
Lab ID: 22081061-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 08/23/2022 10:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	08/23/2022 10:29	R316831
Depth to water	*	-5.00		**6.37**	ft	1	08/23/2022 10:29	R316831
Depth to water from measuring point	*	0		**8.87**	ft	1	08/23/2022 10:29	R316831
Elevation of groundwater surface	*	0		**527.23**	ft	1	08/23/2022 10:29	R316831
Measuring Point Elevation	*	0		**536.10**	ft	1	08/23/2022 10:29	R316831
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	08/23/2022 10:29	R316831
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	08/23/2022 10:29	R316831
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.0**	°F	1	08/23/2022 10:29	R316831
SW-846 9040B								
pH, Field	*	1.00		**6.45**		1	08/23/2022 10:29	R316831
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1710**	µmhos/cm @25C	1	08/23/2022 10:29	R316831
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1360**	mg/L	1	08/26/2022 12:13	R316361
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**545**	mg/L	20	08/29/2022 14:23	R316392
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.24**	mg/L	1	08/30/2022 16:56	R316443
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**34**	mg/L	1	08/29/2022 14:17	R316398
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	08/29/2022 16:07	196039
Barium	NELAP	0.0025		**0.0751**	mg/L	1	08/29/2022 16:07	196039
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/29/2022 16:07	196039
Boron	NELAP	0.0200		**4.32**	mg/L	1	08/29/2022 16:07	196039
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/29/2022 16:07	196039
Calcium	NELAP	0.100		**241**	mg/L	1	08/29/2022 16:07	196039
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:07	196039
Cobalt	NELAP	0.0050		**0.0115**	mg/L	1	08/29/2022 16:07	196039
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	08/29/2022 16:07	196039
Lithium	NELAP	0.0050		**0.0055**	mg/L	1	08/29/2022 16:07	196039
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/29/2022 16:07	196039
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 17:43	196039
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 17:43	196039
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/30/2022 17:43	196039
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/29/2022 10:56	196051
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286
Radium-228	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081061
Client Project: Ash Pond Monitoring Wells
Report Date: 11-Oct-22
Lab ID: 22081061-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 08/23/2022 10:05

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	08/23/2022 10:05	R316831
Depth to water	*	-5.00		**9.31**	ft	1	08/23/2022 10:05	R316831
Depth to water from measuring point	*	0		**11.01**	ft	1	08/23/2022 10:05	R316831
Elevation of groundwater surface	*	0		**524.39**	ft	1	08/23/2022 10:05	R316831
Measuring Point Elevation	*	0		**535.40**	ft	1	08/23/2022 10:05	R316831
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	08/23/2022 10:05	R316831
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.0**	NTU	1	08/23/2022 10:05	R316831
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.9**	°F	1	08/23/2022 10:05	R316831
SW-846 9040B								
pH, Field	*	1.00		**6.60**		1	08/23/2022 10:05	R316831
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1090**	µmhos/cm @25C	1	08/23/2022 10:05	R316831
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1030**	mg/L	1	08/26/2022 12:13	R316361
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**384**	mg/L	10	08/29/2022 14:43	R316392
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.23**	mg/L	1	08/30/2022 16:58	R316443
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**47**	mg/L	1	08/29/2022 14:25	R316398
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	08/29/2022 16:11	196039
Barium	NELAP	0.0025		**0.0883**	mg/L	1	08/29/2022 16:11	196039
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/29/2022 16:11	196039
Boron	NELAP	0.0200		**14.8**	mg/L	1	08/29/2022 16:11	196039
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/29/2022 16:11	196039
Calcium	NELAP	0.100		**157**	mg/L	1	08/29/2022 16:11	196039
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:11	196039
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:11	196039
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	08/29/2022 16:11	196039
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:11	196039
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/29/2022 16:11	196039
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 18:14	196039
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 18:14	196039
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/30/2022 18:14	196039
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/29/2022 10:58	196051
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286
Radium-228	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081061
Client Project: Ash Pond Monitoring Wells
Report Date: 11-Oct-22
Lab ID: 22081061-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 08/25/2022 11:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	08/25/2022 11:49	R316831
Depth to water	*	-5.00		**8.55**	ft	1	08/25/2022 11:49	R316831
Depth to water from measuring point	*	0		**11.21**	ft	1	08/25/2022 11:49	R316831
Elevation of groundwater surface	*	0		**527.81**	ft	1	08/25/2022 11:49	R316831
Measuring Point Elevation	*	0		**539.02**	ft	1	08/25/2022 11:49	R316831
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	08/25/2022 11:49	R316831
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	08/25/2022 11:49	R316831
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.7**	°F	1	08/25/2022 11:49	R316831
SW-846 9040B								
pH, Field	*	1.00		**7.12**		1	08/25/2022 11:49	R316831
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**525**	µmhos/cm @25C	1	08/25/2022 11:49	R316831
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**290**	mg/L	1	08/26/2022 12:14	R316361
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**15**	mg/L	1	08/29/2022 15:39	R316392
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.37**	mg/L	1	08/30/2022 17:06	R316443
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**36**	mg/L	1	08/29/2022 15:39	R316398
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0376**	mg/L	1	08/29/2022 16:22	196039
Barium	NELAP	0.0025		**0.119**	mg/L	1	08/29/2022 16:22	196039
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/29/2022 16:22	196039
Boron	NELAP	0.0200		**0.204**	mg/L	1	08/29/2022 16:22	196039
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/29/2022 16:22	196039
Calcium	NELAP	0.100		**46.4**	mg/L	1	08/29/2022 16:22	196039
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:22	196039
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:22	196039
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	08/29/2022 16:22	196039
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:22	196039
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/29/2022 16:22	196039
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 18:33	196039
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 18:33	196039
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/30/2022 18:33	196039
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/29/2022 11:17	196051
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286
Radium-228	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081061
Client Project: Ash Pond Monitoring Wells
Report Date: 11-Oct-22
Lab ID: 22081061-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 08/23/2022 13:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	08/23/2022 13:29	R316831
Depth to water	*	-5.00		**4.40**	ft	1	08/23/2022 13:29	R316831
Depth to water from measuring point	*	0		**7.30**	ft	1	08/23/2022 13:29	R316831
Elevation of groundwater surface	*	0		**529.90**	ft	1	08/23/2022 13:29	R316831
Measuring Point Elevation	*	0		**537.20**	ft	1	08/23/2022 13:29	R316831
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	08/23/2022 13:29	R316831
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	08/23/2022 13:29	R316831
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.6**	°F	1	08/23/2022 13:29	R316831
SW-846 9040B								
pH, Field	*	1.00		**6.76**		1	08/23/2022 13:29	R316831
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**814**	µmhos/cm @25C	1	08/23/2022 13:29	R316831
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**540**	mg/L	2.5	08/26/2022 12:15	R316361
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	08/29/2022 15:47	R316392
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.30**	mg/L	1	08/30/2022 17:08	R316443
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**27**	mg/L	1	08/29/2022 15:47	R316398
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0377**	mg/L	1	08/29/2022 16:52	196039
Barium	NELAP	0.0025		**0.355**	mg/L	1	08/29/2022 16:52	196039
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/29/2022 16:52	196039
Boron	NELAP	0.0200		**0.0839**	mg/L	1	08/30/2022 13:12	196039
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/29/2022 16:52	196039
Calcium	NELAP	0.100		**96.1**	mg/L	1	08/29/2022 16:52	196039
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:52	196039
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/29/2022 16:52	196039
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	08/29/2022 16:52	196039
Lithium	NELAP	0.0050		**0.0065**	mg/L	1	08/29/2022 16:52	196039
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/29/2022 16:52	196039
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 18:39	196039
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/30/2022 18:39	196039
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/30/2022 18:39	196039
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/29/2022 11:19	196051
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286
Radium-228	*	0		**See attached**	pci/L	1	09/28/2022 0:00	R319286

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22081061
Report Date: 11-Oct-22

Carrier: Adam Bridges

Received By: EAH

Completed by: Reannan Willis
On: 26-Aug-22

Reviewed by: Elizabeth A. Hurley
On: 26-Aug-22

Pages to follow: Chain of custody 2 Extra pages included 36

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.0
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #82999. - BNB/rwillis - 8/26/2022 9:15:00 AM

Additional Nitric Acid (83663) was needed in all samples for Ra226/228 analysis except on AP-13 container upon arrival at the laboratory. - rwillis - 8/26/2022 9:15:03 AM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 22081061

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 3.0 °C
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY 3
LAB NOTES: 82999. BLB 8/26/22
Added HNO3 (83663) to all Sub 2L bottles except AP-13 Secon

Client Comments: Sub bottle. Rmw 8/26/22
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☑ No Permit on file

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells
SAMPLE COLLECTOR'S NAME:

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
22081061-001	RW-3	08/23/22 1145	Groundwater	1	3								✔	✔	✔	✔	✔	✔
002	AP-1	08/23/22 1056	Groundwater	1	3								✔	✔	✔	✔	✔	✔
003	AP-2	08/23/22 1029	Groundwater	1	3								✔	✔	✔	✔	✔	✔
004	AP-3	08/23/22 1005	Groundwater	1	3								✔	✔	✔	✔	✔	✔
005	AP-4	08/23/22 1444	Groundwater	1	3								✔	✔	✔	✔	✔	✔
006	AP-5	08/23/22 1508	Groundwater	1	3								✔	✔	✔	✔	✔	✔
007	AP-6	08/25/22 1408	Groundwater	1	3								✔	✔	✔	✔	✔	✔
008	AP-7	08/25/22 1149	Groundwater	1	3								✔	✔	✔	✔	✔	✔
009	AP-8	08/23/22 1329	Groundwater	1	3								✔	✔	✔	✔	✔	✔
010	AP-9	08/25/22 1249	Groundwater	1	3								✔	✔	✔	✔	✔	✔
011	AP-10	08/23/22 1245	Groundwater	1	3								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
[signature]	08/26/22	[signature]	08-26-22 0750
[signature]	08-26-22 0800	Elizabeth Attaway	8/26/22 0800

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

GAH 8/26/22

Print PDF

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 22081061

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
22081061-012	AP-11	08/25/22 1425	Groundwater	1	3								✔	✔	✔	✔	✔	✔
013	AP-12	08/25/22 1411	Groundwater	1	3								✔	✔	✔	✔	✔	✔
014	AP-13	08/25/22 1357	Groundwater	1	3								✔	✔	✔	✔	✔	✔
015	AP-14	08/24/22 1705	Groundwater	1	3								✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	08/26/22		8-26-22 0750
	8-26-22 0800	Elizabeth A Hardy	8/26/22 0800

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

October 11, 2022

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 22081061

Dear Shelly Hennessy:

Order No.: 22090086

Summit Environmental Technologies, Inc. received 15 sample(s) on 8/31/2022 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 011, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **22090086**
Date: **10/11/2022**

CLIENT: TEKLAB Inc,
Project: 22081061

WorkOrder Narrative:
22090086: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence Sample Notes:
22090086-001A Radium-228_NPW(904.0): Sample and Sample Duplicate exhibited high RPD for Radium-228 possibly due to sample matrix interference.
22090086-002A Radium-228_NPW(904.0): Sample and Sample Duplicate exhibited high RPD for Radium-228 possibly due to sample matrix interference.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **22090086**
Date: **10/11/2022**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **22090086**
11-Oct-22

CLIENT: TEKLAB Inc,
Project: 22081061

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
22090086-001	22081061-001		8/23/2022 11:45:00 AM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-002	22081061-002		8/23/2022 10:56:00 AM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-003	22081061-003		8/23/2022 10:29:00 AM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-004	22081061-004		8/23/2022 10:05:00 AM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-005	22081061-005		8/23/2022 2:44:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-006	22081061-006		8/23/2022 3:08:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-007	22081061-007		8/23/2022 2:08:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-008	22081061-008		8/25/2022 11:49:00 AM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-009	22081061-009		8/23/2022 1:29:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-010	22081061-010		8/25/2022 12:49:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-011	22081061-011		8/23/2022 12:45:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-012	22081061-012		8/25/2022 2:25:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-013	22081061-013		8/25/2022 2:11:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-014	22081061-014		8/25/2022 1:51:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water
22090086-015	22081061-015		8/24/2022 5:09:00 PM	8/31/2022 2:50:00 PM	Non-Potable Water

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DATES REPORT

WO#: **22090086**

11-Oct-22

Client: TEKLAB Inc,
Project: 22081061

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
22090086-001A	22081061-001	8/23/2022 11:45:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-002A	22081061-002	8/23/2022 10:56:00 AM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-003A	22081061-003	8/23/2022 10:29:00 AM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-004A	22081061-004	8/23/2022 10:05:00 AM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-005A	22081061-005	8/23/2022 2:44:00 PM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-006A	22081061-006	8/23/2022 3:08:00 PM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-007A	22081061-007	8/23/2022 2:08:00 PM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-008A	22081061-008	8/25/2022 11:49:00 AM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-009A	22081061-009	8/23/2022 1:29:00 PM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-010A	22081061-010	8/25/2022 12:49:00 PM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-011A	22081061-011	8/23/2022 12:45:00 PM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM
				Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-012A	22081061-012	8/25/2022 2:25:00 PM		Radium-226 (EPA 903.0)		9/19/2022 12:05:00 PM	9/30/2022 11:26:00 AM

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DATES REPORT

WO#: **22090086**

11-Oct-22

Client: TEKLAB Inc,

Project: 22081061

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
22090086-012A	22081061-012	8/25/2022 2:25:00 PM	Non-Potable Water	Radium-228 (EPA 904.0)		9/19/2022 12:05:00 PM	9/28/2022 4:07:00 PM
22090086-013A	22081061-013	8/25/2022 2:11:00 PM		Radium-226 (EPA 903.0)		9/21/2022 10:25:00 AM	10/8/2022 10:50:00 AM
				Radium-228 (EPA 904.0)		9/21/2022 10:25:00 AM	10/7/2022 2:53:00 PM
22090086-014A	22081061-014	8/25/2022 1:51:00 PM		Radium-226 (EPA 903.0)		9/21/2022 10:25:00 AM	10/8/2022 10:50:00 AM
				Radium-228 (EPA 904.0)		9/21/2022 10:25:00 AM	10/7/2022 2:53:00 PM
22090086-015A	22081061-015	8/24/2022 5:09:00 PM		Radium-226 (EPA 903.0)		9/21/2022 10:25:00 AM	10/8/2022 10:50:00 AM
				Radium-228 (EPA 904.0)		9/21/2022 10:25:00 AM	10/7/2022 2:53:00 PM

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Analytical Report

(consolidated)

WO#: **22090086**

Date Reported: **10/11/2022**

CLIENT: TEKLAB Inc,
Collection Date: 8/23/2022 11:45:00 AM
Project: 22081061
Lab ID: 22090086-001
Matrix: NON-POTABLE WATER
Client Sample ID: 22081061-001

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.1	1	9/30/2022 11:26:00 AM
Yield	0.960					1	9/30/2022 11:26:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00	QDR	pCi/L	± 0.53	1	9/28/2022 4:07:00 PM
Yield	1.00					1	9/28/2022 4:07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22090086**

Date Reported: **10/11/2022**

CLIENT: TEKLAB Inc,
Collection Date: 8/23/2022 10:29:00 AM
Project: 22081061
Lab ID: 22090086-003
Matrix: NON-POTABLE WATER
Client Sample ID: 22081061-003

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.08	1	9/30/2022 11:26:00 AM
Yield	0.960					1	9/30/2022 11:26:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.66	1	9/28/2022 4:07:00 PM
Yield	1.00					1	9/28/2022 4:07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22090086**

Date Reported: **10/11/2022**

CLIENT: TEKLAB Inc,
Collection Date: 8/23/2022 10:05:00 AM
Project: 22081061
Lab ID: 22090086-004
Matrix: NON-POTABLE WATER
Client Sample ID: 22081061-004

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.09	1	9/30/2022 11:26:00 AM
Yield	0.970					1	9/30/2022 11:26:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.56	1	9/28/2022 4:07:00 PM
Yield	1.00					1	9/28/2022 4:07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22090086**

Date Reported: **10/11/2022**

CLIENT: TEKLAB Inc,
Collection Date: 8/25/2022 11:49:00 AM
Project: 22081061
Lab ID: 22090086-008
Matrix: NON-POTABLE WATER
Client Sample ID: 22081061-008

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.05	1	9/30/2022 11:26:00 AM
Yield	0.980					1	9/30/2022 11:26:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.76	1	9/28/2022 4:07:00 PM
Yield	1.00					1	9/28/2022 4:07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **22090086**

Date Reported: **10/11/2022**

CLIENT: TEKLAB Inc,
Collection Date: 8/23/2022 1:29:00 PM
Project: 22081061
Lab ID: 22090086-009
Matrix: NON-POTABLE WATER
Client Sample ID: 22081061-009

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.16	1	9/30/2022 11:26:00 AM
Yield	1.00					1	9/30/2022 11:26:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.55	1	9/28/2022 4:07:00 PM
Yield	1.00					1	9/28/2022 4:07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59620**

Sample ID: **22090086-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151169**
Client ID: **22081061-001** Batch ID: **59620** TestNo: **E904.0** **E903-904** Analysis Date: **9/28/2022** SeqNo: **4020063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.01	1.00		0	0			0	200	30	R
Yield	0.970			0	0			1.000	3.05		

Sample ID: **22090086-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151169**
Client ID: **22081061-002** Batch ID: **59620** TestNo: **E904.0** **E903-904** Analysis Date: **9/28/2022** SeqNo: **4020065**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59620**

Sample ID: **MB-59620** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151169**
Client ID: **PBW** Batch ID: **59620** TestNo: **E904.0** **E903-904** Analysis Date: **9/28/2022** SeqNo: **4019852**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCSD-59620** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151169**
Client ID: **LCSS02** Batch ID: **59620** TestNo: **E904.0** **E903-904** Analysis Date: **9/28/2022** SeqNo: **4019854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.63	1.00	5.000	0	72.6	70	130	2.870	23.4	20	
Yield	0.760			0	0			1.000	27.3		

Sample ID: **RLCD-59620** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151169**
Client ID: **BatchQC** Batch ID: **59620** TestNo: **E904.0** **E903-904** Analysis Date: **9/28/2022** SeqNo: **4019857**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	70.0	50	150				
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59620**

Sample ID: **22090083-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151169**
Client ID: **BatchQC** Batch ID: **59620** TestNo: **E904.0** **E903-904** Analysis Date: **9/28/2022** SeqNo: **4019858**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.22	1.00	5.000	0.8500	87.4	70	130				
Yield	0.650			1.000	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59620**

Sample ID: **22090086-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151257**
Client ID: **22081061-001** Batch ID: **59620** TestNo: **E903.0** **E903-904** Analysis Date: **9/30/2022** SeqNo: **4022516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	0.900							0.9600	6.45	0	

Sample ID: **22090086-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151257**
Client ID: **22081061-002** Batch ID: **59620** TestNo: **E903.0** **E903-904** Analysis Date: **9/30/2022** SeqNo: **4022518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	1.00							1.000	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59620**

Sample ID: **MB-59620** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151257**
Client ID: **PBW** Batch ID: **59620** TestNo: **E903.0** **E903-904** Analysis Date: **9/30/2022** SeqNo: **4022506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	0.920										

Sample ID: **LCS-59620** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151257**
Client ID: **LCSW** Batch ID: **59620** TestNo: **E903.0** **E903-904** Analysis Date: **9/30/2022** SeqNo: **4022507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.42	1.00	5.000	0	108	70	130				

Sample ID: **RLC-59620** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151257**
Client ID: **BatchQC** Batch ID: **59620** TestNo: **E903.0** **E903-904** Analysis Date: **9/30/2022** SeqNo: **4022510**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.20	1.00	1.000	0	120	50	150				

Sample ID: **RLCD-59620** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151257**
Client ID: **BatchQC** Batch ID: **59620** TestNo: **E903.0** **E903-904** Analysis Date: **9/30/2022** SeqNo: **4022511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59620**

Sample ID: **RLCD-59620** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/19/2022** RunNo: **151257**
Client ID: **BatchQC** Batch ID: **59620** TestNo: **E903.0** **E903-904** Analysis Date: **9/30/2022** SeqNo: **4022511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.11	1.00	1.000	0	111	50	150				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59674**

Sample ID: **MB-59674** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151629**
Client ID: **PBW** Batch ID: **59674** TestNo: **E904.0** **E903-904** Analysis Date: **10/7/2022** SeqNo: **4035726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	0.950			0	0						

Sample ID: **LCSD-59674** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151629**
Client ID: **LCSS02** Batch ID: **59674** TestNo: **E904.0** **E903-904** Analysis Date: **10/7/2022** SeqNo: **4035728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.83	1.00	5.000	0	76.6	70	130	1.950	65.1	20	
Yield	1.00			0	0			0.5500	58.1		

Sample ID: **RLCD-59674** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151629**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E904.0** **E903-904** Analysis Date: **10/7/2022** SeqNo: **4035731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.17	1.00	1.000	0	117	50	150				
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59674**

Sample ID: **22090315-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151629**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E904.0** **E903-904** Analysis Date: **10/7/2022** SeqNo: **4035732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.71	1.00	5.000	0	74.2	70	130				
Yield	0.740			1.000	0						

Sample ID: **22090381-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151629**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E904.0** **E903-904** Analysis Date: **10/7/2022** SeqNo: **4035746**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	0.970			0	0			0.8700	10.9		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Analytical Laboratories

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59674**

Sample ID: **MB-59674** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **PBW** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036069**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	ND										

Sample ID: **LCS-59674** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **LCSW** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036070**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.91	1.00	5.000	0	118	70	130				

Sample ID: **LCSD-59674** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **LCSS02** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036071**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.17	1.00	5.000	0	103	70	130	5.910	13.4	20	

Sample ID: **RLC-59674** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Analytical Laboratories

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59674**

Sample ID: **RLC-59674** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.11	1.00	1.000	0	111	50	150				

Sample ID: **RLCD-59674** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.12	1.00	1.000	0	112	50	150				

Sample ID: **22090315-001AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.51	1.00	5.000	0	110	70	130				

Sample ID: **22090347-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Analytical Laboratories

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **22090086**
11-Oct-22

Client: TEKLAB Inc,
Project: 22081061 **BatchID:** **59674**

Sample ID: **22090347-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Yield	ND							0	0	0	

Sample ID: **22090381-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/21/2022** RunNo: **151642**
Client ID: **BatchQC** Batch ID: **59674** TestNo: **E903.0** **E903-904** Analysis Date: **10/8/2022** SeqNo: **4036087**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	ND							0	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

22090086

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: ____ Sampler: Client QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226 and 228) by method EPA903.0/904.0
on your standard turnaround time.
Batch QC is required with the report. Receipt summary requested. State of Origin: IL

Project# 22081061

Contact: Shelly A. Hennessy Email: SHennessy@TekLabInc.com
Requested Due Date: 20 business days or less Billing/PO: 33267 Phone: (618) 344-1004

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228										pH CPM
	22081061-001	8/23/22 1145	HNO3	Aqueous	✓	✓										24, 28
	22081061-002	8/23/22 1056	HNO3	Aqueous	✓	✓										30, 25
	22081061-003	8/23/22 1029	HNO3	Aqueous	✓	✓										23, 14
	22081061-004	8/23/22 1005	HNO3	Aqueous	✓	✓										15, 19
	22081061-005	8/23/22 1444	HNO3	Aqueous	✓	✓										17, 27
	22081061-006	8/23/22 1508	HNO3	Aqueous	✓	✓										21, 23
	22081061-007	8/23/22 1408	HNO3	Aqueous	✓	✓										92, 32
	22081061-008	8/25/22 1149	HNO3	Aqueous	✓	✓										25, 21
	22081061-009	8/23/22 1329	HNO3	Aqueous	✓	✓										23, 13
	22081061-010	8/25/22 1249	HNO3	Aqueous	✓	✓										30, 27
	22081061-011	8/23/22 1245	HNO3	Aqueous	✓	✓										23, 6

*Relinquished By	Date/Time	Received By	Date/Time
Brannan Willis	8/29/22 1800	Fed ex	
		[signature]	8-31-22/1450

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

[illegible] 19.0 18.2 18.8 17.8 / [illegible]

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Client | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226 and 228) by method EPA903.0/904.0
on your standard turnaround time.
Batch QC is required with the report. Receipt summary requested. State of Origin: IL

Project# 22081061

Contact: Shelly A. Hennessy | Email: SHennessy@TekLabInc.com
Requested Due Date: 20 business days or less | Billing/PO: 33267
Phone: (618) 344-1004

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228											OH	CPM
	22081061-012	8/25/22 1405	HNO3	Aqueous	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	14	6, 10
	22081061-013	8/25/22 1411	HNO3	Aqueous	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	14	33, 23
	22081061-014	8/25/22 1351	HNO3	Aqueous	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	11	22, 3
	22081061-015	8/24/22 1709	HNO3	Aqueous	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	1	23, 6
			Unpres	Aqueous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
			Unpres	Aqueous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
			Unpres	Aqueous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
			Unpres	Aqueous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
			Unpres	Aqueous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
			Unpres	Aqueous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
			Unpres	Aqueous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
			Unpres	Aqueous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

*Relinquished By	Date/Time	Received By	Date/Time
Roannan Willis	8/29/22 1800	Fedex	
			8-30-22 / 1450

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Analytical Laboratories

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **22090086** RcptNo: **1**

Logged by:	**Anthony W. Britton**	**8/31/2022 2:50:00 PM**	Anthony Britton
Completed By:	**Anthony W. Britton**	**9/1/2022 5:41:25 PM**	Anthony Britton
Reviewed By:	**Jennifer Woolf**	**9/6/2022 1:02:42 PM**	Jennifer Woolf

Chain of Custody

1.	Were seals intact?	Yes ☑	No ☐	Not Present ☐
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?	FedEx		

Log In

4.	Coolers are present?	Yes ☐	No ☑	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	19.0	Good	Not Present			
2	18.2	Good	Not Present			
3	18.8	Good	Not Present			

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **22090086** RcptNo: **1**

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
4	17.8	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

September 19, 2022

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells **WorkOrder:** 22081060

Dear Eric Staley:

TEKLAB, INC received 12 samples on 8/25/2022 9:21:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 22081060
Report Date: 19-Sep-22

This reporting package includes the following:

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Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 22081060

Client Project: Landfill Monitoring Wells **Report Date:** 19-Sep-22

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081060
Client Project: Landfill Monitoring Wells
Report Date: 19-Sep-22

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081060
Client Project: Landfill Monitoring Wells
Report Date: 19-Sep-22

Cooler Receipt Temp: 5.8 °C

An employee of Teklab, Inc. collected the sample(s).

G110 was not collected; the well was broken.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081060
Client Project: Landfill Monitoring Wells
Report Date: 19-Sep-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081060
Client Project: Landfill Monitoring Wells
Report Date: 19-Sep-22
Lab ID: 22081060-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 08/24/2022 12:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	08/24/2022 12:15	R316840
Depth to water	*	-5.00		**13.54**	ft	1	08/24/2022 12:15	R316840
Depth to water from measuring point	*	0		**16.29**	ft	1	08/24/2022 12:15	R316840
Elevation of groundwater surface	*	0		**539.31**	ft	1	08/24/2022 12:15	R316840
Measuring Point Elevation	*	0		**555.60**	ft	1	08/24/2022 12:15	R316840
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.3**	°F	1	08/24/2022 12:15	R316840
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	08/24/2022 12:15	R316840
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1450**	µmhos/cm @25C	1	08/24/2022 12:15	R316840
EPA 1664A								
Hexane Extractable Material	NELAP	6		**< 6**	mg/L	1	08/29/2022 9:13	R316376
EPA 600 350.1 (DISSOLVED)								
Nitrogen, Ammonia (as N)	NELAP	0.10		**1.86**	mg/L	1	08/29/2022 16:20	R316348
EPA 600 353.2 R2.0 (DISSOLVED)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**< 0.050**	mg/L	1	08/25/2022 16:14	R316284
STANDARD METHODS 2540 C (DISSOLVED) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1090**	mg/L	2.5	08/26/2022 9:02	R316361
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.005		**< 0.005**	mg/L	1	08/26/2022 12:35	196008
SW-846 9036 (DISSOLVED)								
Sulfate	NELAP	100		**343**	mg/L	10	08/29/2022 12:25	R316392
SW-846 9251 (DISSOLVED)								
Chloride	NELAP	1		**40**	mg/L	1	08/29/2022 12:19	R316398
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**7360**	µg/L	1	08/26/2022 19:11	196021
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	08/26/2022 19:11	196021
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	08/26/2022 19:11	196021
Magnesium	NELAP	0.050		**80.1**	mg/L	1	08/26/2022 19:11	196021
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	08/26/2022 19:11	196021
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Boron	NELAP	20.0		**7780**	µg/L	1	08/29/2022 17:10	166607
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**163**	µg/L	5	08/26/2022 14:21	196021
Lead	NELAP	1.0		**< 1.0**	µg/L	5	08/26/2022 14:21	196021
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Arsenic	NELAP	1.0		**192**	µg/L	5	08/29/2022 20:06	166607
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	08/26/2022 14:27	196019

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22081060
Client Project: Landfill Monitoring Wells
Report Date: 19-Sep-22

Carrier: Joseph Riley
Received By: EAH

Completed by: Elizabeth A. Hurley
On: 25-Aug-22

Reviewed by: Shelly A. Hennessy
On: 25-Aug-22

Pages to follow: Chain of custody 2 Extra pages included 10

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 5.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

R111 and G113 were filtered and preserved with nitric acid (83663) and sulfuric acid (83463) for the dissolved parameters upon arrival at the laboratory. - RMW/ehurley - 8/25/2022 9:55:42 AM

Additional sodium hydroxide (81662) was needed in R101, G112, G113, G120, G121, G122, AW-1, AW-2, RW-3, and DUP upon arrival at the laboratory; only RW-3 reached the desired pH range. Additional nitric acid (83663) was needed in G120, DUP, G111, and G113. - RMW/BNB/ehurley - 8/25/2022 9:56:39 AM

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 22081060

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 5.8 °C
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY LT61
LAB NOTES: Added NaOH (81662) to R101, G112, G113, G120, G121, G122, AW1, AW2, RW3 + Dup. Only RW3 preserved.

Client Comments: (X) Filter in Lab ☆ DUP
Quarters 1, 3, & 4 Added (83663) HNO3 to G120 and Duplicate, G111, and G113. Added H2SO4 (83463) to R113 and R113. RMW 8/25/22
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Bis(2-ethylhexyl)phthalate

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

PROJECT NAME/NUMBER: Landfill Monitoring Wells
SAMPLE COLLECTOR'S NAME: J. RILEY

RESULTS REQUESTED: [✓] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Nitrate Ammonia (D)	Metals (D)**	Cyanide	Cl SO4 TDS (D)	BOD	Mn (T)	NH3 As K (T)	Nitrate (T)	Phenols	B Mg (T)	NH3 B SVOC***	B (T)	As(T)	Oil and Grea
22081060-001	R101	08/24/22 1419	Groundwater	2	2	1	1						✓	✓	✓	✓	✓	✓	✓								
002	G110	BROKEN	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓									
003	R111 (X)	08/24/22 1259	Groundwater	2	2	1	2						✓	✓	✓	✓	✓			✓							
004	G112	08/24/22 1325	Groundwater	2	1	1	1						✓	✓	✓	✓	✓				✓						
005	G113 (X)	08/24/22 1356	Groundwater	2	1	1	2						✓	✓	✓	✓	✓	✓				✓					
006	G120	08/23/22 1639	Groundwater	2	2	1	1						✓	✓	✓	✓	✓						✓				
007	G121	08/23/22 1601	Groundwater	3	2	1	2						✓	✓	✓	✓	✓							✓			
008	G122	08/24/22 1540	Groundwater	2	2	1	1						✓	✓	✓	✓	✓	✓							✓		
009	AW-1	08/24/22 1215	Groundwater	2	2	1	2						✓	✓	✓	✓	✓								✓	✓	x
010	AW-2 ☆	08/24/22 1239	Groundwater	2	2	1	1						✓	✓	✓	✓	✓								✓		
011	RW-3	08/24/22 1145	Groundwater	2	2	1	1						✓	✓	✓	✓	✓									✓	

Relinquished By	Date/Time	Received By	Date/Time
[signature]	08/25/22 0921	Elizabeth A Hurley	8/25/22 0921

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

RMW/SAH 8/25/22

Print PDF

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 22081060

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C

Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES:

Client Comments:

Quarters 1, 3, & 4

*elevations, pH, conductivity, temperature

**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER

Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED

☑ Standard ☐ 1-2 Day (100% Surcharge)

☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)
22081060-012	DUPLICATE	08/24/22 1239	Groundwater	1	1	1	1							✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	8/25/22 0921		8/25/22 0921

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Well ID	Date	Time	DTW	Drawdown	Temp C	pH	Cond.	DO	Turbidity	ORP	Clarity	Purge	DTB
AW-1		1130	16.29										
		1209	18.32	2.03	15.7	6.63	1450						
		1212	18.48	0.16	15.7	6.64	1450						
		1215	18.5	0.02	15.7	6.64	1450		Slight		SL Cloud	1.95	
Final	8/24/2022	1215	16.29	0.02	15.7	6.64	1450		Slight		SL Cloud	1.95	
								Lt brown no odor					

Fourth Quarter 2022

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

December 19, 2022

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 22110359

Dear Eric Staley:

TEKLAB, INC received 15 samples on 11/10/2022 8:20:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22110359
Report Date: 19-Dec-22

This reporting package includes the following:

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Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 22110359

Client Project: Ash Pond Monitoring Wells **Report Date:** 19-Dec-22

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DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
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Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110359
Client Project: Ash Pond Monitoring Wells
Report Date: 19-Dec-22

Qualifiers

- Unknown hydrocarbon
B - Analyte detected in associated Method Blank
C - RL shown is a Client Requested Quantitation Limit
E - Value above quantitation range
H - Holding times exceeded
I - Associated internal standard was outside method criteria
J - Analyte detected below quantitation limits
M - Manual Integration used to determine area response
ND - Not Detected at the Reporting Limit
R - RPD outside accepted recovery limits
S - Spike Recovery outside recovery limits
T - TIC(Tentatively identified compound)
X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110359
Client Project: Ash Pond Monitoring Wells
Report Date: 19-Dec-22

Cooler Receipt Temp: 4.8 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 and Radium-228 analysis was performed by Pace Analytical National. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

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Springfield, IL 62711-9415
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Kansas City

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Lenexa, KS 66214
Phone (913) 541-1998
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Collinsville Air

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Collinsville, IL 62234-7425
Phone (618) 344-1004
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Email EHurley@teklabinc.com

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Address 1319 Butterfield Rd.
Downers Grove, IL 60515
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Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22110359
Report Date: 19-Dec-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110359
Client Project: Ash Pond Monitoring Wells
Report Date: 19-Dec-22
Lab ID: 22110359-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 11/08/2022 13:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	11/08/2022 13:33	R321096
Depth to water	*	-5.00		**8.09**	ft	1	11/08/2022 13:33	R321096
Depth to water from measuring point	*	0		**10.79**	ft	1	11/08/2022 13:33	R321096
Elevation of groundwater surface	*	0		**528.71**	ft	1	11/08/2022 13:33	R321096
Measuring Point Elevation	*	0		**539.50**	ft	1	11/08/2022 13:33	R321096
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	11/08/2022 13:33	R321096
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	11/08/2022 13:33	R321096
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.5**	°F	1	11/08/2022 13:33	R321096
SW-846 9040B								
pH, Field	*	1.00		**7.21**		1	11/08/2022 13:33	R321096
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1030**	µmhos/cm @25C	1	11/08/2022 13:33	R321096
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**425**	mg/L	2.5	11/15/2022 7:05	R321202
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10	S	**< 10**	mg/L	1	11/23/2022 10:36	R321591
Matrix spike did not recover within control limits. Results verified by reanalysis at dilution.								
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.43**	mg/L	1	11/14/2022 14:43	R321052
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**30**	mg/L	1	11/23/2022 10:36	R321589
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.142**	mg/L	1	11/14/2022 17:54	199975
Barium	NELAP	0.0025		**0.166**	mg/L	1	11/14/2022 17:54	199975
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/14/2022 17:54	199975
Boron	NELAP	0.0200		**0.192**	mg/L	1	11/16/2022 21:05	199975
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/14/2022 17:54	199975
Calcium	NELAP	0.100		**72.7**	mg/L	1	11/14/2022 17:54	199975
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/14/2022 17:54	199975
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/14/2022 17:54	199975
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/14/2022 17:54	199975
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	11/14/2022 17:54	199975
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/14/2022 17:54	199975
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2022 11:17	199975
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2022 11:17	199975
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2022 11:17	199975
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/11/2022 21:27	199972
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/06/2022 0:00	R322549
Radium-228	*	0		**See Attached**	pci/L	1	12/06/2022 0:00	R322549

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110359
Client Project: Ash Pond Monitoring Wells
Report Date: 19-Dec-22
Lab ID: 22110359-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 11/08/2022 10:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	11/08/2022 10:56	R321096
Depth to water	*	-5.00		**5.36**	ft	1	11/08/2022 10:56	R321096
Depth to water from measuring point	*	0		**7.86**	ft	1	11/08/2022 10:56	R321096
Elevation of groundwater surface	*	0		**528.24**	ft	1	11/08/2022 10:56	R321096
Measuring Point Elevation	*	0		**536.10**	ft	1	11/08/2022 10:56	R321096
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	11/08/2022 10:56	R321096
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	11/08/2022 10:56	R321096
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.4**	°F	1	11/08/2022 10:56	R321096
SW-846 9040B								
pH, Field	*	1.00		**6.52**		1	11/08/2022 10:56	R321096
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2170**	µmhos/cm @25C	1	11/08/2022 10:56	R321096
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1310**	mg/L	1	11/15/2022 7:06	R321202
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**643**	mg/L	20	11/23/2022 11:24	R321591
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.22**	mg/L	1	11/14/2022 14:48	R321052
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**34**	mg/L	1	11/23/2022 11:18	R321589
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	11/14/2022 18:01	199975
Barium	NELAP	0.0025		**0.0734**	mg/L	1	11/14/2022 18:01	199975
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/14/2022 18:01	199975
Boron	NELAP	0.0200		**4.08**	mg/L	1	11/17/2022 16:05	199975
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/14/2022 18:01	199975
Calcium	NELAP	0.100		**248**	mg/L	1	11/14/2022 18:01	199975
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/14/2022 18:01	199975
Cobalt	NELAP	0.0050		**0.0111**	mg/L	1	11/14/2022 18:01	199975
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/14/2022 18:01	199975
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	11/14/2022 18:01	199975
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/14/2022 18:01	199975
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2022 11:30	199975
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2022 11:30	199975
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2022 11:30	199975
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/11/2022 21:41	199972
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/06/2022 0:00	R322549
Radium-228	*	0		**See Attached**	pci/L	1	12/06/2022 0:00	R322549

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110359
Client Project: Ash Pond Monitoring Wells
Report Date: 19-Dec-22
Lab ID: 22110359-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 11/08/2022 10:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	11/08/2022 10:40	R321096
Depth to water	*	-5.00		**8.06**	ft	1	11/08/2022 10:40	R321096
Depth to water from measuring point	*	0		**9.76**	ft	1	11/08/2022 10:40	R321096
Elevation of groundwater surface	*	0		**525.64**	ft	1	11/08/2022 10:40	R321096
Measuring Point Elevation	*	0		**535.40**	ft	1	11/08/2022 10:40	R321096
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	11/08/2022 10:40	R321096
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	11/08/2022 10:40	R321096
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.8**	°F	1	11/08/2022 10:40	R321096
SW-846 9040B								
pH, Field	*	1.00		**6.65**		1	11/08/2022 10:40	R321096
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1680**	µmhos/cm @25C	1	11/08/2022 10:40	R321096
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**920**	mg/L	2.5	11/15/2022 7:06	R321202
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**444**	mg/L	20	11/23/2022 11:31	R321591
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.21**	mg/L	1	11/14/2022 15:00	R321052
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**55**	mg/L	5	11/23/2022 11:26	R321589
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	11/14/2022 19:15	199975
Barium	NELAP	0.0025		**0.0951**	mg/L	1	11/14/2022 19:15	199975
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/14/2022 19:15	199975
Boron	NELAP	0.200		**14.6**	mg/L	10	11/17/2022 15:45	199975
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/14/2022 19:15	199975
Calcium	NELAP	0.100		**160**	mg/L	1	11/14/2022 19:15	199975
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/14/2022 19:15	199975
Cobalt	NELAP	0.0050		**0.0054**	mg/L	1	11/14/2022 19:15	199975
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/14/2022 19:15	199975
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	11/14/2022 19:15	199975
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/14/2022 19:15	199975
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2022 11:37	199975
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2022 11:37	199975
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2022 11:37	199975
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/11/2022 21:43	199972
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/06/2022 0:00	R322549
Radium-228	*	0		**See Attached**	pci/L	1	12/06/2022 0:00	R322549

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110359
Client Project: Ash Pond Monitoring Wells
Report Date: 19-Dec-22
Lab ID: 22110359-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 11/09/2022 9:04

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	11/09/2022 9:04	R321096
Depth to water	*	-5.00		**8.86**	ft	1	11/09/2022 9:04	R321096
Depth to water from measuring point	*	0		**11.52**	ft	1	11/09/2022 9:04	R321096
Elevation of groundwater surface	*	0		**527.50**	ft	1	11/09/2022 9:04	R321096
Measuring Point Elevation	*	0		**539.02**	ft	1	11/09/2022 9:04	R321096
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	11/09/2022 9:04	R321096
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	11/09/2022 9:04	R321096
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.6**	°F	1	11/09/2022 9:04	R321096
SW-846 9040B								
pH, Field	*	1.00		**7.17**		1	11/09/2022 9:04	R321096
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**959**	µmhos/cm @25C	1	11/09/2022 9:04	R321096
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**348**	mg/L	1	11/15/2022 7:07	R321202
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**13**	mg/L	1	11/23/2022 12:30	R321591
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.39**	mg/L	1	11/14/2022 15:09	R321052
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**58**	mg/L	5	11/23/2022 12:36	R321589
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	11/14/2022 19:30	199975
Barium	NELAP	0.0025		**0.130**	mg/L	1	11/14/2022 19:30	199975
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/14/2022 19:30	199975
Boron	NELAP	0.0200		**0.260**	mg/L	1	11/17/2022 9:35	199975
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/14/2022 19:30	199975
Calcium	NELAP	0.100	S	**44.8**	mg/L	1	11/14/2022 19:30	199975
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/14/2022 19:30	199975
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/14/2022 19:30	199975
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/14/2022 19:30	199975
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	11/14/2022 19:30	199975
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/14/2022 19:30	199975
Matrix spike control limits for Ca are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/19/2022 2:52	199975
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/21/2022 14:36	199975
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/19/2022 2:52	199975
CCV recovered outside the upper control limits Se. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/11/2022 21:52	199972
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/25/2022 0:00	R322549

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110359
Client Project: Ash Pond Monitoring Wells
Report Date: 19-Dec-22
Lab ID: 22110359-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 11/09/2022 9:04

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-228	*	0		**See Attached**	pci/L	1	11/25/2022 0:00	R322549

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110359
Client Project: Ash Pond Monitoring Wells
Report Date: 19-Dec-22
Lab ID: 22110359-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 11/08/2022 11:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	11/08/2022 11:30	R321096
Depth to water	*	-5.00		**3.75**	ft	1	11/08/2022 11:30	R321096
Depth to water from measuring point	*	0		**6.65**	ft	1	11/08/2022 11:30	R321096
Elevation of groundwater surface	*	0		**530.55**	ft	1	11/08/2022 11:30	R321096
Measuring Point Elevation	*	0		**537.20**	ft	1	11/08/2022 11:30	R321096
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	11/08/2022 11:30	R321096
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.7**	NTU	1	11/08/2022 11:30	R321096
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.3**	°F	1	11/08/2022 11:30	R321096
SW-846 9040B								
pH, Field	*	1.00		**6.99**		1	11/08/2022 11:30	R321096
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1290**	µmhos/cm @25C	1	11/08/2022 11:30	R321096
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**505**	mg/L	2.5	11/15/2022 7:08	R321202
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	11/23/2022 12:38	R321591
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.27**	mg/L	1	11/14/2022 15:10	R321052
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**26**	mg/L	1	11/23/2022 12:38	R321589
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0340**	mg/L	1	11/14/2022 19:41	199975
Barium	NELAP	0.0025		**0.371**	mg/L	1	11/14/2022 19:41	199975
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/14/2022 19:41	199975
Boron	NELAP	0.0200		**0.0927**	mg/L	1	11/16/2022 21:20	199975
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/14/2022 19:41	199975
Calcium	NELAP	0.100		**100**	mg/L	1	11/14/2022 19:41	199975
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/14/2022 19:41	199975
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/14/2022 19:41	199975
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/14/2022 19:41	199975
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	11/14/2022 19:41	199975
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/14/2022 19:41	199975
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/13/2022 4:26	199975
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/13/2022 4:26	199975
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/13/2022 4:26	199975
CCV recovered outside the upper control limits for Se and TL. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/11/2022 21:55	199972
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/25/2022 0:00	R322549
Radium-228	*	0		**See Attached**	pci/L	1	11/25/2022 0:00	R322549

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 22110359
Report Date: 19-Dec-22

Carrier: Joseph Riley

Completed by: Timothy W. Mathis
On: 10-Nov-22

Received By: ERH

Reviewed by: Shelly A. Hennessy
On: 11-Nov-22

Pages to follow: Chain of custody 2 Extra pages included 30

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #83856 PRY. - TMathis - 11/10/2022 4:08:42 PM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 22110359

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☑ No Permit on file

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 4.8 °C UTG1

Preserved in: ☐ LAB ☑ FIELD

FOR LAB USE ONLY

LAB NOTES: PM/ 83856. PAT 11/10/22

Client Comments:

*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER

Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

J. RILEY C. Collins

RESULTS REQUESTED

☑ Standard ☐ 1-2 Day (100% Surcharge)

☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
22110359 001	RW-3	11/8/22 1334 JR	Groundwater	1	3								✔	✔	✔	✔	✔	✔
002	AP-1	11/8/22 1111	Groundwater	1	3								✔	✔	✔	✔	✔	✔
003	AP-2	11/8/22 1056	Groundwater	1	3								✔	✔	✔	✔	✔	✔
004	AP-3	11/8/22 1040	Groundwater	1	3								✔	✔	✔	✔	✔	✔
005	AP-4	11/8/22 1251	Groundwater	1	3								✔	✔	✔	✔	✔	✔
006	AP-5	11/8/22 1220	Groundwater	1	3								✔	✔	✔	✔	✔	✔
007	AP-6	11/8/22 1147	Groundwater	1	3								✔	✔	✔	✔	✔	✔
008	AP-7	11/9/22 904	Groundwater	1	3								✔	✔	✔	✔	✔	✔
009	AP-8	11/8/22 1130	Groundwater	1	3								✔	✔	✔	✔	✔	✔
010	AP-9	11/9/22 926	Groundwater	1	3								✔	✔	✔	✔	✔	✔
011	AP-10	11/8/22 1009	Groundwater	1	3								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
	11/10/22 0820	Ellie Hopkins	11/10/22 0820

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

PAT 11/10/22

Print PDF

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 1211035 9

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
012	AP-11	11/9/22 1012	Groundwater	1	3								✔	✔	✔	✔	✔	✔
013	AP-12	1029	Groundwater	1	3								✔	✔	✔	✔	✔	✔
014	AP-13	1043	Groundwater	1	3								✔	✔	✔	✔	✔	✔
015	AP-14	11/8/22 1316	Groundwater	1	3								✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	11/10/22 0820		11/10/22 0820

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Pace Analytical®

ANALYTICAL REPORT

December 14, 2022

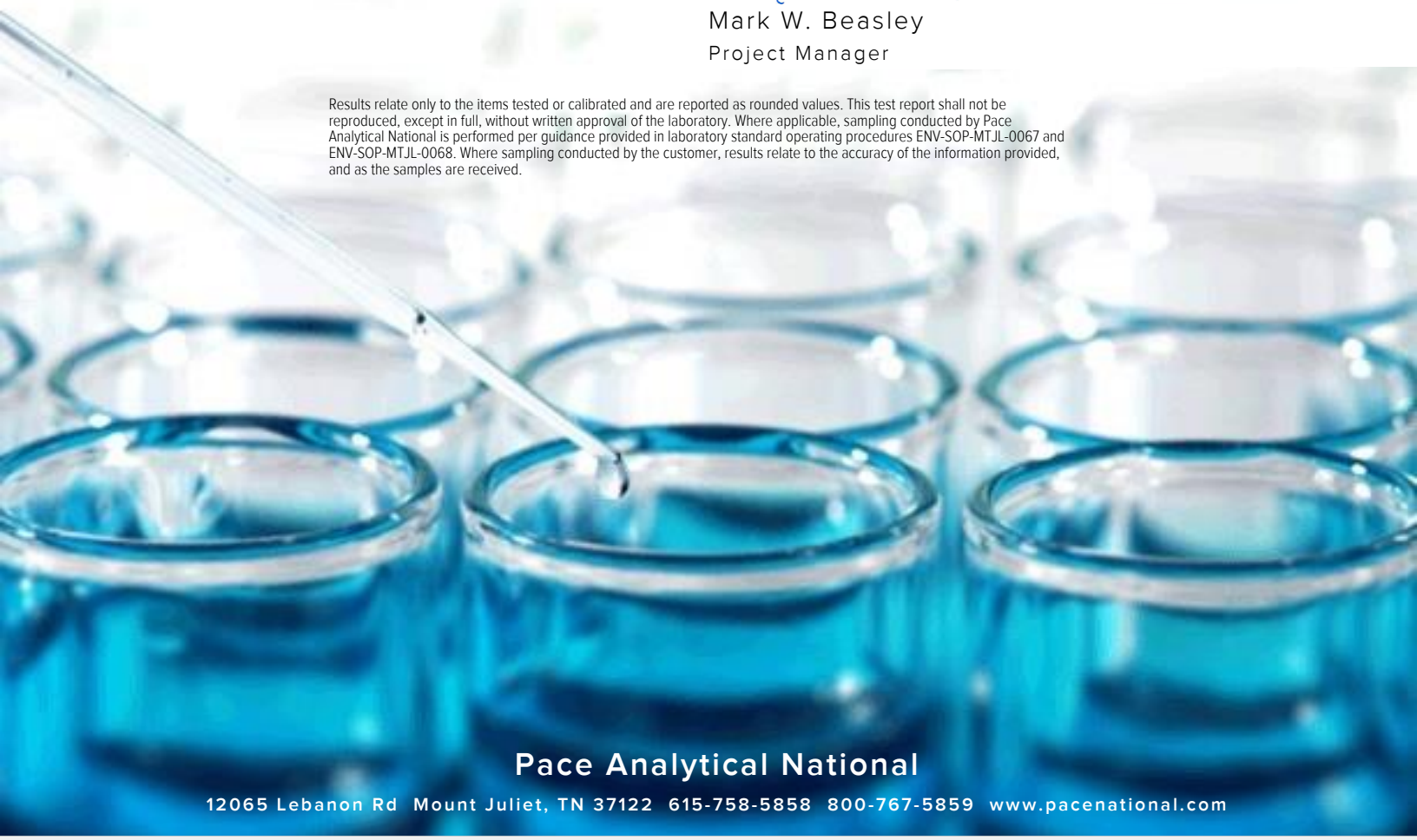
TEKLAB, Inc.

Sample Delivery Group:	L1557781
Samples Received:	11/14/2022
Project Number:	22110359
Description:	
Site:	006
Report To:	Elizabeth Hurley 5445 Horseshoe Lake Road Collinsville, IL 62234

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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SAMPLE SUMMARY

22110359-006 L1557781-01 Non-Potable Water

Collected by | Collected date/time 11/08/22 12:20 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN

22110359-007 L1557781-02 Non-Potable Water

Collected by | Collected date/time 11/08/22 11:47 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN

22110359-008 L1557781-03 Non-Potable Water

Collected by | Collected date/time 11/08/22 09:04 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN

22110359-009 L1557781-04 Non-Potable Water

Collected by | Collected date/time 11/08/22 11:30 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN

22110359-010 L1557781-05 Non-Potable Water

Collected by | Collected date/time 11/08/22 09:26 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN

22110359-011 L1557781-06 Non-Potable Water

Collected by | Collected date/time 11/08/22 10:09 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

22110359-012 L1557781-07 Non-Potable Water

Collected by | Collected date/time 11/09/22 10:12 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN

22110359-013 L1557781-08 Non-Potable Water

Collected by | Collected date/time 11/09/22 10:29 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 08:37	RGT	Mt. Juliet, TN

22110359-014 L1557781-09 Non-Potable Water

Collected by | Collected date/time 11/09/22 10:43 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN

22110359-015 L1557781-10 Non-Potable Water

Collected by | Collected date/time 11/08/22 13:16 | Received date/time 11/14/22 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1960584	1	11/18/22 11:52	11/25/22 15:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN

22110359-001 L1557781-11 Non-Potable Water

Collected by | Collected date/time 11/08/22 13:33 | Received date/time 11/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1961949	1	11/22/22 10:36	12/08/22 10:43	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/08/22 10:43	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN

22110359-002 L1557781-12 Non-Potable Water

Collected by | Collected date/time 11/08/22 11:11 | Received date/time 11/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1961949	1	11/22/22 10:36	12/08/22 10:43	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/08/22 10:43	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

22110359-003 L1557781-13 Non-Potable Water

Collected by	Collected date/time	Received date/time
	11/08/22 10:56	11/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1961949	1	11/22/22 10:36	12/08/22 10:43	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/08/22 10:43	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN

22110359-004 L1557781-14 Non-Potable Water

Collected by	Collected date/time	Received date/time
	11/08/22 10:40	11/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1961949	1	11/22/22 10:36	12/08/22 10:43	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/08/22 10:43	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN

22110359-005 L1557781-15 Non-Potable Water

Collected by	Collected date/time	Received date/time
	11/08/22 12:51	11/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1961949	1	11/22/22 10:36	12/08/22 10:43	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1966869	1	12/02/22 10:53	12/08/22 10:43	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1966869	1	12/02/22 10:53	12/06/22 10:12	RGT	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

22110359-008
Collected date/time: 11/08/22 09:04

SAMPLE RESULTS - 03

L1557781

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.199	U	0.419	0.768	11/25/2022 15:42	WG1960584
(T) Barium	*89.1*			*30.0-143*	*11/25/2022 15:42*	WG1960584
(T) Yttrium	*65.6*			*30.0-136*	*11/25/2022 15:42*	WG1960584

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.382	J	0.513	0.840	12/06/2022 08:37	WG1966869

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.382		0.296	0.341	12/06/2022 08:37	WG1966869
(T) Barium-133	*93.2*			*30.0-143*	*12/06/2022 08:37*	WG1966869

22110359-009
Collected date/time: 11/08/22 11:30

SAMPLE RESULTS - 04

L1557781

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.385	J	0.483	0.865	11/25/2022 15:42	WG1960584
(T) Barium	*96.1*			*30.0-143*	*11/25/2022 15:42*	WG1960584
(T) Yttrium	*54.3*			*30.0-136*	*11/25/2022 15:42*	WG1960584

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.95		0.693	0.895	12/06/2022 08:37	WG1966869

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	1.57		0.497	0.230	12/06/2022 08:37	WG1966869
(T) Barium-133	*92.0*			*30.0-143*	*12/06/2022 08:37*	WG1966869

22110359-001
Collected date/time: 11/08/22 13:33

SAMPLE RESULTS - 11

L1557781

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.161	U	0.300	0.550	12/08/2022 10:43	WG1961949
(T) Barium	*98.8*			*30.0-143*	*12/08/2022 10:43*	WG1961949
(T) Yttrium	*114*			*30.0-136*	*12/08/2022 10:43*	WG1961949

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.432	J	0.351	0.568	12/08/2022 10:43	WG1966869

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.271		0.183	0.142	12/06/2022 10:12	WG1966869
(T) Barium-133	*96.6*			*30.0-143*	*12/06/2022 10:12*	WG1966869

22110359-003
Collected date/time: 11/08/22 10:56

SAMPLE RESULTS - 13

L1557781

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.332	J	0.223	0.403	12/08/2022 10:43	WG1961949
(T) Barium	*93.6*			*30.0-143*	*12/08/2022 10:43*	WG1961949
(T) Yttrium	*112*			*30.0-136*	*12/08/2022 10:43*	WG1961949

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.431	J	0.261	0.450	12/08/2022 10:43	WG1966869

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0990	J	0.136	0.200	12/06/2022 10:12	WG1966869
(T) Barium-133	*101*			*30.0-143*	*12/06/2022 10:12*	WG1966869

22110359-004
Collected date/time: 11/08/22 10:40

SAMPLE RESULTS - 14

L1557781

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.460		0.233	0.417	12/08/2022 10:43	WG1961949
(T) Barium	*92.0*			*30.0-143*	*12/08/2022 10:43*	WG1961949
(T) Yttrium	*132*			*30.0-136*	*12/08/2022 10:43*	WG1961949

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.505		0.269	0.482	12/08/2022 10:43	WG1966869

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0446	U	0.134	0.241	12/06/2022 10:12	WG1966869
(T) Barium-133	*96.1*			*30.0-143*	*12/06/2022 10:12*	WG1966869

WG1960584

Radiochemistry by Method 904/9320

QUALITY CONTROL SUMMARY

L1557781-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3867956-1 11/25/22 15:42

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	-0.345	U	0.257	0.480
(T) Barium	*94.5*		*94.5*	
(T) Yttrium	*60.6*		*60.6*	

L1552433-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1552433-10 11/30/22 15:39 • (DUP) R3867956-5 11/30/22 15:39

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.519	0.414	0.751	-0.850	0.640	0.751	1	200	1.80	U	20	3
(T) Barium	*96.0*			*89.4*	*89.4*							
(T) Yttrium	*64.2*			*57.2*	*57.2*							

Laboratory Control Sample (LCS)

(LCS) R3867956-2 11/25/22 15:42

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.48	110	80.0-120	
(T) Barium			*97.2*		
(T) Yttrium			*70.2*		

L1552433-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1552433-01 11/25/22 15:42 • (MS) R3867956-3 11/25/22 15:42 • (MSD) R3867956-4 11/25/22 15:42

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	1.58	13.2	12.3	117	107	1	70.0-130			7.20		20
(T) Barium		*85.3*			*92.5*	*100*							
(T) Yttrium		*57.3*			*60.5*	*64.7*							

WG1961949

Radiochemistry by Method 904/9320

QUALITY CONTROL SUMMARY

L1557781-11,12,13,14,15

Method Blank (MB)

(MB) R3870220-1 12/08/22 10:43

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	-0.105	U	0.152	0.290
(T) Barium	*98.1*		*98.1*	
(T) Yttrium	*105*		*105*	

L1552442-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1552442-01 12/08/22 10:43 • (DUP) R3870220-5 12/08/22 10:43

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.845	0.219	0.385	0.551	0.285	0.385	1	42.1	0.818		20	3
(T) Barium	*98.7*			*107*	*107*							
(T) Yttrium	*111*			*107*	*107*							

Laboratory Control Sample (LCS)

(LCS) R3870220-2 12/08/22 10:43

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.49	89.8	80.0-120	
(T) Barium			*99.9*		
(T) Yttrium			*103*		

L1552437-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1552437-16 12/08/22 10:43 • (MS) R3870220-3 12/08/22 10:43 • (MSD) R3870220-4 12/08/22 10:43

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	-0.124	9.64	9.63	96.4	96.3	1	70.0-130			0.0415		20
(T) Barium		*95.0*			*92.4*	*105*							
(T) Yttrium		*106*			*112*	*104*							

WG1966869

Radiochemistry by Method SM7500Ra B M

QUALITY CONTROL SUMMARY

L1557781-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15

Method Blank (MB)

(MB) R3871343-1 12/05/22 21:01

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	-0.0469	U	0.0294	0.0704
(T) Barium-133	*91.4*		*91.4*	

L1557781-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1557781-15 12/06/22 10:12 • (DUP) R3871343-5 12/06/22 08:37

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.495	0.267	0.231	0.387	0.288	0.231	1	24.6	0.277		20	3
(T) Barium-133	*101*			*98.8*	*98.8*							

Laboratory Control Sample (LCS)

(LCS) R3871343-2 12/06/22 08:37

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.02	5.39	107	80.0-120	
(T) Barium-133			*96.5*		

L1557781-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1557781-01 12/06/22 08:37 • (MS) R3871343-3 12/06/22 08:37 • (MSD) R3871343-4 12/06/22 08:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.0344	20.6	20.3	103	101	1	75.0-125			1.42		20
(T) Barium-133		*87.6*			*92.2*	*95.8*							

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

A010

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO O With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Client | QC Level: 2

Project# 22110359

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 22/228.
ICollected at an IL site.
Batch QC is required for all analyses requested. EDD requested.

Contact: Shelly Hennessey | Email: shennessy@teklabinc.com
Requested Due Date: 10-15 day TAT | Billing/PO: 33615 | Phone: 618-344-1004

L557781

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	RAD 226/228											
-01	22110359-001	11/8/22 1333	HN03	Groundwater	✔											
-02	22110359-002	11/8/22 1111	HN03	Groundwater	✔											
	22110359-003	11/8/22 1056	HN03	Groundwater	✔											
	22110359-004	11/8/22 1040	HN03	Groundwater	✔											
	22110359-005	11/8/22 1251	HN03	Groundwater	✔											
-06	22110359-006	11/8/22 1220	HN03	Groundwater	✔											
-07	22110359-007	11/8/22 1147	HN03	Groundwater	✔											
-03	22110359-008	11/8/22 0904	HN03	Groundwater	✔											
-04	22110359-009	11/8/22 1130	HN03	Groundwater	✔											
-05	22110359-010	11/8/22 0926	HN03	Groundwater	✔											
-08	22110359-011	11/8/22 1009	HN03	Groundwater	✔											

*Relinquished By	Date/Time	Received By	Date/Time
	11/11/22 1100		11/11/22 1030

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO O With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Client | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 22/228.
ICollected at an IL site.
Batch QC is required for all analyses requested. EDD requested.

Project# 22110359

Contact: Shelly Hennessey | Email: shennessy@teklabinc.com
Requested Due Date: 10-15 day TAT | Billing/PO: 33615 | Phone: 618-344-1004

U557781

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	RAD 226/228
-07	22110359-012	11/9/22 1012	HN03	Groundwater	✔
-06	22110359-013	11/9/22 1029	HN03	Groundwater	✔
-09	22110359-014	11/9/22 1043	HN03	Groundwater	✔
-10	22110359-015	11/8/22 1316	HN03	Groundwater	✔
			HN03	Groundwater	✔
			HN03	Groundwater	✔
			03	Groundwater	✔
			03	Groundwater	✔
			03	Groundwater	✔
			03	Groundwater	✔
			03	Groundwater	✔

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

Arm

*Relinquished By	Date/Time	Received By	Date/Time
	11.11.22 1700		11/14/22 1030

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

PDF_0563

LF557781

Tracking Numbers	Temperature
FEDEx Ground	Amb
↓	Amb

PDF_0564

11/15-NCF-L1557781 TEKLABIL

R5

Time estimate: oh **Time spent:** oh

Members

HM Hailey Melson (responsible) MB Mark Beasley

Due on *18 November 2022 8:00 AM* for target *Done*

- [x] Login Clarification needed
- [ ] Chain of custody is incomplete
- [ ] Please specify Metals requested
- [ ] Please specify TCLP requested
- [ ] Received additional samples not listed on COC
- [ ] Sample IDs on containers do not match IDs on COC
- [ ] Client did not "X" analysis
- [ ] Chain of Custody is missing
- [ ] If no COC: Received by:_____
- [ ] If no COC: Date/Time:_____
- [ ] If no COC: Temp./Cont.Rec./pH:_____
- [ ] If no COC: Carrier:_____
- [ ] If no COC: Tracking #:_____
- [ ] Client informed by call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [ ] Date/Time:_____
- [ ] PM initials:_____
- [ ] Client Contact:_____

Comments

Hailey Melson *15 November 2022 12:50 PM*

Missing IDs: 22110359-001, -002, -003, -004, -005

Hailey Melson *16 November 2022 1:34 PM*

Samples received today 11/16 and added.

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

November 28, 2022

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells **WorkOrder:** 22110358

Dear Eric Staley:

TEKLAB, INC received 12 samples on 11/10/2022 8:20:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Elizabeth A. Hurley
Director of Customer Service
(618)344-1004 ex 33
ehurley@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 22110358
Report Date: 28-Nov-22

This reporting package includes the following:

Cover Letter	1
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Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 22110358

Client Project: Landfill Monitoring Wells **Report Date:** 28-Nov-22

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110358
Client Project: Landfill Monitoring Wells
Report Date: 28-Nov-22

Qualifiers

# -	Unknown hydrocarbon
B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit
E -	Value above quantitation range
H -	Holding times exceeded
I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 22110358
Report Date: 28-Nov-22

Cooler Receipt Temp: 4.8 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110358
Client Project: Landfill Monitoring Wells
Report Date: 28-Nov-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 22110358
Client Project: Landfill Monitoring Wells
Report Date: 28-Nov-22
Lab ID: 22110358-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 11/09/2022 12:26

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	11/09/2022 12:26	R321383
Depth to water	*	-5.00		**12.15**	ft	1	11/09/2022 12:26	R321383
Depth to water from measuring point	*	0		**14.90**	ft	1	11/09/2022 12:26	R321383
Elevation of groundwater surface	*	0		**540.70**	ft	1	11/09/2022 12:26	R321383
Measuring Point Elevation	*	0		**555.60**	ft	1	11/09/2022 12:26	R321383
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.5**	°F	1	11/09/2022 12:26	R321383
SW-846 9040B								
pH, Field	*	1.00		**6.83**		1	11/09/2022 12:26	R321383
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1740**	µmhos/cm @25C	1	11/09/2022 12:26	R321383
EPA 600 350.1 (DISSOLVED)								
Nitrogen, Ammonia (as N)	NELAP	0.10		**< 0.10**	mg/L	1	11/14/2022 10:32	R321026
EPA 600 353.2 R2.0 (DISSOLVED)								
Nitrogen, Nitrate (as N)	NELAP	0.250		**1.29**	mg/L	5	11/10/2022 18:40	R320983
STANDARD METHODS 2540 C (DISSOLVED) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1100**	mg/L	2.5	11/16/2022 7:38	R321282
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.005		**< 0.005**	mg/L	1	11/17/2022 14:01	200165
SW-846 9036 (DISSOLVED)								
Sulfate	NELAP	100		**344**	mg/L	10	11/21/2022 23:00	R321457
SW-846 9251 (DISSOLVED)								
Chloride	NELAP	8		**40**	mg/L	2	11/21/2022 22:55	R321468
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**7160**	µg/L	1	11/15/2022 19:27	199980
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	11/15/2022 19:27	199980
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	11/15/2022 19:27	199980
Magnesium	NELAP	0.050		**75.6**	mg/L	1	11/15/2022 19:27	199980
Zinc	NELAP	10.0		**11.9**	µg/L	1	11/15/2022 19:27	199980
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**20.8**	µg/L	5	11/15/2022 9:35	199980
Lead	NELAP	1.0		**1.6**	µg/L	5	11/15/2022 9:35	199980
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	11/11/2022 20:46	199966

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 22110358
Report Date: 28-Nov-22

Carrier: Joseph Riley

Completed by: Timothy W. Mathis
On: 10-Nov-22

Received By: ERH

Reviewed by: Elizabeth A. Hurley
On: 10-Nov-22

Pages to follow: Chain of custody 2 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

R101, G110, R111, G112, G113, G120, and G121 were filtered and preserved for the dissolved parameters upon arrival at the laboratory. - TMathis - 11/10/2022 4:11:48 PM

pH strip #83856/83857. - TMathis - 11/10/2022 4:12:54 PM

Additional nitric acid (83726) was needed in G122 and AW-1; additional sodium hydroxide (81662) was needed in all cynide containers upon arrival at the laboratory. - TMathis - 11/10/2022 4:13:15 PM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 22110358

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 4.8 °C COC #

Preserved in: ☑ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES: ADDED TO ALL CYANIDE CONT. ADDED HNO3 TO G122 AND AW-2

Client Comments: *DUP X FILTER IN LAB

Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
D. RILEY C. Collins

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID		Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)
22110358-001	R101	X	11/9/22 1337	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
002	G110	X	1401	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
003	R111	X	1255	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
004	G112	X	1310	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
005	G113	X	1324	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
006	G120	X	1210	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
007	G121	X	1133	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
008	G122		1121	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
009	AW-1		1226	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
010	AW-2	*	1154	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
011	RW-3		11/8/22 1334	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
	11/10/22 0820	Allen Hoskins	11/10/22 0820

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Print PDF

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 2211035 8

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TOS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)
2211035 8-012	DUPLICATE *	11/9/22 1154	Groundwater	1	1	1	1							✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	11/10/22 0820		11/10/22 0820

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

First Quarter 2023

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 13, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 23020985

Dear Eric Staley:

TEKLAB, INC received 7 samples on 2/17/2023 8:50:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23020985
Report Date: 13-Mar-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	14
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23020985

Client Project: Ash Pond Monitoring Wells **Report Date:** 13-Mar-23

Abbr	Definition
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CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
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DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
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NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
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Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23020985
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Mar-23

Qualifiers

# -	Unknown hydrocarbon
B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit
E -	Value above quantitation range
H -	Holding times exceeded
I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23020985
Report Date: 13-Mar-23

Cooler Receipt Temp: 1.2 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23020985
Report Date: 13-Mar-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23020985
Client Project: Ash Pond Monitoring Wells
Report Date: 13-Mar-23
Lab ID: 23020985-001
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 02/16/2023 14:54

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	02/16/2023 14:54	R325158
Depth to water	*	-5.00		**10.82**	ft	1	02/16/2023 14:54	R325158
Depth to water from measuring point	*	0		**13.48**	ft	1	02/16/2023 14:54	R325158
Elevation of groundwater surface	*	0		**525.54**	ft	1	02/16/2023 14:54	R325158
Measuring Point Elevation	*	0		**539.02**	ft	1	02/16/2023 14:54	R325158
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	02/16/2023 14:54	R325158
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**22**	NTU	1	02/16/2023 14:54	R325158
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**51.4**	°F	1	02/16/2023 14:54	R325158
SW-846 9040B								
pH, Field	*	1.00		**7.20**		1	02/16/2023 14:54	R325158
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**626**	µmhos/cm @25C	1	02/16/2023 14:54	R325158
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**328**	mg/L	1	02/20/2023 9:58	R325069
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**16**	mg/L	1	02/27/2023 16:13	R325321
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.36**	mg/L	1	02/24/2023 9:35	R325243
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**45**	mg/L	2	02/27/2023 16:40	R325333
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	02/21/2023 23:57	203052
Barium	NELAP	0.0025		**0.111**	mg/L	1	02/21/2023 23:57	203052
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/21/2023 23:57	203052
Boron	NELAP	0.0200		**0.180**	mg/L	1	02/22/2023 17:56	203052
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/21/2023 23:57	203052
Calcium	NELAP	0.100		**49.3**	mg/L	1	02/21/2023 23:57	203052
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/21/2023 23:57	203052
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/21/2023 23:57	203052
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/21/2023 23:57	203052
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/21/2023 23:57	203052
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/21/2023 23:57	203052
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2023 20:58	203052
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2023 20:58	203052
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2023 20:58	203052
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/18/2023 9:22	203036
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	03/08/2023 0:00	R325892
Radium-228	*	0		**See attached**	pci/L	1	03/08/2023 0:00	R325892

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23020985
Report Date: 13-Mar-23

Carrier: Joe Riley

Completed by:
On:
17-Feb-23
Timothy W. Mathis

Received By: ANC

Reviewed by:
On:
17-Feb-23
Elizabeth A. Hurley

Pages to follow: Chain of custody 2 Extra pages included 19

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 1.2
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #87147. - CET/ehurley - 2/17/2023 11:18:53 AM

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # ~~23021159~~ 23020985

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 1.2 °C CT

Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY

LAB NOTES: PW891447-CRT 2-17-23.

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No

Are these samples known to be hazardous? [ ] Yes [✓] No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [✓] No Permit on file

Client Comments:

*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER

Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

J. RILEY

RESULTS REQUESTED

[✓] Standard [ ] 1-2 Day (100% Surcharge)

[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
	~~BW-3~~		Groundwater	1	3								✓	✓	✓	✓	✓	✓
	~~AP-1~~		Groundwater	1	3								✓	✓	✓	✓	✓	✓
	~~AP-2~~		Groundwater	1	3								✓	✓	✓	✓	✓	✓
	~~AP-3~~		Groundwater	1	3								✓	✓	✓	✓	✓	✓
	~~AP-4~~		Groundwater	1	3								✓	✓	✓	✓	✓	✓
	~~AP-5~~		Groundwater	1	3								✓	✓	✓	✓	✓	✓
	~~AP-6~~		Groundwater	1	3								✓	✓	✓	✓	✓	✓
23020985 01	AP-7	02/16/23 1454	Groundwater	1	3								✓	✓	✓	✓	✓	✓
	~~AP-8~~		Groundwater	1	3								✓	✓	✓	✓	✓	✓
002	AP-9	02/16/23 1517	Groundwater	1	3								✓	✓	✓	✓	✓	✓
003	AP-10	02/16/23 1134	Groundwater	1	3								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	02/17/23 0850	Allison Colin	2/17/23 850

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CRS 2-17-23

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # _____

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
J. KOLEY

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23020885 004	AP-11	02/16/23 1254	Groundwater	1	3								✔	✔	✔	✔	✔	✔
005	AP-12	02/16/23 1310	Groundwater	1	3								✔	✔	✔	✔	✔	✔
006	AP-13	02/16/23 1325	Groundwater	1	3								✔	✔	✔	✔	✔	✔
007	AP-14	02/16/23 1213	Groundwater	1	3								✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	02/17/23 0850	Allison Cole	2/17/23 850

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

March 10, 2023

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 23020985

Dear Shelly Hennessy:

Order No.: 23021632

Summit Environmental Technologies, Inc. received 7 sample(s) on 2/22/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **23021632**
Date: **3/10/2023**

CLIENT: TEKLAB Inc,
Project: 23020985

WorkOrder Narrative:
23021632: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence Sample Notes:
23021632-001A thru -007A Radium-228_NPW(904.0): Samples contained sediment

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **23021632**
Date: **3/10/2023**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **23021632**

10-Mar-23

CLIENT: TEKLAB Inc,
Project: 23020985

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23021632-001	23020985-001		2/16/2023 2:54:00 PM	2/22/2023 11:10:00 AM	Non-Potable Water
23021632-002	23020985-002		2/16/2023 3:11:00 PM	2/22/2023 11:10:00 AM	Non-Potable Water
23021632-003	23020985-003		2/16/2023 11:34:00 AM	2/22/2023 11:10:00 AM	Non-Potable Water
23021632-004	23020985-004		2/16/2023 12:54:00 PM	2/22/2023 11:10:00 AM	Non-Potable Water
23021632-005	23020985-005		2/16/2023 1:10:00 PM	2/22/2023 11:10:00 AM	Non-Potable Water
23021632-006	23020985-006		2/16/2023 1:25:00 PM	2/22/2023 11:10:00 AM	Non-Potable Water
23021632-007	23020985-007		2/16/2023 12:13:00 PM	2/22/2023 11:10:00 AM	Non-Potable Water

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DATES REPORT

WO#: **23021632**

10-Mar-23

Client: TEKLAB Inc,
Project: 23020985

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23021632-001A	23020985-001	2/16/2023 2:54:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		2/27/2023 11:11:00 AM	3/9/2023 2:05:00 PM
				Radium-228 (EPA 904.0)		2/27/2023 11:11:00 AM	3/8/2023 2:24:00 PM
23021632-002A	23020985-002	2/16/2023 3:11:00 PM		Radium-226 (EPA 903.0)		2/27/2023 11:11:00 AM	3/9/2023 2:05:00 PM
				Radium-228 (EPA 904.0)		2/27/2023 11:11:00 AM	3/8/2023 2:24:00 PM
23021632-003A	23020985-003	2/16/2023 11:34:00 AM		Radium-226 (EPA 903.0)		2/27/2023 11:11:00 AM	3/9/2023 2:05:00 PM
				Radium-228 (EPA 904.0)		2/27/2023 11:11:00 AM	3/8/2023 2:24:00 PM
23021632-004A	23020985-004	2/16/2023 12:54:00 PM		Radium-226 (EPA 903.0)		2/27/2023 11:11:00 AM	3/9/2023 2:05:00 PM
				Radium-228 (EPA 904.0)		2/27/2023 11:11:00 AM	3/8/2023 2:24:00 PM
23021632-005A	23020985-005	2/16/2023 1:10:00 PM		Radium-226 (EPA 903.0)		2/27/2023 11:11:00 AM	3/9/2023 2:05:00 PM
				Radium-228 (EPA 904.0)		2/27/2023 11:11:00 AM	3/8/2023 2:24:00 PM
23021632-006A	23020985-006	2/16/2023 1:25:00 PM		Radium-226 (EPA 903.0)		2/27/2023 11:11:00 AM	3/9/2023 2:05:00 PM
				Radium-228 (EPA 904.0)		2/27/2023 11:11:00 AM	3/8/2023 2:24:00 PM
23021632-007A	23020985-007	2/16/2023 12:13:00 PM		Radium-226 (EPA 903.0)		2/27/2023 11:11:00 AM	3/9/2023 2:05:00 PM
				Radium-228 (EPA 904.0)		2/27/2023 11:11:00 AM	3/8/2023 2:24:00 PM

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23021632**

Date Reported: **3/10/2023**

CLIENT: TEKLAB Inc,

Collection Date: 2/16/2023 2:54:00 PM

Project: 23020985

Lab ID: 23021632-001

Matrix: NON-POTABLE WATER

Client Sample ID: 23020985-001

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.12	1	3/9/2023 2:05:00 PM
Yield	1.00					1	3/9/2023 2:05:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.45	1	3/8/2023 2:24:00 PM
Yield	1.00					1	3/8/2023 2:24:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23021632**
10-Mar-23

Client: TEKLAB Inc,
Project: 23020985 **BatchID:** **63147**

Sample ID: **MB-63147** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159591**
Client ID: **PBW** Batch ID: **63147** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2023** SeqNo: **4241639**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCSD-63147** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159591**
Client ID: **LCSS02** Batch ID: **63147** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2023** SeqNo: **4241641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.62	1.00	5.000	0	72.4	70	130	2.390	40.9	20	R
Yield	0.950			0	0			0.9900	4.12		

Sample ID: **RLC-63147** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159591**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2023** SeqNo: **4241643**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	81.0	50	150				
Yield	0.970			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23021632**
10-Mar-23

Client: TEKLAB Inc,
Project: 23020985 **BatchID:** **63147**

Sample ID: **RLCD-63147** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159591**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2023** SeqNo: **4241644**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.15	1.00	1.000	0	115	50	150				
Yield	1.00			0	0						

Sample ID: **23021630-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159591**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2023** SeqNo: **4241645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.99	1.00	5.000	0	79.8	70	130				
Yield	0.850			0.9400	0						

Sample ID: **23021631-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159591**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2023** SeqNo: **4241650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Analytical Laboratories

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23021632**
10-Mar-23

Client: TEKLAB Inc,
Project: 23020985 **BatchID:** **63147**

Sample ID: **23021637-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159591**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2023** SeqNo: **4241652**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23021632**
10-Mar-23

Client: TEKLAB Inc,
Project: 23020985 **BatchID:** **63147**

Sample ID: **MB-63147** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159596**
Client ID: **PBW** Batch ID: **63147** TestNo: **E903.0** **E903-904** Analysis Date: **3/9/2023** SeqNo: **4241980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-63147** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159596**
Client ID: **LCSW** Batch ID: **63147** TestNo: **E903.0** **E903-904** Analysis Date: **3/9/2023** SeqNo: **4241981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.76	1.00	5.000	0	115	70	130				

Sample ID: **LCSD-63147** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159596**
Client ID: **LCSS02** Batch ID: **63147** TestNo: **E903.0** **E903-904** Analysis Date: **3/9/2023** SeqNo: **4241982**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.46	1.00	5.000	0	109	70	130	5.760	5.35	20	

Sample ID: **RLC-63147** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159596**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E903.0** **E903-904** Analysis Date: **3/9/2023** SeqNo: **4241984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23021632**
10-Mar-23

Client: TEKLAB Inc,
Project: 23020985 **BatchID:** **63147**

Sample ID: **RLC-63147** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159596**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E903.0** **E903-904** Analysis Date: **3/9/2023** SeqNo: **4241984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	85.0	50	150				

Sample ID: **RLCD-63147** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159596**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E903.0** **E903-904** Analysis Date: **3/9/2023** SeqNo: **4241985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.24	1.00	1.000	0	124	50	150				

Sample ID: **23021637-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/27/2023** RunNo: **159596**
Client ID: **BatchQC** Batch ID: **63147** TestNo: **E903.0** **E903-904** Analysis Date: **3/9/2023** SeqNo: **4241987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							0.9600	4.08	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

TEKLAB, INC. Chain of Custody

23021632

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Cooler Temp: ____ Sampler: CLIENT QC Level: 2

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226 and 228) by method EPA903.0/904.0
on your standard turnaround time.
Batch QC is required with the report. Receipt summary requested.

Project# 23020985

Contact: Shelly Hennessey Email: shennessey@teklabinc.com State of Origin: IL
Requested Due Date: 20 business days or less Billing/PO: 34003 Phone: (618) 344-1004 ext.

PLEASE NOTE:
NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.
Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228	cpm	
	23020985-001	2/16/23 1454	HNO3	Aqueous	☑	☑	40	1
	23020985-002	2/16/23 1511	HNO3	Aqueous	☑	☑	20	1
	23020985-003	2/16/23 1134	HNO3	Aqueous	☑	☑	23	1
	23020985-004	2/16/23 1254	HNO3	Aqueous	☑	☑	21	1
	23020985-005	2/16/23 1310	HNO3	Aqueous	☑	☑	11	1
	23020985-006	2/16/23 1325	HNO3	Aqueous	☑	☑	20	1
	23020985-007	2/16/23 1213	HNO3	Aqueous	☑	☑	30	1
			Unpres	Aqueous	☐	☐		
			Unpres	Aqueous	☐	☐		
			Unpres	Aqueous	☐	☐		
			Unpres	Aqueous	☐	☐		

*Relinquished By	Date/Time	Received By	Date/Time
	2-20-23		2/22/23 1110
			17.0+0.3=17.3

Fedex cooler noice

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights,

SubCocRevA

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **23021632** RcptNo: **1**

Logged by:	**Anthony W. Britton**	**2/22/2023 11:10:00 AM**	Anthony Britton
Completed By:	**Anthony W. Britton**	**2/24/2023 9:19:09 AM**	Anthony Britton
Reviewed By:	**Jennifer Woolf**	**2/24/2023 10:27:12 AM**	Jennifer Woolf

Chain of Custody

1.	Were seals intact?	Yes ☑	No ☐	Not Present ☐
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?	FedEx		

Log In

4.	Coolers are present?	Yes ☐	No ☑	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	17.3	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 07, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 23010325

Dear Eric Staley:

TEKLAB, INC received 15 samples on 1/30/2023 9:20:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23010325
Report Date: 07-Mar-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	16
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23010325

Client Project: Ash Pond Monitoring Wells **Report Date:** 07-Mar-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23010325
Client Project: Ash Pond Monitoring Wells
Report Date: 07-Mar-23

Qualifiers

# -	Unknown hydrocarbon
B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit
E -	Value above quantitation range
H -	Holding times exceeded
I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23010325
Report Date: 07-Mar-23

Cooler Receipt Temp: 0.0 °C

An employee of Teklab, Inc. collected the sample(s).

Wells AP-7, AP-9, AP-10, AP-11, AP-12, AP-13 and AP-14 were frozen and could not be collected. JR/JC 1/30/23

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23010325
Report Date: 07-Mar-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23010325
Client Project: Ash Pond Monitoring Wells
Report Date: 07-Mar-23
Lab ID: 23010325-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 01/26/2023 14:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	01/26/2023 14:40	R324367
Depth to water	*	-5.00		**6.60**	ft	1	01/26/2023 14:40	R324367
Depth to water from measuring point	*	0		**9.30**	ft	1	01/26/2023 14:40	R324367
Elevation of groundwater surface	*	0		**530.20**	ft	1	01/26/2023 14:40	R324367
Measuring Point Elevation	*	0		**539.50**	ft	1	01/26/2023 14:40	R324367
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	01/26/2023 14:40	R324367
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**170**	NTU	1	01/26/2023 14:40	R324367
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**41.9**	°F	1	01/26/2023 14:40	R324367
SW-846 9040B								
pH, Field	*	1.00		**6.15**		1	01/26/2023 14:40	R324367
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1640**	µmhos/cm @25C	1	01/26/2023 14:40	R324367
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**435**	mg/L	2.5	01/31/2023 8:38	R324271
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	02/06/2023 13:57	R324440
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.46**	mg/L	1	02/07/2023 9:56	R324472
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**29**	mg/L	1	02/06/2023 13:57	R324453
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.169**	mg/L	1	02/02/2023 12:40	202449
Barium	NELAP	0.0025		**0.168**	mg/L	1	02/02/2023 12:40	202449
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/02/2023 12:40	202449
Boron	NELAP	0.0200		**0.175**	mg/L	1	02/02/2023 12:40	202449
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/02/2023 12:40	202449
Calcium	NELAP	0.100		**67.8**	mg/L	1	02/02/2023 12:40	202449
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/02/2023 12:40	202449
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/02/2023 12:40	202449
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/02/2023 12:40	202449
Lithium	NELAP	0.0050		**0.0179**	mg/L	1	02/06/2023 17:28	202449
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/02/2023 12:40	202449
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2023 0:32	202449
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/03/2023 16:36	202449
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/03/2023 16:36	202449
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/01/2023 18:13	202480
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/14/2023 0:00	R325259
Radium-228	*	0		**See Attached**	pci/L	1	02/14/2023 0:00	R325259

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23010325
Client Project: Ash Pond Monitoring Wells
Report Date: 07-Mar-23
Lab ID: 23010325-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 01/27/2023 10:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	01/27/2023 10:55	R324367
Depth to water	*	-5.00		**4.40**	ft	1	01/27/2023 10:55	R324367
Depth to water from measuring point	*	0		**6.90**	ft	1	01/27/2023 10:55	R324367
Elevation of groundwater surface	*	0		**529.20**	ft	1	01/27/2023 10:55	R324367
Measuring Point Elevation	*	0		**536.10**	ft	1	01/27/2023 10:55	R324367
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	01/27/2023 10:55	R324367
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.9**	NTU	1	01/27/2023 10:55	R324367
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.6**	°F	1	01/27/2023 10:55	R324367
SW-846 9040B								
pH, Field	*	1.00		**6.46**		1	01/27/2023 10:55	R324367
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2440**	µmhos/cm @25C	1	01/27/2023 10:55	R324367
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1180**	mg/L	2.5	01/31/2023 8:39	R324271
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**485**	mg/L	20	02/06/2023 14:45	R324440
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.24**	mg/L	1	02/07/2023 10:00	R324472
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**36**	mg/L	1	02/06/2023 14:27	R324453
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	02/02/2023 13:13	202449
Barium	NELAP	0.0025		**0.0744**	mg/L	1	02/02/2023 13:13	202449
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/02/2023 13:13	202449
Boron	NELAP	0.0200		**3.94**	mg/L	1	02/02/2023 13:13	202449
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/02/2023 13:13	202449
Calcium	NELAP	0.100		**217**	mg/L	1	02/02/2023 13:13	202449
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/02/2023 13:13	202449
Cobalt	NELAP	0.0050		**0.0091**	mg/L	1	02/02/2023 13:13	202449
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/02/2023 13:13	202449
Lithium	NELAP	0.0050		**0.0476**	mg/L	1	02/06/2023 17:30	202449
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/02/2023 13:13	202449
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2023 1:00	202449
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/03/2023 16:09	202449
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/03/2023 16:09	202449
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/01/2023 18:17	202480
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/14/2023 0:00	R325259
Radium-228	*	0		**See Attached**	pci/L	1	02/14/2023 0:00	R325259

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23010325
Client Project: Ash Pond Monitoring Wells
Report Date: 07-Mar-23
Lab ID: 23010325-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 01/27/2023 10:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	01/27/2023 10:35	R324367
Depth to water	*	-5.00		**7.77**	ft	1	01/27/2023 10:35	R324367
Depth to water from measuring point	*	0		**9.47**	ft	1	01/27/2023 10:35	R324367
Elevation of groundwater surface	*	0		**525.93**	ft	1	01/27/2023 10:35	R324367
Measuring Point Elevation	*	0		**535.40**	ft	1	01/27/2023 10:35	R324367
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	01/27/2023 10:35	R324367
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**< 1.0**	NTU	1	01/27/2023 10:35	R324367
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.9**	°F	1	01/27/2023 10:35	R324367
SW-846 9040B								
pH, Field	*	1.00		**6.58**		1	01/27/2023 10:35	R324367
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2090**	µmhos/cm @25C	1	01/27/2023 10:35	R324367
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1040**	mg/L	2.5	01/31/2023 8:39	R324271
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**461**	mg/L	10	02/06/2023 14:53	R324440
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.22**	mg/L	1	02/07/2023 10:01	R324472
SW-846 9251 (TOTAL)								
Chloride	NELAP	5		**60**	mg/L	5	02/06/2023 14:48	R324453
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	02/02/2023 13:15	202449
Barium	NELAP	0.0025		**0.111**	mg/L	1	02/02/2023 13:15	202449
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/02/2023 13:15	202449
Boron	NELAP	0.0200		**14.5**	mg/L	1	02/02/2023 13:15	202449
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/02/2023 13:15	202449
Calcium	NELAP	0.100		**161**	mg/L	1	02/02/2023 13:15	202449
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/02/2023 13:15	202449
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/02/2023 13:15	202449
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/02/2023 13:15	202449
Lithium	NELAP	0.0050		**0.0501**	mg/L	1	02/06/2023 17:44	202449
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/02/2023 13:15	202449
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2023 1:05	202449
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/03/2023 16:14	202449
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/03/2023 16:14	202449
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/01/2023 18:24	202480
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/14/2023 0:00	R325259
Radium-228	*	0		**See Attached**	pci/L	1	02/14/2023 0:00	R325259

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23010325
Client Project: Ash Pond Monitoring Wells
Report Date: 07-Mar-23
Lab ID: 23010325-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 01/27/2023 11:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	01/27/2023 11:45	R324367
Depth to water	*	-5.00		**2.30**	ft	1	01/27/2023 11:45	R324367
Depth to water from measuring point	*	0		**5.20**	ft	1	01/27/2023 11:45	R324367
Elevation of groundwater surface	*	0		**532.00**	ft	1	01/27/2023 11:45	R324367
Measuring Point Elevation	*	0		**537.20**	ft	1	01/27/2023 11:45	R324367
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	01/27/2023 11:45	R324367
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.0**	NTU	1	01/27/2023 11:45	R324367
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.5**	°F	1	01/27/2023 11:45	R324367
SW-846 9040B								
pH, Field	*	1.00		**6.86**		1	01/27/2023 11:45	R324367
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1570**	µmhos/cm @25C	1	01/27/2023 11:45	R324367
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**555**	mg/L	2.5	01/31/2023 8:51	R324271
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	02/06/2023 15:47	R324440
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.30**	mg/L	1	02/07/2023 10:09	R324472
SW-846 9251 (TOTAL)								
Chloride	NELAP	1		**26**	mg/L	1	02/06/2023 15:46	R324453
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0336**	mg/L	1	02/02/2023 13:21	202449
Barium	NELAP	0.0025		**0.360**	mg/L	1	02/02/2023 13:21	202449
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/02/2023 13:21	202449
Boron	NELAP	0.0200		**0.0849**	mg/L	1	02/02/2023 13:21	202449
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/02/2023 13:21	202449
Calcium	NELAP	0.100		**95.1**	mg/L	1	02/02/2023 13:21	202449
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/02/2023 13:21	202449
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/02/2023 13:21	202449
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/02/2023 13:21	202449
Lithium	NELAP	0.0050		**0.0201**	mg/L	1	02/06/2023 17:49	202449
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/02/2023 13:21	202449
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2023 1:27	202449
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2023 1:27	202449
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/07/2023 1:27	202449
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/01/2023 18:38	202480
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/14/2023 0:00	R325259
Radium-228	*	0		**See Attached**	pci/L	1	02/14/2023 0:00	R325259

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23010325
Report Date: 07-Mar-23

Carrier: John Riley

Completed by: Lindsey Maddox
On: 30-Jan-23

Received By: ANC

Reviewed by: Shelly A. Hennessy
On: 30-Jan-23

Pages to follow: Chain of custody 2 Extra pages included 23

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 0.0
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #87147 TSM. - lmaddox - 1/30/2023 10:36:29 AM

Additional Nitric Acid (86511) was needed in the 2 liter containers of AP-1, AP-2, AP-3, AP-4(2 of 2) upon arrival at the laboratory. - lmaddox - 1/30/2023 10:36:48 AM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23010325

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 0 °C #5
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: 87147 TM Added HNO_3(8051l) to AP-1 (1 of 2), AP-2, AP-3, AP-4 (1 of 2)

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [✓] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
T RILEY / J COLP

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23010325-001	RW-3	*14:40 01/26/23	Groundwater	1	3								✓	✓	✓	✓	✓	✓
002	AP-1	*11:19 01/27/23	Groundwater	1	3								✓	✓	✓	✓	✓	✓
003	AP-2	01/27/23 1056	Groundwater	1	3								✓	✓	✓	✓	✓	✓
004	AP-3	01/27/23 1035	Groundwater	1	3								✓	✓	✓	✓	✓	✓
005	AP-4	01/26/23 1351	Groundwater	1	3								✓	✓	✓	✓	✓	✓
006	AP-5	01/27/23 1240	Groundwater	1	3								✓	✓	✓	✓	✓	✓
007	AP-6	01/27/23 1205	Groundwater	1	3								✓	✓	✓	✓	✓	✓
008	AP-7	FROZEN	Groundwater	1	3								✓	✓	✓	✓	✓	✓
009	AP-8	01/27/23 1145	Groundwater	1	3								✓	✓	✓	✓	✓	✓
010	AP-9	FROZEN	Groundwater	1	3								✓	✓	✓	✓	✓	✓
011	AP-10	FROZEN	Groundwater	1	3								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	01/31/23 0920	Allison Colvin	1/20/23 0920

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23010325

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23010325-012	AP-11	FROZEN	Groundwater	1	3								✔	✔	✔	✔	✔	✔
013	AP-12	FROZEN	Groundwater	1	3								✔	✔	✔	✔	✔	✔
014	AP-13	FROZEN	Groundwater	1	3								✔	✔	✔	✔	✔	✔
015	AP-14	FROZEN	Groundwater	1	3								✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater										✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	01/30/23 0720		

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Summit Environmental Technologies, Inc.
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Website: http://www.settek.com

February 22, 2023

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 23010325

Dear Shelly Hennessy:

Order No.: 23020178

Summit Environmental Technologies, Inc. received 8 sample(s) on 2/2/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **23020178**
Date: **2/22/2023**

CLIENT: TEKLAB Inc,
Project: 23010325

WorkOrder Narrative:
23020178: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence QC Notes:
LCSD-62679 Radium-226_DW(903.0): LCSD-62679 exhibited a high recovery and RPD, the batch is in control by LCS/QCS-62679

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Qualifiers and Acronyms

WO#: **23020178**
Date: **2/22/2023**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **23020178**

22-Feb-23

CLIENT: TEKLAB Inc,
Project: 23010325

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23020178-001	23010325-001		1/26/2023 2:20:00 PM	2/2/2023 1:05:00 PM	Non-Potable Water
23020178-002	23010325-002		1/27/2023 1:19:00 PM	2/2/2023 1:05:00 PM	Non-Potable Water
23020178-003	23010325-003		1/27/2023 10:55:00 AM	2/2/2023 1:05:00 PM	Non-Potable Water
23020178-004	23010325-004		1/27/2023 10:35:00 AM	2/2/2023 1:05:00 PM	Non-Potable Water
23020178-005	23010325-005		1/26/2023 1:51:00 PM	2/2/2023 1:05:00 PM	Non-Potable Water
23020178-006	23010325-006		1/27/2023 12:40:00 PM	2/2/2023 1:05:00 PM	Non-Potable Water
23020178-007	23010325-007		1/27/2023 12:05:00 PM	2/2/2023 1:05:00 PM	Non-Potable Water
23020178-008	23010325-009		1/27/2023 11:45:00 AM	2/2/2023 1:05:00 PM	Non-Potable Water

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DATES REPORT

WO#: **23020178**

22-Feb-23

Client: TEKLAB Inc,
Project: 23010325

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23020178-001A	23010325-001	1/26/2023 2:20:00 PM	Non-Potable Water	Combined Radium (EPA903+904)		2/7/2023 10:11:00 AM	2/17/2023 5:17:57 PM
				Radium-226 (EPA 903.0)		2/7/2023 10:11:00 AM	2/15/2023
				Radium-228 (EPA 904.0)		2/7/2023 10:11:00 AM	2/14/2023 1:39:00 PM
23020178-002A	23010325-002	1/27/2023 1:19:00 PM		Combined Radium (EPA903+904)		2/7/2023 10:11:00 AM	2/17/2023 5:17:57 PM
				Radium-226 (EPA 903.0)		2/7/2023 10:11:00 AM	2/15/2023
				Radium-228 (EPA 904.0)		2/7/2023 10:11:00 AM	2/14/2023 1:39:00 PM
23020178-003A	23010325-003	1/27/2023 10:55:00 AM		Combined Radium (EPA903+904)		2/7/2023 10:11:00 AM	2/17/2023 5:17:57 PM
				Radium-226 (EPA 903.0)		2/7/2023 10:11:00 AM	2/15/2023
				Radium-228 (EPA 904.0)		2/7/2023 10:11:00 AM	2/14/2023 1:39:00 PM
23020178-004A	23010325-004	1/27/2023 10:35:00 AM		Combined Radium (EPA903+904)		2/7/2023 10:11:00 AM	2/17/2023 5:17:57 PM
				Radium-226 (EPA 903.0)		2/7/2023 10:11:00 AM	2/15/2023
				Radium-228 (EPA 904.0)		2/7/2023 10:11:00 AM	2/14/2023 1:39:00 PM
23020178-005A	23010325-005	1/26/2023 1:51:00 PM		Combined Radium (EPA903+904)		2/7/2023 10:11:00 AM	2/17/2023 5:17:57 PM
				Radium-226 (EPA 903.0)		2/7/2023 10:11:00 AM	2/15/2023
				Radium-228 (EPA 904.0)		2/7/2023 10:11:00 AM	2/14/2023 1:39:00 PM
23020178-006A	23010325-006	1/27/2023 12:40:00 PM		Combined Radium (EPA903+904)		2/7/2023 10:11:00 AM	2/17/2023 5:17:57 PM
				Radium-226 (EPA 903.0)		2/7/2023 10:11:00 AM	2/15/2023
				Radium-228 (EPA 904.0)		2/7/2023 10:11:00 AM	2/14/2023 1:39:00 PM
23020178-007A	23010325-007	1/27/2023 12:05:00 PM		Combined Radium (EPA903+904)		2/7/2023 10:11:00 AM	2/17/2023 5:17:57 PM
				Radium-226 (EPA 903.0)		2/7/2023 10:11:00 AM	2/15/2023
				Radium-228 (EPA 904.0)		2/7/2023 10:11:00 AM	2/14/2023 1:39:00 PM
23020178-008A	23010325-009	1/27/2023 11:45:00 AM		Combined Radium (EPA903+904)		2/7/2023 10:11:00 AM	2/17/2023 5:17:57 PM
				Radium-226 (EPA 903.0)		2/7/2023 10:11:00 AM	2/15/2023

Original

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DATES REPORT

WO#: **23020178**

22-Feb-23

Client: TEKLAB Inc,
Project: 23010325

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23020178-008A	23010325-009	1/27/2023 11:45:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		2/7/2023 10:11:00 AM	2/14/2023 1:39:00 PM

Original

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Analytical Report

(consolidated)

WO#: **23020178**

Date Reported: **2/22/2023**

CLIENT: TEKLAB Inc,

Collection Date: 1/26/2023 2:20:00 PM

Project: 23010325

Lab ID: 23020178-001

Matrix: NON-POTABLE WATER

Client Sample ID: 23010325-001

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **HDJ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.28	2.00	U	pCi/L	± 0.54	1	2/17/2023 5:17:57 PM
RAD226/228					**E903.0**	**E903-904**	Analyst: **HDJ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.28	1.00	U	pCi/L	± 0.11	1	2/15/2023
Yield	1					1	2/15/2023
RAD226/228					**E904.0**	**E903-904**	Analyst: **HDJ**
RADIUM-228 (EPA 904.0)							
Radium-228	-0.37	1.00	U	pCi/L	± 0.43	1	2/14/2023 1:39:00 PM
Yield	0.98					1	2/14/2023 1:39:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23020178**

Date Reported: **2/22/2023**

CLIENT: TEKLAB Inc,

Collection Date: 1/27/2023 10:55:00 AM

Project: 23010325

Lab ID: 23020178-003

Matrix: NON-POTABLE WATER

Client Sample ID: 23010325-003

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **HDJ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.87	2.00	U	pCi/L	± 0.56	1	2/17/2023 5:17:57 PM
RAD226/228					**E903.0**	**E903-904**	Analyst: **HDJ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.41	1.00	U	pCi/L	± 0.14	1	2/15/2023
Yield	0.91					1	2/15/2023
RAD226/228					**E904.0**	**E903-904**	Analyst: **HDJ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.46	1.00	U	pCi/L	± 0.42	1	2/14/2023 1:39:00 PM
Yield	0.92					1	2/14/2023 1:39:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23020178**

Date Reported: **2/22/2023**

CLIENT: TEKLAB Inc,

Collection Date: 1/27/2023 10:35:00 AM

Project: 23010325

Lab ID: 23020178-004

Matrix: NON-POTABLE WATER

Client Sample ID: 23010325-004

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **HDJ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.54	2.00	U	pCi/L	± 0.53	1	2/17/2023 5:17:57 PM
RAD226/228					**E903.0**	**E903-904**	Analyst: **HDJ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.13	1.00	U	pCi/L	± 0.08	1	2/15/2023
Yield	0.97					1	2/15/2023
RAD226/228					**E904.0**	**E903-904**	Analyst: **HDJ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.41	1.00	U	pCi/L	± 0.45	1	2/14/2023 1:39:00 PM
Yield	0.97					1	2/14/2023 1:39:00 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23020178**

Date Reported: **2/22/2023**

CLIENT: TEKLAB Inc,

Collection Date: 1/27/2023 11:45:00 AM

Project: 23010325

Lab ID: 23020178-008

Matrix: NON-POTABLE WATER

Client Sample ID: 23010325-009

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **HDJ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	1.98	2.00	U	pCi/L	± 0.75	1	2/17/2023 5:17:57 PM
RAD226/228					**E903.0**	**E903-904**	Analyst: **HDJ**
RADIUM-226 (EPA 903.0)							
Radium-226	1.11	1.00		pCi/L	± 0.21	1	2/15/2023
Yield	1					1	2/15/2023
RAD226/228					**E904.0**	**E903-904**	Analyst: **HDJ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.87	1.00	J	pCi/L	± 0.54	1	2/14/2023 1:39:00 PM
Yield	1					1	2/14/2023 1:39:00 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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QC SUMMARY REPORT

WO#: **23020178**
22-Feb-23

Client: TEKLAB Inc,
Project: 23010325 **BatchID:** **62679**

Sample ID: **23020178-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158366**
Client ID: **23010325-001** Batch ID: **62679** TestNo: **E904.0** **E903-904** Analysis Date: **2/14/2023** SeqNo: **4210556**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.44	1.00		0	0			0	0	30	U
Yield	1			0	0			0.9800	2.02		

Sample ID: **23020178-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158366**
Client ID: **23010325-002** Batch ID: **62679** TestNo: **E904.0** **E903-904** Analysis Date: **2/14/2023** SeqNo: **4210558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.24	1.00		0	0			0.9300	28.6	30	
Yield	1			0	0			0.9600	4.08		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23020178**
22-Feb-23

Client: TEKLAB Inc,
Project: 23010325 **BatchID:** **62679**

Sample ID: **MB-62679** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158366**
Client ID: **PBW** Batch ID: **62679** TestNo: **E904.0** **E903-904** Analysis Date: **2/14/2023** SeqNo: **4210547**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						U
Yield	0.810			0	0						

Sample ID: **LCS-62679** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158366**
Client ID: **LCSW** Batch ID: **62679** TestNo: **E904.0** **E903-904** Analysis Date: **2/14/2023** SeqNo: **4210548**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.71	1.00	5.000	0	74.2	70	130				
Yield	0.920			0	0						

Sample ID: **LCSD-62679** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158366**
Client ID: **LCSS02** Batch ID: **62679** TestNo: **E904.0** **E903-904** Analysis Date: **2/14/2023** SeqNo: **4210549**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.54	1.00	5.000	0	70.8	70	130	3.710	4.69	20	
Yield	0.860			0	0			0.9200	6.74		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23020178**
22-Feb-23

Client: TEKLAB Inc,
Project: 23010325 **BatchID:** **62679**

Sample ID: **RLC-62679** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158366**
Client ID: **BatchQC** Batch ID: **62679** TestNo: **E904.0** **E903-904** Analysis Date: **2/14/2023** SeqNo: **4210551**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.21	1.00	1.000	0	121	50	150				
Yield	0.920			0	0						

Sample ID: **RLCD-62679** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158366**
Client ID: **BatchQC** Batch ID: **62679** TestNo: **E904.0** **E903-904** Analysis Date: **2/14/2023** SeqNo: **4210552**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.900	1.00	1.000	0	90.0	50	150				J
Yield	0.910			0	0						

Sample ID: **23020315-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158366**
Client ID: **BatchQC** Batch ID: **62679** TestNo: **E904.0** **E903-904** Analysis Date: **2/14/2023** SeqNo: **4210553**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.22	1.00	5.000	0	84.4	70	130				
Yield	1.00			0.9700	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23020178**
22-Feb-23

Client: TEKLAB Inc,
Project: 23010325 **BatchID:** **62679**

Sample ID: **23020178-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158369**
Client ID: **23010325-001** Batch ID: **62679** TestNo: **E903.0** **E903-904** Analysis Date: **2/15/2023** SeqNo: **4210647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.39	1.00						0	0	30	U
Yield	0.99							1.000	1.01	0	

Sample ID: **23020178-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158369**
Client ID: **23010325-002** Batch ID: **62679** TestNo: **E903.0** **E903-904** Analysis Date: **2/15/2023** SeqNo: **4210649**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.64	1.00						0	0	30	U
Yield	0.98							0.9600	2.06	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23020178**
22-Feb-23

Client: TEKLAB Inc,
Project: 23010325 **BatchID:** **62679**

Sample ID: **MB-62679** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158369**
Client ID: **PBW** Batch ID: **62679** TestNo: **E903.0** **E903-904** Analysis Date: **2/15/2023** SeqNo: **4210638**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									U
Yield	0.850										

Sample ID: **LCS-62679** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158369**
Client ID: **LCSW** Batch ID: **62679** TestNo: **E903.0** **E903-904** Analysis Date: **2/15/2023** SeqNo: **4210639**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.28	1.00	5.000	0	106	70	130				QLR

Sample ID: **RLC-62679** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158369**
Client ID: **BatchQC** Batch ID: **62679** TestNo: **E903.0** **E903-904** Analysis Date: **2/15/2023** SeqNo: **4210642**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.29	1.00	1.000	0	129	50	150				

Sample ID: **RLCD-62679** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/7/2023** RunNo: **158369**
Client ID: **BatchQC** Batch ID: **62679** TestNo: **E903.0** **E903-904** Analysis Date: **2/15/2023** SeqNo: **4210643**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Analytical Laboratories

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23020178**
22-Feb-23

Client: TEKLAB Inc,
Project: 23010325 **BatchID:** **62679**

Sample ID: **RLCD-62679**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/7/2023**	RunNo: **158369**
Client ID: **BatchQC**	Batch ID: **62679**	TestNo: **E903.0**	**E903-904**	Analysis Date: **2/15/2023**	SeqNo: **4210643**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.22	1.00	1.000	0	122	50	150				

Sample ID: **23020315-001AMS**	SampType: **MS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/7/2023**	RunNo: **158369**
Client ID: **BatchQC**	Batch ID: **62679**	TestNo: **E903.0**	**E903-904**	Analysis Date: **2/15/2023**	SeqNo: **4210644**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.63	1.00	5.000	0	113	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: QC Level: 3

Comments: **Please issue reports and invoices via email only**
Please analyze for Radium (226, 228, and combined) by method EPA903.0/904.0
on standard TAT Please include negative values (no ND).
Batch QC and CCR EDD are required. Receipt summary requested

23020178

Project# 23010325

Contact: Shelly A Hennessy Email: SHennessy@TeklabInc.com
Requested Due Date: 20 business days or less Billing/PO: 33924 Phone: 618-344-1004

State of Origin:

PLEASE NOTE:
NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.
Changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228	Combined Radium	GPM		pH							
	23010325-001	1/26/23 1420	HNO3	Groundwater	✔	✔	✔	37	23	1	1						
	23010325-002	1/27/23 1319	HNO3	Groundwater	✔	✔	✔	24	23	1	1						
	23010325-003	1/27/23 1055	HNO3	Groundwater	✔	✔	✔	20	23	1	1						
	23010325-004	1/27/23 1035	HNO3	Groundwater	✔	✔	✔	30	10	1	1						
	23010325-005	1/26/23 1351	HNO3	Groundwater	✔	✔	✔	16	20	1	1						
	23010325-006	1/27/23 1240	HNO3	Groundwater	✔	✔	✔	20	27	1	1						
	23010325-007	1/27/23 1205	HNO3	Groundwater	✔	✔	✔	23	27	1	1						
	23010325-009	1/27/23 1145	HNO3	Groundwater	✔	✔	✔	16	40	1	1						
			Unpres	Aqueous													
			Unpres	Aqueous													
			Unpres	Aqueous													

*Relinquished By	Date/Time	Received By	Date/Time
	1/30/23		
		Fedex	2/2/23 1325

2 coolers @ 4.6+0.3 = 4.9 @ 4.5+0.3 = 4.8

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

PDF_0628

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **23020178** RcptNo: **1**

Logged by:	**Anthony W. Britton**	**2/2/2023 1:05:00 PM**	Anthony Britton
Completed By:	**Anthony W. Britton**	**2/2/2023 7:00:57 PM**	Anthony Britton
Reviewed By:	**Jennifer Woolf**	**2/3/2023 10:02:23 AM**	Jennifer Woolf

Chain of Custody

1.	Were seals intact?	Yes ☑	No ☐	Not Present ☐
2.	Is Chain of Custody complete?	Yes ☐	No ☑	Not Present ☐
3.	How was the sample delivered?	FedEx		

Log In

4.	Coolers are present?	Yes ☐	No ☑	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

18. Additional remarks:

IL per email
project address not included

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Not Present			

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
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Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **23020178** RcptNo: **1**

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	4.9	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 07, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells **WorkOrder:** 23010324

Dear Eric Staley:

TEKLAB, INC received 12 samples on 1/27/2023 8:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 23010324
Report Date: 07-Mar-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23010324

Client Project: Landfill Monitoring Wells **Report Date:** 07-Mar-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23010324
Client Project: Landfill Monitoring Wells
Report Date: 07-Mar-23

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 23010324
Report Date: 07-Mar-23

Cooler Receipt Temp: 0.6 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23010324
Client Project: Landfill Monitoring Wells
Report Date: 07-Mar-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2023	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2023	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23010324
Client Project: Landfill Monitoring Wells
Report Date: 07-Mar-23
Lab ID: 23010324-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 01/26/2023 9:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	01/26/2023 9:57	R324169
Depth to water	*	-5.00		**10.40**	ft	1	01/26/2023 9:57	R324169
Depth to water from measuring point	*	0		**13.15**	ft	1	01/26/2023 9:57	R324169
Elevation of groundwater surface	*	0		**542.45**	ft	1	01/26/2023 9:57	R324169
Measuring Point Elevation	*	0		**555.60**	ft	1	01/26/2023 9:57	R324169
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.9**	°F	1	01/26/2023 9:57	R324169
SW-846 9040B								
pH, Field	*	1.00		**6.54**		1	01/26/2023 9:57	R324169
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1940**	µmhos/cm @25C	1	01/26/2023 9:57	R324169
EPA 600 350.1 (DISSOLVED)								
Nitrogen, Ammonia (as N)	NELAP	0.20		**2.05**	mg/L	2	02/01/2023 11:55	R324270
EPA 600 353.2 R2.0 (DISSOLVED)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**< 0.050**	mg/L	1	01/27/2023 13:28	R324122
STANDARD METHODS 2540 C (DISSOLVED) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1150**	mg/L	2.5	01/31/2023 8:58	R324271
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.005		**< 0.005**	mg/L	1	01/30/2023 20:10	202398
SW-846 9036 (DISSOLVED)								
Sulfate	NELAP	100		**378**	mg/L	10	02/01/2023 14:14	R324278
SW-846 9251 (DISSOLVED)								
Chloride	NELAP	4		**41**	mg/L	1	02/01/2023 14:09	R324295
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**7580**	µg/L	1	01/30/2023 18:14	202413
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	01/30/2023 18:14	202413
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	01/30/2023 18:14	202413
Magnesium	NELAP	0.050		**75.5**	mg/L	1	01/30/2023 18:14	202413
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	01/30/2023 18:14	202413
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**133**	µg/L	5	02/01/2023 18:54	202413
Lead	NELAP	1.0		**< 1.0**	µg/L	5	02/01/2023 18:54	202413
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	02/01/2023 17:59	202480

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 23010324
Report Date: 07-Mar-23

Carrier: Jospeh Riley

Completed by: Timothy W. Mathis
On: 27-Jan-23

Received By: ANC

Reviewed by: Shelly A. Hennessy
On: 27-Jan-23

Pages to follow: Chain of custody 2 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 0.6
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

G110, R111, and G113 were filtered and preserved for the dissolved parameters upon arrival at the laboratory. - TMathis - 1/27/2023 10:23:28 AM

pH strip #79929/87147 ANC. - TMathis - 1/27/2023 10:24:14 AM

Additional nitric acid (86511) and sulfuric acid (86787) was added to G110 and R111; additional sodium hydroxide was needed for R101 and G113 upon arrival at the laboratory. - SHennessy - 1/27/2023 11:25:21 AM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23010324

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 0.6 °C #3
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: Added HNO3(86511) to G110, R111, H2SO4(86787) to G110, R111 NaOH(81662) to R101, G113
PH 79929 87147 *Samples are partially frozen

Client Comments: ☆ Dup ⊗ Filter in LAB
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

PROJECT NAME/NUMBER: Landfill Monitoring Wells
SAMPLE COLLECTOR'S NAME: J. RILEY / J. COLP

RESULTS REQUESTED: [✓] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Courier
23010324-001	R101	01/26/23 1252	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
002	G110 ⊗	01/26/23 1319	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
003	R111 ⊗	01/26/23 1157	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
004	G112	01/26/23 1216	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
005	G113 ⊗	01/26/23 1234	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
006	G120	01/26/23 1017	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
007	G121	01/26/23 1130	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
008	G122	01/26/23 1108	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
009	AW-1	01/26/23 0957	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
010	AW-2 ☆	01/26/23 1040	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	
011	RW-3 1440	01/26/23 ~~1351~~	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	

Relinquished By	Date/Time	Received By	Date/Time
[signature]	01/27/23 0800	Allison Colin	1/27/23 0800

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Print PDF

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23010324

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)
23010324-012	DUPLICATE	01/26/23 1040	Groundwater	1	1	1	1							✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	01/27/23 0800	Allison Colin	1/27/23 0800

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Second Quarter 2023

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

May 24, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 23040094

Dear Eric Staley:

TEKLAB, INC received 15 samples on 4/17/2023 6:34:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23040094
Report Date: 24-May-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	22
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23040094

Client Project: Ash Pond Monitoring Wells **Report Date:** 24-May-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040094
Client Project: Ash Pond Monitoring Wells
Report Date: 24-May-23

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040094
Client Project: Ash Pond Monitoring Wells
Report Date: 24-May-23

Cooler Receipt Temp: 7.8 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23040094
Report Date: 24-May-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040094
Client Project: Ash Pond Monitoring Wells
Report Date: 24-May-23
Lab ID: 23040094-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 04/11/2023 12:24

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	04/11/2023 12:24	R327742
Depth to water	*	-5.00		**6.04**	ft	1	04/11/2023 12:24	R327742
Depth to water from measuring point	*	0		**8.74**	ft	1	04/11/2023 12:24	R327742
Elevation of groundwater surface	*	0		**530.76**	ft	1	04/11/2023 12:24	R327742
Measuring Point Elevation	*	0		**539.50**	ft	1	04/11/2023 12:24	R327742
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	04/11/2023 12:24	R327742
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.5**	NTU	1	04/11/2023 12:24	R327742
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.6**	°F	1	04/11/2023 12:24	R327742
SW-846 9040B								
pH, Field	*	1.00		**7.06**		1	04/11/2023 12:24	R327742
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**749**	µmhos/cm @25C	1	04/11/2023 12:24	R327742
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**426**	mg/L	1	04/14/2023 10:00	R327370
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	04/17/2023 20:21	R327359
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.52**	mg/L	1	04/13/2023 11:01	R327239
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**31**	mg/L	1	04/17/2023 20:21	R327452
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.145**	mg/L	1	04/14/2023 16:13	204956
Barium	NELAP	0.0025		**0.172**	mg/L	1	04/14/2023 16:13	204956
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/14/2023 16:13	204956
Boron	NELAP	0.0200		**0.186**	mg/L	1	04/14/2023 16:13	204956
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/14/2023 16:13	204956
Calcium	NELAP	0.100		**70.5**	mg/L	1	04/14/2023 16:13	204956
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:13	204956
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:13	204956
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	04/14/2023 16:13	204956
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:13	204956
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/14/2023 16:13	204956
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/17/2023 19:30	204956
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/17/2023 19:30	204956
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/17/2023 19:30	204956
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/14/2023 15:00	204954
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224
Radium-228	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040094
Client Project: Ash Pond Monitoring Wells
Report Date: 24-May-23
Lab ID: 23040094-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 04/12/2023 14:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	04/12/2023 14:49	R327742
Depth to water	*	-5.00		**4.74**	ft	1	04/12/2023 14:49	R327742
Depth to water from measuring point	*	0		**7.24**	ft	1	04/12/2023 14:49	R327742
Elevation of groundwater surface	*	0		**528.86**	ft	1	04/12/2023 14:49	R327742
Measuring Point Elevation	*	0		**536.10**	ft	1	04/12/2023 14:49	R327742
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	04/12/2023 14:49	R327742
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.2**	NTU	1	04/12/2023 14:49	R327742
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.6**	°F	1	04/12/2023 14:49	R327742
SW-846 9040B								
pH, Field	*	1.00		**6.44**		1	04/12/2023 14:49	R327742
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1470**	µmhos/cm @25C	1	04/12/2023 14:49	R327742
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1100**	mg/L	1	04/14/2023 10:00	R327370
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**462**	mg/L	20	04/17/2023 20:42	R327359
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.22**	mg/L	1	04/13/2023 11:05	R327239
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**37**	mg/L	1	04/17/2023 20:36	R327452
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	04/14/2023 16:20	204956
Barium	NELAP	0.0025		**0.0656**	mg/L	1	04/14/2023 16:20	204956
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/14/2023 16:20	204956
Boron	NELAP	0.0200		**3.70**	mg/L	1	04/14/2023 16:20	204956
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/14/2023 16:20	204956
Calcium	NELAP	0.100		**210**	mg/L	1	04/14/2023 16:20	204956
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:20	204956
Cobalt	NELAP	0.0050		**0.0102**	mg/L	1	04/14/2023 16:20	204956
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	04/14/2023 16:20	204956
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:20	204956
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/14/2023 16:20	204956
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/17/2023 19:43	204956
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/17/2023 19:43	204956
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/17/2023 19:43	204956
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/14/2023 15:04	204954
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224
Radium-228	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040094
Client Project: Ash Pond Monitoring Wells
Report Date: 24-May-23
Lab ID: 23040094-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 04/12/2023 15:26

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	04/12/2023 15:26	R327742
Depth to water	*	-5.00		**7.93**	ft	1	04/12/2023 15:26	R327742
Depth to water from measuring point	*	0		**9.63**	ft	1	04/12/2023 15:26	R327742
Elevation of groundwater surface	*	0		**525.77**	ft	1	04/12/2023 15:26	R327742
Measuring Point Elevation	*	0		**535.40**	ft	1	04/12/2023 15:26	R327742
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	04/12/2023 15:26	R327742
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.2**	NTU	1	04/12/2023 15:26	R327742
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.6**	°F	1	04/12/2023 15:26	R327742
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	04/12/2023 15:26	R327742
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1300**	µmhos/cm @25C	1	04/12/2023 15:26	R327742
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**984**	mg/L	1	04/14/2023 10:01	R327370
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**483**	mg/L	10	04/17/2023 21:05	R327359
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.22**	mg/L	1	04/13/2023 11:06	R327239
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**59**	mg/L	5	04/17/2023 21:00	R327452
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	04/14/2023 16:39	204956
Barium	NELAP	0.0025		**0.103**	mg/L	1	04/14/2023 16:39	204956
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/14/2023 16:39	204956
Boron	NELAP	0.0200		**14.3**	mg/L	1	04/14/2023 16:39	204956
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/14/2023 16:39	204956
Calcium	NELAP	0.100		**168**	mg/L	1	04/14/2023 16:39	204956
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:39	204956
Cobalt	NELAP	0.0050		**0.0054**	mg/L	1	04/14/2023 16:39	204956
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	04/14/2023 16:39	204956
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:39	204956
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/14/2023 16:39	204956
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/17/2023 19:49	204956
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/17/2023 19:49	204956
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/17/2023 19:49	204956
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/14/2023 15:11	204954
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224
Radium-228	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040094
Client Project: Ash Pond Monitoring Wells
Report Date: 24-May-23
Lab ID: 23040094-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 04/17/2023 15:59

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	04/17/2023 15:59	R327742
Depth to water	*	-5.00		**7.80**	ft	1	04/17/2023 15:59	R327742
Depth to water from measuring point	*	0		**10.46**	ft	1	04/17/2023 15:59	R327742
Elevation of groundwater surface	*	0		**528.56**	ft	1	04/17/2023 15:59	R327742
Measuring Point Elevation	*	0		**539.02**	ft	1	04/17/2023 15:59	R327742
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	04/17/2023 15:59	R327742
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**25**	NTU	1	04/17/2023 15:59	R327742
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.7**	°F	1	04/17/2023 15:59	R327742
SW-846 9040B								
pH, Field	*	1.00		**7.11**		1	04/17/2023 15:59	R327742
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**712**	µmhos/cm @25C	1	04/17/2023 15:59	R327742
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**444**	mg/L	1	04/19/2023 9:21	R327565
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	05/01/2023 17:23	R328161
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.53**	mg/L	1	04/21/2023 12:41	R327650
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**70**	mg/L	2	05/01/2023 17:28	R328107
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0462**	mg/L	1	04/20/2023 18:41	205144
Barium	NELAP	0.0025		**0.162**	mg/L	1	04/20/2023 18:41	205144
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/20/2023 18:41	205144
Boron	NELAP	0.0200		**0.391**	mg/L	1	04/20/2023 18:41	205144
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/20/2023 18:41	205144
Calcium	NELAP	0.100		**53.6**	mg/L	1	04/20/2023 18:41	205144
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/20/2023 18:41	205144
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/20/2023 18:41	205144
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	04/20/2023 18:41	205144
Lithium	NELAP	0.0050		**0.0113**	mg/L	1	04/24/2023 18:16	205144
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/20/2023 18:41	205144
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/20/2023 22:08	205144
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/20/2023 22:08	205144
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/20/2023 22:08	205144
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/19/2023 15:17	205181
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224
Radium-228	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040094
Client Project: Ash Pond Monitoring Wells
Report Date: 24-May-23
Lab ID: 23040094-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 04/12/2023 12:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	04/12/2023 12:12	R327742
Depth to water	*	-5.00		**1.45**	ft	1	04/12/2023 12:12	R327742
Depth to water from measuring point	*	0		**4.35**	ft	1	04/12/2023 12:12	R327742
Elevation of groundwater surface	*	0		**532.85**	ft	1	04/12/2023 12:12	R327742
Measuring Point Elevation	*	0		**537.20**	ft	1	04/12/2023 12:12	R327742
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	04/12/2023 12:12	R327742
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**13**	NTU	1	04/12/2023 12:12	R327742
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.0**	°F	1	04/12/2023 12:12	R327742
SW-846 9040B								
pH, Field	*	1.00		**6.77**		1	04/12/2023 12:12	R327742
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**970**	µmhos/cm @25C	1	04/12/2023 12:12	R327742
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**544**	mg/L	1	04/14/2023 11:15	R327370
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	04/17/2023 21:32	R327359
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.33**	mg/L	1	04/13/2023 11:10	R327239
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**26**	mg/L	1	04/17/2023 21:32	R327452
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		**0.0348**	mg/L	1	04/14/2023 16:46	204956
Barium	NELAP	0.0025		**0.375**	mg/L	1	04/14/2023 16:46	204956
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/14/2023 16:46	204956
Boron	NELAP	0.0200		**0.110**	mg/L	1	04/14/2023 16:46	204956
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/14/2023 16:46	204956
Calcium	NELAP	0.100		**99.1**	mg/L	1	04/14/2023 16:46	204956
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:46	204956
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:46	204956
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	04/14/2023 16:46	204956
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/14/2023 16:46	204956
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/14/2023 16:46	204956
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/17/2023 20:01	204956
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/17/2023 20:01	204956
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/17/2023 20:01	204956
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/14/2023 15:16	204954
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224
Radium-228	*	0		**See attached**	pci/L	1	05/09/2023 0:00	R329224

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23040094
Report Date: 24-May-23

Carrier: Tracy Carroll

Completed by: Lindsey Maddox
On: 18-Apr-23

Received By: LM

Reviewed by: Elizabeth A. Hurley
On: 18-Apr-23

Pages to follow: Chain of custody 6 Extra pages included 52

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 7.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

RW-3 was received on 4/11/23 at 1745 (on ice 10.2C - LTG1). - EAH 4/13/23

pH strip #87147. - acolin - 4/12/2023 12:43:58 PM

AP-1, AP-2, AP-3, AP-6, AP-8, and AP-10 were received on 4/12/23 at 1755 (on ice 3.8C - LTG 1). - EAH 4/13/23

pH strip #88374. - CET/TMathis - 4/13/2023 7:45:17 AM

AP-4, AP-5, and AP-14 were received on 4/13/23 at 1510 (on ice 9.0C - LTG 1). - EAH 4/13/23

AP-7, AP-9, AP-11, AP-12 and AP-13 were received on 4/17/23 at 1634 (on ice 7.8C - LTG 5). - lmaddox 4/18/23

pH strip #88374. - CET/lmaddox - 4/18/2023 9:26:13 AM

Additional Nitric Acid (89071) was needed in AP-11 upon arrival at the laboratory. - CET/lmaddox - 4/18/2023 9:26:50 AM

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23040094

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 10.2 °C
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: PH 87147 AC 4/12/23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells
SAMPLE COLLECTOR'S NAME: JCalp / TCarroll

RESULTS REQUESTED: [✓] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS:

and Type of Containers / INDICATE ANALYSIS REQUESTED

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23040094-001	RW-3 8.74	4-11-23/ 1224	Groundwater	1	3								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	3								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	3								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	3								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	3								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	3								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	3								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	3								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	3								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	3								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	3								✓	✓	✓	✓	✓	✓

Sent 4/13/23

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carroll	4/11/23 1745	[signature]	4/11/23 1745

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23040094

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 3.8 °C LTG
Preserved in: ☐ LAB ☒ FIELD FOR LAB USE ONLY
LAB NOTES: PhJ 88374.085 4-12-23.

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
J Colp + T Carrell

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23040094-001	RW-3 ~~8.74~~	~~4-12-23/1224~~	Groundwater	1	3								✔	✔	✔	✔	✔	✔
002	AP-1 9.92	4-12-23/1249	Groundwater	1	3								✔	✔	✔	✔	✔	✔
003	AP-2 7.24	4-12-23/1449	Groundwater	1	3								✔	✔	✔	✔	✔	✔
004	AP-3 9.63	4-12-23/1526	Groundwater	1	3								✔	✔	✔	✔	✔	✔
005	AP-4		Groundwater	1	3								✔	✔	✔	✔	✔	✔
006	AP-5		Groundwater	1	3								✔	✔	✔	✔	✔	✔
007	AP-6 7.43	4-12-23/1103	Groundwater	1	3								✔	✔	✔	✔	✔	✔
008	AP-7		Groundwater	1	3								✔	✔	✔	✔	✔	✔
009	AP-8 4.35	4-12-23/1212	Groundwater	1	3								✔	✔	✔	✔	✔	✔
010	AP-9		Groundwater	1	3								✔	✔	✔	✔	✔	✔
011	AP-10 3.05	4-12-23/1350	Groundwater	1	3								✔	✔	✔	✔	✔	✔

Sent 4/3/23

Relinquished By	Date/Time	Received By	Date/Time
Jerry Carrell J. Colp	4-12-23 1755	[signature]	4-12-23 1755

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

[signature] 4-12-23

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23040094

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 9.0 °C 576
Preserved in: ☐ LAB ☑ FIELD FOR LAB USE ONLY
LAB NOTES: ph 88374, CES 4-13-23.

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
JCalp & Tcarroll

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23040094-001	RW-3		Groundwater	1	3								✔	✔	✔	✔	✔	✔
002	AP-1		Groundwater	1	3								✔	✔	✔	✔	✔	✔
003	AP-2		Groundwater	1	3								✔	✔	✔	✔	✔	✔
004	AP-3		Groundwater	1	3								✔	✔	✔	✔	✔	✔
005	AP-4 9.52	4-13-23 / 1013	Groundwater	1	3								✔	✔	✔	✔	✔	✔
006	AP-5 13.05	4-13-23 / 1127	Groundwater	1	3								✔	✔	✔	✔	✔	✔
007	AP-6		Groundwater	1	3								✔	✔	✔	✔	✔	✔
008	AP-7		Groundwater	1	3								✔	✔	✔	✔	✔	✔
009	AP-8		Groundwater	1	3								✔	✔	✔	✔	✔	✔
010	AP-9		Groundwater	1	3								✔	✔	✔	✔	✔	✔
011	AP-10		Groundwater	1	3								✔	✔	✔	✔	✔	✔

and Type of Containers: HNO3 2 (Sent 4/13/23)

INDICATE ANALYSIS REQUESTED

Relinquished By	Date/Time	Received By	Date/Time
Terry Carroll J. Sob	4-13-23 / 1449	Morgan Peter	4/13/23 ~~1510~~ 1449 temp

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CES 4-13-23

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23040094

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells
SAMPLE COLLECTOR'S NAME: J Colp & T Carroll

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other _____ ☐ 3 Day (50% Surcharge)
BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23040094-012	AP-11		Groundwater	1	3								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	3								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	3								✔	✔	✔	✔	✔	✔
015	AP-14 2.40	4-13-23 1106	Groundwater	1	3								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Jean Carroll J. Colp	4-13-23 1449	Mayra Peña	4/13/23 1449

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23040094

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 7.8 °C
Preserved in: [X] LAB [X] FIELD TE CET 4-18-23 FOR LAB USE ONLY LTG5
LAB NOTES: phr 88374. Added HNO3(89071) to 2L Apll. CET 4-18-23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
JCalp & TCarrell

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23040094-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7 10.46	4-17-23 / 1559	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9 12.13	4-17-23 / 1521	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carrell	4/17/23 18:34	[signature]	4/17/23 18:34

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CET 4-18-23

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23040094

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb Se Tl (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
T Cazzell J Calp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23040094-012	AP-11 14.20	4-17-23 1349	Groundwater	1	3								✔	✔	✔	✔	✔	✔
013	AP-12 14.96	4-17-23 1312	Groundwater	1	3								✔	✔	✔	✔	✔	✔
014	AP-13 13.91	4-17-23 1134	Groundwater	1	3								✔	✔	✔	✔	✔	✔
015	AP-14		Groundwater	1	3								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Tony Cazzell	4/17/23 1834		4/17/23 1834

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WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: CWLP Client: _____

Project Number: _____ Task #: _____ Start Date: _____ Time: _____

Field Personnel: J. Cobb / T. Carroll Finish Date: 4-11-23 Time: 1224

WELL INFORMATION

Well ID: RW-3

Casing ID: _____ inches

EVENT TYPE

Well Development

Well Volume Approach Sampling

Low-Flow / Low Stress Sampling Other

(Specify): Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
	1157		8.74								
	1212	0.65			14.1	7.13	737	2.24	12.81	-108.0	
	1215	0.78			14.1	7.11	740	2.12	9.92	-110.2	
	1218	0.91			14.1	7.09	743	2.00	8.42	-112.5	
	1221	1.04			14.2	7.08	745	1.89	4.60	-114.4	
	1224	1.17		14.90	14.2	7.06	749	1.78	4.49	-116.3	

NOTES (continued)

Bladder pump / Clear / No turbidity / Slight odor

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: CCP Client: _____

Project Number: _____ Task #: _____ Start Date: _____ Time: _____

Field Personnel: J. Cobb / T. Carroll Finish Date: 4-12-23 Time: 1449

WELL INFORMATION

Well ID: AP-2

Casing ID: _____ inches

EVENT TYPE

Well Development

Well Volume Approach Sampling

Low-Flow / Low Stress Sampling Other (Specify): Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
	1401		7.24								
	1437	1.56			13.1	6.45	1450	0.70	11.34	-2.1	
	1440	1.69			13.1	6.45	1453	0.69	11.01	-2.4	
	1443	1.82			13.0	6.45	1460	0.67	10.17	-2.7	
	1446	1.82			13.1	6.45	1465	0.66	8.94	-2.9	
	1449	1.95		7.38	13.1	6.44	1469	0.64	9.24	-3.2	

NOTES (continued)

Bladder Pump / Slight turbidity / Strong odor / Clear

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: CwLP Client:
Project Number: Task #: Start Date: Time:
Field Personnel: J.Gib/T. Carroll Finish Date: 4-12-23 Time: 1526

WELL INFORMATION

Well ID: AR3
Casing ID: inches

EVENT TYPE

Well Development
Well Volume Approach Sampling
Low-Flow / Low Stress Sampling Other
(Specify): Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
	1505		9.63								
	1520	0.65			13.1	6.64	1302	1.09	7.99	-78.7	
	1523	0.78			13.0	6.64	1303	0.99	6.92	-79.7	
	1526	0.91		9.70	13.1	6.64	1300	0.91	6.21	-80.6	

NOTES (continued)

Bladder Pump / Clear / no odor / no turbidity

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: CWLP
Client:
Project Number:
Task #:
Start Date:
Time:
Field Personnel: J-Cap / T. Carroll
Finish Date: 4-17-23
Time: 1559

WELL INFORMATION

Well ID: AP-7
Casing ID: inches

EVENT TYPE

☐ Well Development ☐ Low-Flow / Low Stress Sampling
☐ Well Volume Approach Sampling ☐ Other (Specify):

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
	1532		10.46								
	1547	0.65			12.5	7.10	675	3.4	19.88	-96.9	
	1550	0.78			12.5	7.09	681	3.1	26.30	-99.1	
	1553	0.91			12.5	7.08	689	2.8	30.59	-102.2	
	1556	1.04			12.6	7.09	698	2.7	25.70	-104.0	
	1559	1.17		19.15	12.6	7.11	712	2.6	24.53	-104.4	

NOTES (continued)

Bladder Pump / odor moderate / clear / slight turbidity /

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: CwLP Client: _____

Project Number: _____ Task #: _____ Start Date: _____ Time: _____

Field Personnel: J.CaP / T. Carroll Finish Date: 4-12-23 Time: 1212

WELL INFORMATION

Well ID: AO-8

Casing ID: _____ inches

EVENT TYPE

Well Development

Well Volume Approach Sampling

Low-Flow / Low Stress Sampling Other

(Specify): Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
	1127		4.35								
	1154	1.17			13.6	6.80	971	0.76	22.90	-159.8	
	1157	1.30			13.6	6.80	970	0.73	22.41	-160.5	
	1200	1.43			13.6	6.79	969	0.70	17.84	-160.7	
	1203	1.56			13.8	6.79	970	0.66	14.62	-160.3	
	1206	1.69			13.8	6.78	970	0.67	13.26	-160.2	
	1209	1.82			13.9	6.78	971	0.66	12.88	-160.1	
	1212	1.95		4.52	13.9	6.77	970	0.65	12.83	-159.6	

NOTES (continued)

Submersible pump / Clear / Slight turbidity / no odor

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

May 23, 2023

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 23040094

Dear Shelly Hennessy:

Order No.: 23041812

Summit Environmental Technologies, Inc. received 15 sample(s) on 4/26/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **23041812**
Date: **5/23/2023**

CLIENT: TEKLAB Inc,
Project: 23040094

WorkOrder Narrative:
23041812: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **23041812**
Date: **5/23/2023**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **23041812**

23-May-23

CLIENT: TEKLAB Inc,
Project: 23040094

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23041812-001	23040094-001		4/11/2023 12:24:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-002	23040094-002		4/12/2023 12:49:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-003	23040094-003		4/12/2023 2:49:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-004	23040094-004		4/12/2023 3:26:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-005	23040094-005		4/13/2023 10:13:00 AM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-006	23040094-006		4/13/2023 11:27:00 AM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-007	23040094-007		4/12/2023 11:03:00 AM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-008	23040094-008		4/17/2023 3:59:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-009	23040094-009		4/12/2023 12:12:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-010	23040094-010		4/17/2023 3:21:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-011	23040094-011		4/12/2023 1:50:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-012	23040094-012		4/17/2023 1:49:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-013	23040094-013		4/17/2023 1:12:00 PM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-014	23040094-014		4/17/2023 11:34:00 AM	4/26/2023 1:10:00 PM	Non-Potable Water
23041812-015	23040094-015		4/13/2023 11:06:00 AM	4/26/2023 1:10:00 PM	Non-Potable Water

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DATES REPORT

WO#: **23041812**

23-May-23

Client: TEKLAB Inc,
Project: 23040094

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23041812-001A	23040094-001	4/11/2023 12:24:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		4/28/2023 9:55:00 AM	5/9/2023 12:05:00 PM
				Radium-228 (EPA 904.0)		4/28/2023 9:55:00 AM	5/8/2023 2:58:00 PM
				Radium-228 (EPA 904.0)		5/11/2023 9:48:00 AM	5/16/2023 3:00:00 PM
23041812-002A	23040094-002	4/12/2023 12:49:00 PM		Radium-226 (EPA 903.0)		4/28/2023 9:55:00 AM	5/9/2023 12:05:00 PM
				Radium-228 (EPA 904.0)		4/28/2023 9:55:00 AM	5/8/2023 2:58:00 PM
23041812-003A	23040094-003	4/12/2023 2:49:00 PM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-004A	23040094-004	4/12/2023 3:26:00 PM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-005A	23040094-005	4/13/2023 10:13:00 AM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-006A	23040094-006	4/13/2023 11:27:00 AM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-007A	23040094-007	4/12/2023 11:03:00 AM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-008A	23040094-008	4/17/2023 3:59:00 PM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-009A	23040094-009	4/12/2023 12:12:00 PM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-010A	23040094-010	4/17/2023 3:21:00 PM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-011A	23040094-011	4/12/2023 1:50:00 PM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM

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DATES REPORT

WO#: **23041812**

23-May-23

Client: TEKLAB Inc,
Project: 23040094

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23041812-012A	23040094-012	4/17/2023 1:49:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-013A	23040094-013	4/17/2023 1:12:00 PM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-014A	23040094-014	4/17/2023 11:34:00 AM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM
23041812-015A	23040094-015	4/13/2023 11:06:00 AM		Radium-226 (EPA 903.0)		5/1/2023 12:25:00 PM	5/10/2023 9:46:00 AM
				Radium-228 (EPA 904.0)		5/1/2023 12:25:00 PM	5/9/2023 3:21:00 PM

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Analytical Report

(consolidated)

WO#: **23041812**

Date Reported: **5/23/2023**

CLIENT: TEKLAB Inc,

Collection Date: 4/11/2023 12:24:00 PM

Project: 23040094

Lab ID: 23041812-001

Matrix: NON-POTABLE WATER

Client Sample ID: 23040094-001

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	0.19	1.00	U	pCi/L	± 0.1	1	5/9/2023 12:05:00 PM
Yield	0.96					1	5/9/2023 12:05:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	0.29	1.00	U	pCi/L	± 0.43	1	5/16/2023 3:00:00 PM
Yield	0.9					1	5/16/2023 3:00:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23041812**

Date Reported: **5/23/2023**

CLIENT: TEKLAB Inc,

Collection Date: 4/12/2023 2:49:00 PM

Project: 23040094

Lab ID: 23041812-003

Matrix: NON-POTABLE WATER

Client Sample ID: 23040094-003

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	0.29	1.00	U	pCi/L	± 0.16	1	5/10/2023 9:46:00 AM
Yield	0.94					1	5/10/2023 9:46:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	2.21	1.00		pCi/L	± 0.92	1	5/9/2023 3:21:00 PM
Yield	0.94					1	5/9/2023 3:21:00 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23041812**

Date Reported: **5/23/2023**

CLIENT: TEKLAB Inc,

Collection Date: 4/12/2023 3:26:00 PM

Project: 23040094

Lab ID: 23041812-004

Matrix: NON-POTABLE WATER

Client Sample ID: 23040094-004

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	-0.03	1.00	U	pCi/L	± 0.17	1	5/10/2023 9:46:00 AM
Yield	0.9					1	5/10/2023 9:46:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	0.39	1.00	U	pCi/L	± 0.72	1	5/9/2023 3:21:00 PM
Yield	0.96					1	5/9/2023 3:21:00 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23041812**

Date Reported: **5/23/2023**

CLIENT: TEKLAB Inc,
Collection Date: 4/17/2023 3:59:00 PM

Project: 23040094

Lab ID: 23041812-008
Matrix: NON-POTABLE WATER

Client Sample ID: 23040094-008

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	0.37	1.00	U	pCi/L	± 0.17	1	5/10/2023 9:46:00 AM
Yield	0.94					1	5/10/2023 9:46:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	1.17	1.00		pCi/L	± 0.89	1	5/9/2023 3:21:00 PM
Yield	0.94					1	5/9/2023 3:21:00 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23041812**

Date Reported: **5/23/2023**

CLIENT: TEKLAB Inc,

Collection Date: 4/12/2023 12:12:00 PM

Project: 23040094

Lab ID: 23041812-009

Matrix: NON-POTABLE WATER

Client Sample ID: 23040094-009

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	1.22	1.00		pCi/L	± 0.28	1	5/10/2023 9:46:00 AM
Yield	1					1	5/10/2023 9:46:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	1.66	1.00		pCi/L	± 0.94	1	5/9/2023 3:21:00 PM
Yield	1					1	5/9/2023 3:21:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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QC SUMMARY REPORT

WO#: **23041812**
23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64709**

Sample ID: **MB-64709** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163427**
Client ID: **PBW** Batch ID: **64709** TestNo: **E904.0** **E903-904** Analysis Date: **5/8/2023** SeqNo: **4346663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.640	1.00		0	0						J
Yield	0.980			0	0						

Sample ID: **LCS-64709** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163427**
Client ID: **LCSW** Batch ID: **64709** TestNo: **E904.0** **E903-904** Analysis Date: **5/8/2023** SeqNo: **4346664**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.43	1.00	5.000	0	88.6	70	130				
Yield	1.00			0	0						

Sample ID: **RLCD-64709** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163427**
Client ID: **BatchQC** Batch ID: **64709** TestNo: **E904.0** **E903-904** Analysis Date: **5/8/2023** SeqNo: **4346668**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.970	1.00	1.000	0	97.0	50	150				J
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23041812**

23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64709**

Sample ID: **23041659-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163427**
Client ID: **BatchQC** Batch ID: **64709** TestNo: **E904.0** **E903-904** Analysis Date: **5/8/2023** SeqNo: **4346672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	U
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **23041812**
23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64709**

Sample ID: **MB-64709** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **PBW** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									U
Yield	1.00										

Sample ID: **LCS-64709** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **LCSW** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.16	1.00	5.000	0	103	70	130				

Sample ID: **LCSD-64709** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **LCSS02** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346932**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.38	1.00	5.000	0	108	70	130	5.160	4.17	20	

Sample ID: **RLC-64709** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **BatchQC** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**
23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64709**

Sample ID: **RLC-64709** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **BatchQC** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.21	1.00	1.000	0	121	50	150				

Sample ID: **RLCD-64709** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **BatchQC** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.09	1.00	1.000	0	109	50	150				

Sample ID: **23041658-001AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **BatchQC** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.09	1.00	5.000	0	102	70	130				

Sample ID: **23041659-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **BatchQC** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	U

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**

23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64709**

Sample ID: **23041659-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/28/2023** RunNo: **163434**
Client ID: **BatchQC** Batch ID: **64709** TestNo: **E903.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4346939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Yield	0.970							0.9600	1.04	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**
23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64851**

Sample ID: **MB-64851** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163841**
Client ID: **PBW** Batch ID: **64851** TestNo: **E904.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4362722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.930	1.00		0	0						J
Yield	0.880			0	0						

Sample ID: **LCS-64851** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163841**
Client ID: **LCSW** Batch ID: **64851** TestNo: **E904.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4362723**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.60	1.00	5.000	0	72.0	70	130				
Yield	0.880			0	0						

Sample ID: **RLC-64851** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163841**
Client ID: **BatchQC** Batch ID: **64851** TestNo: **E904.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4362726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.69	1.00	1.000	0	269	50	150				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**

23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64851**

Sample ID: **RLCD-64851**	SampType: **RLC**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **5/1/2023**	RunNo: **163841**
Client ID: **BatchQC**	Batch ID: **64851**	TestNo: **E904.0**	**E903-904**	Analysis Date: **5/9/2023**	SeqNo: **4362727**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.99	1.00	1.000	0	199	50	150				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**

23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64851**

Sample ID: **23041819-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163841**
Client ID: **BatchQC** Batch ID: **64851** TestNo: **E904.0** **E903-904** Analysis Date: **5/9/2023** SeqNo: **4362731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	U
Yield	0.930			0	0			0.9800	5.24		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**
23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64851**

Sample ID: **MB-64851** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **PBW** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363196**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									U
Yield	0.880										

Sample ID: **LCS-64851** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **LCSW** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363197**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.48	1.00	5.000	0	110	70	130				

Sample ID: **LCSD-64851** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **LCSS02** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363198**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.17	1.00	5.000	0	103	70	130	5.480	5.82	20	

Sample ID: **RLCD-64851** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **BatchQC** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**
23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64851**

Sample ID: **RLCD-64851** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **BatchQC** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.34	1.00	1.000	0	134	50	150				

Sample ID: **23041815-001AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **BatchQC** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.61	1.00	5.000	0.9600	93.0	70	130				

Sample ID: **23041819-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **BatchQC** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	U
Yield	0.940							0.9600	2.11	0	

Sample ID: **23041990-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **BatchQC** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Cuyahoga Falls, Ohio 44223
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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**

23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **64851**

Sample ID: **23041990-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/1/2023** RunNo: **163869**
Client ID: **BatchQC** Batch ID: **64851** TestNo: **E903.0** **E903-904** Analysis Date: **5/10/2023** SeqNo: **4363207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.760	1.00						0	200	20	JR
Yield	0.990							0.9700	2.04	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Analytical Laboratories

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**
23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **65044**

Sample ID: **MB-65044** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/11/2023** RunNo: **163963**
Client ID: **PBW** Batch ID: **65044** TestNo: **E904.0** **E903-904** Analysis Date: **5/16/2023** SeqNo: **4366735**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.660	1.00		0	0						J
Yield	0.890			0	0						

Sample ID: **LCS-65044** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/11/2023** RunNo: **163963**
Client ID: **LCSW** Batch ID: **65044** TestNo: **E904.0** **E903-904** Analysis Date: **5/16/2023** SeqNo: **4366736**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.81	1.00	5.000	0	56.2	70	130				
Yield	0.910			0	0						

Sample ID: **LCSD-65044** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/11/2023** RunNo: **163963**
Client ID: **LCSS02** Batch ID: **65044** TestNo: **E904.0** **E903-904** Analysis Date: **5/16/2023** SeqNo: **4366737**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.74	1.00	5.000	0	74.8	70	130	2.810	28.4	20	
Yield	0.960			0	0			0.9100	5.35		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23041812**

23-May-23

Client: TEKLAB Inc,
Project: 23040094 **BatchID:** **65044**

Sample ID: **RLCD-65044**	SampType: **RLC**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **5/11/2023**	RunNo: **163963**
Client ID: **BatchQC**	Batch ID: **65044**	TestNo: **E904.0**	**E903-904**	Analysis Date: **5/16/2023**	SeqNo: **4366740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.23	1.00	1.000	0	123	50	150				
Yield	0.960			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-~~1006~~

23041812

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Tracy Carroll/TEKLAB | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 23040094

Contact: Shelly Hennessey | Email: shennessey@teklabinc.com
Requested Due Date: Standard TAT | Billing/PO: 34257 | Phone: (618) 344-1004

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228												
	23040094-001	4/11/23 1224	HNO3	Groundwater	☑	PH	1	CPM	23								
	23040094-002	4/12/23 1249	HNO3	Groundwater	☑		1		29								
	23040094-003	4/12/23 1449	HNO3	Groundwater	☑		1		31								
	23040094-004	4/12/23 1526	HNO3	Groundwater	☑		1		36								
	23040094-005	4/13/23 1013	HNO3	Groundwater	☑		1		24								
	23040094-006	4/13/23 1127	HNO3	Groundwater	☑		1		35								
	23040094-007	4/12/23 1103	HNO3	Groundwater	☑		1		21								
	23040094-008	4/17/23 1559	HNO3	Groundwater	☑		1		27								
	23040094-009	4/12/23 1212	HNO3	Groundwater	☑		1		32								
	23040094-010	4/17/23 1521	HNO3	Groundwater	☑		1		39								
	23040094-011	4/12/23 1350	HNO3	Groundwater	☑	☑	1	☑	41								

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	4/18/23	[signature]	04/26/23 1310

13.1+0.1=13.2, Fed ex cooler

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Tracy Carroll/TEKLAB | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 on your standard turn around time.
Samples collected from an IL site.
Batch QC is required for all analyses requested. EDD requested..

Project# 23040094

Contact: Shelly Hennessey | Email: shennessey@teklabinc.com
Requested Due Date: Standard TAT | Billing/PO: 34257 | Phone: (618) 344-1004

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228												
	23040094-012	4/17/23 1349	HNO3	Groundwater	☑	PH	1	CRM	16	☐	☐	☐	☐	☐	☐	☐	☐
	23040094-013	4/17/23 1312	HNO3	Groundwater	☑	1	1	1	20	☐	☐	☐	☐	☐	☐	☐	☐
	23040094-014	4/17/23 1134	HNO3	Groundwater	☑	1	1	1	19	☐	☐	☐	☐	☐	☐	☐	☐
	23040094-015	4/13/23 1106	HNO3	Groundwater	☑	V	1	V	28	☐	☐	☐	☐	☐	☐	☐	☐
			HNO3	Groundwater	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
			HNO3	Groundwater	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
			HNO3	Groundwater	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
			HNO3	Groundwater	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
			HNO3	Groundwater	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
			HNO3	Groundwater	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
			HNO3	Groundwater	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

*Relinquished By	Date/Time	Received By	Date/Time
CMP	4/18/23		

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights. Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **23041812** RcptNo: **1**

Logged by:	**Anthony W. Britton**	**4/26/2023 1:10:00 PM**	Anthony Britton
Completed By:	**Anthony W. Britton**	**4/26/2023 4:55:12 PM**	Anthony Britton
Reviewed By:	**Jennifer Woolf**	**4/26/2023 6:42:30 PM**	Jennifer Woolf

Chain of Custody

1.	Were seals intact?	Yes ☑	No ☐	Not Present ☐
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?	FedEx		

Log In

4.	Coolers are present?	Yes ☐	No ☑	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	13.2	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

May 03, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells G1-G2 **WorkOrder:** 23040093

Dear Eric Staley:

TEKLAB, INC received 12 samples on 4/12/2023 5:55:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells G1-G2

Work Order: 23040093
Report Date: 03-May-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	31
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23040093

Client Project: Landfill Monitoring Wells G1-G2 **Report Date:** 03-May-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040093
Client Project: Landfill Monitoring Wells G1-G2
Report Date: 03-May-23

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040093
Client Project: Landfill Monitoring Wells G1-G2
Report Date: 03-May-23

Cooler Receipt Temp: 3.8 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040093
Client Project: Landfill Monitoring Wells G1-G2
Report Date: 03-May-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2023	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2023	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040093
Client Project: Landfill Monitoring Wells G1-G2
Report Date: 03-May-23
Lab ID: 23040093-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 04/11/2023 10:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	04/11/2023 10:49	R327707
Depth to water	*	-5.00		**10.62**	ft	1	04/11/2023 10:49	R327707
Depth to water from measuring point	*	0		**13.37**	ft	1	04/11/2023 10:49	R327707
Elevation of groundwater surface	*	0		**542.23**	ft	1	04/11/2023 10:49	R327707
Measuring Point Elevation	*	0		**555.60**	ft	1	04/11/2023 10:49	R327707
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.7**	°F	1	04/11/2023 10:49	R327707
SW-846 9040B								
pH, Field	*	1.00		**6.47**		1	04/11/2023 10:49	R327707
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1550**	µmhos/cm @25C	1	04/11/2023 10:49	R327707
EPA 600 350.1 (DISSOLVED)								
Nitrogen, Ammonia (as N)	NELAP	0.10		**1.75**	mg/L	1	04/13/2023 13:54	R327246
EPA 600 350.1 (TOTAL)								
Nitrogen, Ammonia (as N)	NELAP	0.10		**1.74**	mg/L	1	04/13/2023 13:51	R327246
EPA 600 353.2 R2.0 (DISSOLVED)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**< 0.050**	mg/L	1	04/12/2023 17:13	R327235
EPA 600 353.2 R2.0 (TOTAL)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**< 0.050**	mg/L	1	04/12/2023 18:17	R327235
STANDARD METHODS 2540 C (DISSOLVED) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1120**	mg/L	1	04/14/2023 11:57	R327370
STANDARD METHODS 5210 B 2001, 2011								
Biochemical Oxygen Demand	NELAP	10		**< 10**	mg/L	1	04/12/2023 17:20	204912
STANDARD METHODS 5220 D (TOTAL) 1997								
Chemical Oxygen Demand	NELAP	50		**< 50**	mg/L	1	04/17/2023 13:14	R327362
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.005		**< 0.005**	mg/L	1	04/17/2023 9:47	204993
SW-846 9036 (DISSOLVED)								
Sulfate	NELAP	100		**389**	mg/L	10	04/14/2023 9:25	R327292
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**399**	mg/L	10	04/14/2023 10:20	R327292
SW-846 9060								
Total Organic Carbon (TOC)	NELAP	1.0		**2.8**	mg/L	1	04/18/2023 19:38	R327458
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	04/13/2023 11:36	R327239
SW-846 9251 (DISSOLVED)								
Chloride	NELAP	4		**44**	mg/L	1	04/14/2023 9:20	R327293
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**41**	mg/L	1	04/14/2023 10:16	R327293
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**7970**	µg/L	1	04/13/2023 12:53	204916
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	04/13/2023 12:53	204916
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	04/13/2023 12:53	204916
Magnesium	NELAP	0.050		**79.4**	mg/L	1	04/13/2023 12:53	204916

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23040093
Client Project: Landfill Monitoring Wells G1-G2
Report Date: 03-May-23
Lab ID: 23040093-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 04/11/2023 10:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	04/13/2023 12:53	204916
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**635**	µg/L	1	04/13/2023 16:19	204911
Barium	NELAP	2.5		**622**	µg/L	1	04/13/2023 16:19	204911
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	04/13/2023 16:19	204911
Boron	NELAP	20.0		**8390**	µg/L	1	04/13/2023 16:19	204911
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	04/13/2023 16:19	204911
Calcium	NELAP	0.100		**191**	mg/L	1	04/13/2023 16:19	204911
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	04/13/2023 16:19	204911
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	04/13/2023 16:19	204911
Copper	NELAP	5.0		**< 5.0**	µg/L	1	04/13/2023 16:19	204911
Iron	NELAP	40.0		**43300**	µg/L	1	04/13/2023 16:19	204911
Magnesium	NELAP	0.050		**83.2**	mg/L	1	04/13/2023 16:19	204911
Manganese	NELAP	7.0		**178**	µg/L	1	04/13/2023 16:19	204911
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	04/13/2023 16:19	204911
Potassium	NELAP	0.100		**2.24**	mg/L	1	04/13/2023 16:19	204911
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	04/13/2023 16:19	204911
Silver	NELAP	7.0		**< 7.0**	µg/L	1	04/13/2023 16:19	204911
Sodium	NELAP	0.050		**29.8**	mg/L	1	04/13/2023 16:19	204911
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	04/13/2023 16:19	204911
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	04/13/2023 16:19	204911
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**150**	µg/L	5	04/14/2023 21:14	204916
Lead	NELAP	1.0		**< 1.0**	µg/L	5	04/13/2023 20:24	204916
LCS recovered outside upper control limits for Pb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	04/13/2023 20:03	204911
Arsenic	NELAP	1.0		**152**	µg/L	5	04/13/2023 20:03	204911
Lead	NELAP	1.0		**< 1.0**	µg/L	5	04/13/2023 20:03	204911
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	04/13/2023 20:03	204911
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	04/13/2023 10:17	204914
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	04/13/2023 10:15	204914

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells G1-G2

Work Order: 23040093
Report Date: 03-May-23

Carrier: Justin Colp

Completed by: On: 13-Apr-23 — Timothy W. Mathis

Received By: TWM

Reviewed by: On: 13-Apr-23 — Elizabeth A. Hurley

Pages to follow: Chain of custody 4 Extra pages included 11

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

R111, G112, G113, G120, G121, G122, and Duplicate were received on 4/10/23 at 1916 (on ice 3.4C - LTG 5).. - ehurley - 4/11/2023 10:05:36 AM

pH strip #88374/79929. - CET/ehurley - 4/11/2023 10:06:08 AM

R101, AW-1, AW-2, and RW-3 were received on 4/11/23 at 1745 (on ice 10.2C - LTG5). - EAH 4/13/23

pH strip #79929/87147. - acolin - 4/12/2023 12:42:00 PM

G110 was received on 4/12/23 at 1755 (on ice 3.8C - LTG1). - EAH 4/13/23

pH strip #79929/88374. - CET/TMathis - 4/13/2023 7:28:42 AM

G110 was filtered and preserved for the dissolved parameters upon arrival at the laboratory. - TMathis - 4/13/2023 7:29:33 AM

Additional NaOH (81662) and H2SO4 (86787) were needed in G110 upon arrival at the laboratory. - TMathis - 4/13/2023 7:29:51 AM

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23040093

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

23040093

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 3.4 °C LTG
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: Ph 588374/79929. Added NaOH (81662) to all NaOH samples. CTST 4-11-23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarter 2
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)
23040093-001	R101		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
002	G110		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
003	R111 24.66	4-10-23 / 1731	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
004	G112 27.57	4-10-23 / 1623	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
005	G113 3.90	4-10-23 / 1500	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
006	G120 14.93	4-10-23 / 1253	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
007	G121 26.85	4-10-23 / 1349	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
008	G122 28.70	4-10-23 / 1417	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
009	AW-1		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
010	AW-2		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
011	RW-3		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	4-10-23 / 1916	Morgan Petin	4/10/23 1916

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CTST 4-11-23

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23040093

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarter 2
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)				
23040093-012	Duplicate 27.57	4-10-23 1623	Groundwater	2	2	1	4							✔	✔	✔	✔	✔	✔	✔	✔	✔				
			Groundwater																							
			Groundwater																							
			Groundwater																							
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			Groundwater																							
			Groundwater																							

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	4-10-23 / 1916	Morgan Petrie	4/10/23 1916

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23040093

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 10.2 °C
Preserved in: ☐ LAB ☒ FIELD FOR LAB USE ONLY LTG5
LAB NOTES:
pH 79929, 87147 AC 4/12/23

Client Comments: # = Filter in lab
Quarter 2
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER: Landfill Monitoring Wells G1-G2
SAMPLE COLLECTOR'S NAME: JColp / TCarroll

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID		Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)				
23040093-001	R101	5.80	4-11-23/ 1416	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
002	G110	~~8.93~~	~~4-11-23/ 1527~~	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
003	R111			Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
004	G112			Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
005	G113			Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
006	G120			Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
007	G121			Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
008	G122			Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
009	AW-1	13.37	4-11-23/ 1049	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
010	AW-2	4.20	4-11-23/ 1142	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				
011	RW-3	8.74	4-11-23/ 1224	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				

Relinquished By	Date/Time	Received By	Date/Time
Tleary Carroll	4/11/23 1745	Allison Colp	4/11/23 1745

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23040093

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 3.8 °C TG.1
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: phw 88374/799291 Added Naoh (81662) to 6110. Added
* = Filter in lab H2SO4 (86787) to 125ml amber
From 6110.
CE 4-13-23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarter 2
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (O)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)				
23040093-001	R101		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
002	G110 * 23.47	4-12-23 / 1017	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
003	R111		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
004	G112		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
005	G113		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
006	G120		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
007	G121		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
008	G122		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
009	AW-1		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
010	AW-2		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
011	RW-3		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				

Relinquished By	Date/Time	Received By	Date/Time
J. Cob	4-12-23 1755	[signature]	4.12.23 1755

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CE 4-13-23

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Cia LP Client: Vistra

Project Number: Task #: Start Date: Time:

Field Personnel: J. Cobb / T. Carroll Finish Date: 4-11-23 Time: 1049

WELL INFORMATION

Well ID: AW-1

Casing ID: inches

EVENT TYPE

Well Development Low-Flow / Low Stress Sampling Other

Well Volume Approach Sampling (Specify): Low Flow

WATER QUALITY INDICATOR PARAMETERS (continued)

Sampling Stage	Time (military)	Volume Removed (gallons)	Depth to Water (Feet)	Drawdown (Feet)	Temp. (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
	0952		13.37								
	1034	1.82			14.2	6.47	1548	0.76	17.49	-158.2	
	1037	1.95			14.3	6.47	1549	0.73	19.01	-158.3	
	1040	2.08			14.3	6.47	1549	0.71	16.05	-158.2	
	1043	2.21			14.3	6.47	1549	0.69	13.94	-157.9	
	1046	2.34			14.3	6.47	1548	0.67	12.65	-157.6	
	1049	2.47		17.80	14.3	6.47	1548	0.66	13.81	-157.4	

NOTES (continued)

Submersible Pump / Clear / Slight turbidity / no odor

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential SEC - Specific Electrical Conductance SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Third Quarter 2023

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

August 16, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 23070002

Dear Eric Staley:

TEKLAB, INC received 15 samples on 7/7/2023 4:44:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23070002
Report Date: 16-Aug-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	25
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23070002

Client Project: Ash Pond Monitoring Wells **Report Date:** 16-Aug-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070002
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Aug-23

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070002
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Aug-23

Cooler Receipt Temp: 5.2 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23070002
Report Date: 16-Aug-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070002
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Aug-23
Lab ID: 23070002-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 07/06/2023 12:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	07/06/2023 12:23	R332756
Depth to water	*	-5.00		**8.29**	ft	1	07/06/2023 12:23	R332756
Depth to water from measuring point	*	0		**10.99**	ft	1	07/06/2023 12:23	R332756
Elevation of groundwater surface	*	0		**528.51**	ft	1	07/06/2023 12:23	R332756
Measuring Point Elevation	*	0		**539.50**	ft	1	07/06/2023 12:23	R332756
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	07/06/2023 12:23	R332756
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.3**	NTU	1	07/06/2023 12:23	R332756
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.5**	°F	1	07/06/2023 12:23	R332756
SW-846 9040B								
pH, Field	*	1.00		**7.13**		1	07/06/2023 12:23	R332756
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**437**	µmhos/cm @25C	1	07/06/2023 12:23	R332756
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**290**	mg/L	2.5	07/07/2023 15:00	R331380
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**22**	mg/L	1	07/24/2023 14:05	R333047
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.27**	mg/L	1	07/11/2023 12:53	R331398
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**28**	mg/L	1	07/24/2023 14:06	R333070
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.106**	mg/L	1	07/11/2023 18:26	208261
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	07/11/2023 18:26	208261
Boron	NELAP	0.0200		**0.0595**	mg/L	1	07/12/2023 13:56	208261
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	07/11/2023 18:26	208261
Calcium	NELAP	0.100	B	**52.8**	mg/L	1	07/11/2023 18:26	208261
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:26	208261
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:26	208261
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	07/11/2023 18:26	208261
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	07/11/2023 18:26	208261
Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 2:05	208261
Arsenic	NELAP	0.0010		**0.0831**	mg/L	5	07/12/2023 2:05	208261
Lithium	*	0.0030		**< 0.0030**	mg/L	5	07/17/2023 11:48	208261
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 2:05	208261
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	07/12/2023 2:05	208261
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	07/11/2023 15:26	208286
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/24/2023 15:18	R335080

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070002
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Aug-23
Lab ID: 23070002-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 07/06/2023 12:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-228	*	0		**See Attached**	pci/L	1	07/24/2023 15:18	R335080

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070002
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Aug-23
Lab ID: 23070002-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 07/07/2023 12:31

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	07/07/2023 12:31	R332756
Depth to water	*	-5.00		**6.07**	ft	1	07/07/2023 12:31	R332756
Depth to water from measuring point	*	0		**8.57**	ft	1	07/07/2023 12:31	R332756
Elevation of groundwater surface	*	0		**527.53**	ft	1	07/07/2023 12:31	R332756
Measuring Point Elevation	*	0		**536.10**	ft	1	07/07/2023 12:31	R332756
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	07/07/2023 12:31	R332756
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.3**	NTU	1	07/07/2023 12:31	R332756
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.3**	°F	1	07/07/2023 12:31	R332756
SW-846 9040B								
pH, Field	*	1.00		**6.40**		1	07/07/2023 12:31	R332756
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1390**	µmhos/cm @25C	1	07/07/2023 12:31	R332756
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1600**	mg/L	2.5	07/11/2023 10:29	R331470
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**795**	mg/L	20	07/24/2023 14:39	R333047
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.20**	mg/L	1	07/11/2023 12:58	R331398
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**54**	mg/L	2	07/26/2023 19:46	R333204
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0719**	mg/L	1	07/11/2023 18:30	208261
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	07/11/2023 18:30	208261
Boron	NELAP	0.0200		**3.73**	mg/L	1	07/12/2023 20:40	208261
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	07/11/2023 18:30	208261
Calcium	NELAP	0.100	B	**244**	mg/L	1	07/11/2023 18:30	208261
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:30	208261
Cobalt	NELAP	0.0050		**0.0085**	mg/L	1	07/11/2023 18:30	208261
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	07/11/2023 18:30	208261
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	07/11/2023 18:30	208261
Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 3:13	208261
Arsenic	NELAP	0.0010		**0.0020**	mg/L	5	07/12/2023 3:13	208261
Lithium	*	0.0030		**0.0063**	mg/L	5	07/17/2023 11:58	208261
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 3:13	208261
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	07/12/2023 3:13	208261
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	07/11/2023 15:31	208286
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/24/2023 15:18	R335080
Radium-228	*	0		**See Attached**	pci/L	1	07/24/2023 15:18	R335080

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070002
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Aug-23
Lab ID: 23070002-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 07/07/2023 13:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	07/07/2023 13:16	R332756
Depth to water	*	-5.00		**9.01**	ft	1	07/07/2023 13:16	R332756
Depth to water from measuring point	*	0		**10.71**	ft	1	07/07/2023 13:16	R332756
Elevation of groundwater surface	*	0		**524.69**	ft	1	07/07/2023 13:16	R332756
Measuring Point Elevation	*	0		**535.40**	ft	1	07/07/2023 13:16	R332756
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	07/07/2023 13:16	R332756
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**5.2**	NTU	1	07/07/2023 13:16	R332756
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.5**	°F	1	07/07/2023 13:16	R332756
SW-846 9040B								
pH, Field	*	1.00		**6.53**		1	07/07/2023 13:16	R332756
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1230**	µmhos/cm @25C	1	07/07/2023 13:16	R332756
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**990**	mg/L	2.5	07/11/2023 10:29	R331470
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**467**	mg/L	10	07/24/2023 14:48	R333047
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.21**	mg/L	1	07/11/2023 13:00	R331398
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**51**	mg/L	2	07/24/2023 14:43	R333070
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0993**	mg/L	1	07/11/2023 18:31	208261
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	07/11/2023 18:31	208261
Boron	NELAP	0.200		**14.0**	mg/L	10	07/12/2023 20:39	208261
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	07/11/2023 18:31	208261
Calcium	NELAP	0.100	B	**189**	mg/L	1	07/11/2023 18:31	208261
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:31	208261
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:31	208261
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	07/11/2023 18:31	208261
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	07/11/2023 18:31	208261
Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 3:18	208261
Arsenic	NELAP	0.0010		**0.0109**	mg/L	5	07/12/2023 3:18	208261
Lithium	*	0.0030		**0.0063**	mg/L	5	07/17/2023 12:03	208261
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 3:18	208261
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	07/12/2023 3:18	208261
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	07/11/2023 15:33	208286
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/24/2023 15:18	R335080
Radium-228	*	0		**See Attached**	pci/L	1	07/24/2023 15:18	R335080

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070002
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Aug-23
Lab ID: 23070002-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 07/07/2023 12:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	07/07/2023 12:23	R332756
Depth to water	*	-5.00		**8.66**	ft	1	07/07/2023 12:23	R332756
Depth to water from measuring point	*	0		**11.32**	ft	1	07/07/2023 12:23	R332756
Elevation of groundwater surface	*	0		**527.70**	ft	1	07/07/2023 12:23	R332756
Measuring Point Elevation	*	0		**539.02**	ft	1	07/07/2023 12:23	R332756
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	07/07/2023 12:23	R332756
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**11**	NTU	1	07/07/2023 12:23	R332756
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.2**	°F	1	07/07/2023 12:23	R332756
SW-846 9040B								
pH, Field	*	1.00		**7.28**		1	07/07/2023 12:23	R332756
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**586**	µmhos/cm @25C	1	07/07/2023 12:23	R332756
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**300**	mg/L	2.5	07/11/2023 10:30	R331470
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**20**	mg/L	1	07/24/2023 15:28	R333047
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.34**	mg/L	1	07/11/2023 13:09	R331398
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**39**	mg/L	1	07/24/2023 15:28	R333070
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.106**	mg/L	1	07/11/2023 18:49	208261
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	07/11/2023 18:49	208261
Boron	NELAP	0.0200		**0.141**	mg/L	1	07/15/2023 16:25	208261
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	07/11/2023 18:49	208261
Calcium	NELAP	0.100	B	**49.6**	mg/L	1	07/11/2023 18:49	208261
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:49	208261
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:49	208261
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	07/11/2023 18:49	208261
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	07/11/2023 18:49	208261
Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 3:35	208261
Arsenic	NELAP	0.0010		**0.0412**	mg/L	5	07/12/2023 3:35	208261
Lithium	*	0.0030		**0.0047**	mg/L	5	07/17/2023 12:46	208261
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 3:35	208261
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	07/12/2023 3:35	208261
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	07/11/2023 15:51	208286
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/25/2023 15:30	R335080
Radium-228	*	0		**See Attached**	pci/L	1	07/25/2023 15:30	R335080

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070002
Client Project: Ash Pond Monitoring Wells
Report Date: 16-Aug-23
Lab ID: 23070002-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 07/07/2023 10:39

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	07/07/2023 10:39	R332756
Depth to water	*	-5.00		**3.84**	ft	1	07/07/2023 10:39	R332756
Depth to water from measuring point	*	0		**6.74**	ft	1	07/07/2023 10:39	R332756
Elevation of groundwater surface	*	0		**530.46**	ft	1	07/07/2023 10:39	R332756
Measuring Point Elevation	*	0		**537.20**	ft	1	07/07/2023 10:39	R332756
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	07/07/2023 10:39	R332756
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.6**	NTU	1	07/07/2023 10:39	R332756
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.8**	°F	1	07/07/2023 10:39	R332756
SW-846 9040B								
pH, Field	*	1.00		**6.75**		1	07/07/2023 10:39	R332756
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**906**	µmhos/cm @25C	1	07/07/2023 10:39	R332756
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**555**	mg/L	2.5	07/11/2023 10:52	R331470
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	07/24/2023 15:36	R333047
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.29**	mg/L	1	07/11/2023 13:18	R331398
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**25**	mg/L	1	07/24/2023 15:36	R333070
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.378**	mg/L	1	07/11/2023 18:50	208261
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	07/11/2023 18:50	208261
Boron	NELAP	0.0200		**0.0932**	mg/L	1	07/15/2023 16:27	208261
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	07/11/2023 18:50	208261
Calcium	NELAP	0.100	B	**107**	mg/L	1	07/11/2023 18:50	208261
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:50	208261
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	07/11/2023 18:50	208261
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	07/11/2023 18:50	208261
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	07/11/2023 18:50	208261
Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 4:20	208261
Arsenic	NELAP	0.0010		**0.0513**	mg/L	5	07/12/2023 4:20	208261
Lithium	*	0.0030		**0.0074**	mg/L	5	07/17/2023 12:51	208261
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	07/12/2023 4:20	208261
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	07/12/2023 4:20	208261
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	07/11/2023 15:54	208286
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/25/2023 15:30	R335080
Radium-228	*	0		**See Attached**	pci/L	1	07/25/2023 15:30	R335080

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23070002
Report Date: 16-Aug-23

Carrier: Tracy Carroll

Received By: ANC

Completed by: Allison Colin
On: 10-Jul-23

Reviewed by: Ellie Hopkins
On: 10-Jul-23

Pages to follow: Chain of custody 3 Extra pages included 42

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 5.2
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #90719. - acolin - 7/10/2023 9:09:38 AM

Additional nitric acid (90404) was needed in AP2 2L, AP3 2L, AP4 2L, AP8 2L, AP9 2L, AP10 2L, AP12 250 & 2L upon arrival at the laboratory. - acolin - 7/10/2023 9:09:41 AM

Samples collected on 7/7/23 were delivered to the laboratory on 7/7/23 at 1644 (on ice - 5.2C - LTG#1). pH strip #90719 - ERH 7/10/23

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23070002

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 5.2 °C LTGS
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: pw9719.Cert 7-6-23.

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
JCarroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23070002-001	RW-3	7/6/23 1223	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6	7/6/23 1330	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Jeremy Carroll	7/6/23 1703		7-6-23 1730

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

7-6-23

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23070002

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 5.2 °C
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY #1
LAB NOTES: PH 90719
Added HNO3 (90404) to AP2, AP3, AP4, AP8, AP9, AP10, BP N 2L 2L 2L 2L 2L 2L 250+2L
ANL 7/10/23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp TCarroll

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23070002-001	RW-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	AP-1	7/7/23 1108	Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	AP-2	1231	Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	AP-3	1316	Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	AP-4	7-7-23 1142	Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	AP-5	7-7-23 1312	Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	AP-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	AP-7	7-7-23 1223	Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AP-8	7/7/23 1039	Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AP-9	7-7-23 1240	Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	AP-10	7/7/23 1147	Groundwater	1	2								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
Teresa Carroll	7/7/23 1644	[signature]	7/7/23 1644

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23070002

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp TCarroll

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23070002-012	AP-11	7-7-23 / 1434	Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12	/ / 1416	Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13	/ / 1347	Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14	↓ / 1121	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carroll	7/7/23 1644	Allison Lin.	7/7 1644

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SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

August 15, 2023

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 23070002

Order No.: 23070747

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 15 sample(s) on 7/12/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **23070747**
Date: **8/15/2023**

CLIENT: TEKLAB Inc,
Project: 23070002

WorkOrder Narrative:
23070747: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **23070747**
Date: **8/15/2023**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **23070747**

15-Aug-23

CLIENT: TEKLAB Inc,
Project: 23070002

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23070747-001	23070002-001		7/6/2023 12:23:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-002	23070002-002		7/7/2023 11:08:00 AM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-003	23070002-003		7/7/2023 12:31:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-004	23070002-004		7/7/2023 1:16:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-005	23070002-005		7/7/2023 11:42:00 AM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-006	23070002-006		7/7/2023 1:12:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-007	23070002-007		7/6/2023 1:30:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-008	23070002-008		7/7/2023 12:23:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-009	23070002-009		7/7/2023 10:39:00 AM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-010	23070002-010		7/7/2023 12:40:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-011	23070002-011		7/7/2023 11:47:00 AM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-012	23070002-012		7/7/2023 2:34:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-013	23070002-013		7/7/2023 2:16:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-014	23070002-014		7/7/2023 1:47:00 PM	7/12/2023 12:00:00 PM	Non-Potable Water
23070747-015	23070002-015		7/7/2023 11:21:00 AM	7/12/2023 12:00:00 PM	Non-Potable Water

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

DATES REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23070747-001A	23070002-001	7/6/2023 12:23:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		7/17/2023 2:35:11 PM	7/25/2023 9:25:00 AM
				Radium-228 (EPA 904.0)		7/17/2023 2:35:11 PM	7/24/2023 3:18:00 PM
23070747-002A	23070002-002	7/7/2023 11:08:00 AM		Radium-226 (EPA 903.0)		7/17/2023 2:35:11 PM	7/25/2023 9:25:00 AM
				Radium-228 (EPA 904.0)		7/17/2023 2:35:11 PM	7/24/2023 3:18:00 PM
23070747-003A	23070002-003	7/7/2023 12:31:00 PM		Radium-226 (EPA 903.0)		7/17/2023 2:35:11 PM	7/25/2023 9:25:00 AM
				Radium-228 (EPA 904.0)		7/17/2023 2:35:11 PM	7/24/2023 3:18:00 PM
23070747-004A	23070002-004	7/7/2023 1:16:00 PM		Radium-226 (EPA 903.0)		7/17/2023 2:35:11 PM	7/25/2023 9:25:00 AM
				Radium-228 (EPA 904.0)		7/17/2023 2:35:11 PM	7/24/2023 3:18:00 PM
23070747-005A	23070002-005	7/7/2023 11:42:00 AM		Radium-226 (EPA 903.0)		7/17/2023 2:35:11 PM	7/25/2023 9:25:00 AM
				Radium-228 (EPA 904.0)		7/17/2023 2:35:11 PM	7/24/2023 3:18:00 PM
23070747-006A	23070002-006	7/7/2023 1:12:00 PM		Radium-226 (EPA 903.0)		7/21/2023 11:56:00 AM	7/27/2023 10:01:00 AM
				Radium-228 (EPA 904.0)		7/21/2023 11:56:00 AM	7/26/2023 4:09:00 PM
23070747-007A	23070002-007	7/6/2023 1:30:00 PM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM
				Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM
23070747-008A	23070002-008	7/7/2023 12:23:00 PM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM
				Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM
23070747-009A	23070002-009	7/7/2023 10:39:00 AM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM
				Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM
23070747-010A	23070002-010	7/7/2023 12:40:00 PM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM
				Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM
23070747-011A	23070002-011	7/7/2023 11:47:00 AM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM
				Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM
23070747-012A	23070002-012	7/7/2023 2:34:00 PM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC. Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

DATES REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23070747-012A	23070002-012	7/7/2023 2:34:00 PM	Non-Potable Water	Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM
23070747-013A	23070002-013	7/7/2023 2:16:00 PM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM
				Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM
23070747-014A	23070002-014	7/7/2023 1:47:00 PM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM
				Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM
				Radium-228 (EPA 904.0)		8/10/2023 4:23:11 PM	8/14/2023 3:29:00 PM
				Radium-228 (EPA 904.0)		7/27/2023 11:50:00 AM	8/3/2023 4:04:00 PM
23070747-015A	23070002-015	7/7/2023 11:21:00 AM		Radium-226 (EPA 903.0)		7/19/2023 2:03:37 PM	7/26/2023 10:02:00 AM
				Radium-228 (EPA 904.0)		7/19/2023 2:03:37 PM	7/25/2023 3:30:00 PM

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23070747**

Date Reported: **8/15/2023**

CLIENT: TEKLAB Inc,

Collection Date: 7/6/2023 12:23:00 PM

Project: 23070002

Lab ID: 23070747-001

Matrix: NON-POTABLE WATER

Client Sample ID: 23070002-001

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.06	1	7/25/2023 9:25:00 AM
Yield	1.00					1	7/25/2023 9:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.74	1	7/24/2023 3:18:00 PM
Yield	1.00					1	7/24/2023 3:18:00 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23070747**

Date Reported: **8/15/2023**

CLIENT: TEKLAB Inc,

Collection Date: 7/7/2023 12:31:00 PM

Project: 23070002

Lab ID: 23070747-003

Matrix: NON-POTABLE WATER

Client Sample ID: 23070002-003

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.09	1	7/25/2023 9:25:00 AM
Yield	1.00					1	7/25/2023 9:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.74	1	7/24/2023 3:18:00 PM
Yield	1.00					1	7/24/2023 3:18:00 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23070747**

Date Reported: **8/15/2023**

CLIENT: TEKLAB Inc,

Collection Date: 7/7/2023 1:16:00 PM

Project: 23070002

Lab ID: 23070747-004

Matrix: NON-POTABLE WATER

Client Sample ID: 23070002-004

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.05	1	7/25/2023 9:25:00 AM
Yield	1.00					1	7/25/2023 9:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.87	1	7/24/2023 3:18:00 PM
Yield	1.00					1	7/24/2023 3:18:00 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23070747**

Date Reported: **8/15/2023**

CLIENT: TEKLAB Inc,

Collection Date: 7/7/2023 12:23:00 PM

Project: 23070002

Lab ID: 23070747-008

Matrix: NON-POTABLE WATER

Client Sample ID: 23070002-008

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.06	1	7/26/2023 10:02:00 AM
Yield	1.00					1	7/26/2023 10:02:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.53	1	7/25/2023 3:30:00 PM
Yield	0.910					1	7/25/2023 3:30:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
ND	Not Detected	OG1	
P	Second column confirmation exceeds	PL	Permit Limit

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Analytical Report

(consolidated)

WO#: **23070747**

Date Reported: **8/15/2023**

CLIENT: TEKLAB Inc,

Collection Date: 7/7/2023 10:39:00 AM

Project: 23070002

Lab ID: 23070747-009

Matrix: NON-POTABLE WATER

Client Sample ID: 23070002-009

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.17	1	7/26/2023 10:02:00 AM
Yield	1.00					1	7/26/2023 10:02:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.54	1	7/25/2023 3:30:00 PM
Yield	1.00					1	7/25/2023 3:30:00 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	OG1	
	P	Second column confirmation exceeds	PL	Permit Limit

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QC SUMMARY REPORT

WO#: **23070747**
15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **66938**

Sample ID: **MB-66938** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167890**
Client ID: **PBW** Batch ID: **66938** TestNo: **E904.0** **E903-904** Analysis Date: **7/24/2023** SeqNo: **4506021**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	0.950			0	0						

Sample ID: **LCSD-66938** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167890**
Client ID: **LCSS02** Batch ID: **66938** TestNo: **E904.0** **E903-904** Analysis Date: **7/24/2023** SeqNo: **4506023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.74	1.00	5.000	0	94.8	70	130	3.440	31.8	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **RLC-66938** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167890**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E904.0** **E903-904** Analysis Date: **7/24/2023** SeqNo: **4506025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	78.0	50	150				
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **66938**

Sample ID: **RLCD-66938** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167890**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E904.0** **E903-904** Analysis Date: **7/24/2023** SeqNo: **4506026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.02	1.00	1.000	0	102	50	150				
Yield	1.00			0	0						

Sample ID: **23070595-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167890**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E904.0** **E903-904** Analysis Date: **7/24/2023** SeqNo: **4506027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.04	1.00	5.000	0	40.8	70	130				S
Yield	1.00			1.000	0						

Sample ID: **23070596-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167890**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E904.0** **E903-904** Analysis Date: **7/24/2023** SeqNo: **4506030**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	0.910			0	0			0.9500	4.30		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **66938**

Sample ID: **23070597-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167890**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E904.0** **E903-904** Analysis Date: **7/24/2023** SeqNo: **4506032**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **66938**

Sample ID: **MB-66938** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **PBW** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506087**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-66938** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **LCSW** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.00	1.00	5.000	0	100	70	130				

Sample ID: **LCSD-66938** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **LCSS02** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.16	1.00	5.000	0	103	70	130	5.000	3.15	20	

Sample ID: **RLC-66938** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **66938**

Sample ID: **RLC-66938** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.34	1.00	1.000	0	134	50	150				

Sample ID: **RLCD-66938** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.11	1.00	1.000	0	111	50	150				

Sample ID: **23070595-001AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506093**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.35	1.00	5.000	0	87.0	70	130				

Sample ID: **23070596-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **66938**

Sample ID: **23070596-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Yield	1.00							1.000	0	0	

Sample ID: **23070597-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/17/2023** RunNo: **167894**
Client ID: **BatchQC** Batch ID: **66938** TestNo: **E903.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67011**

Sample ID: **MB-67011** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167896**
Client ID: **PBW** Batch ID: **67011** TestNo: **E904.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-67011** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167896**
Client ID: **LCSW** Batch ID: **67011** TestNo: **E904.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.58	1.00	5.000	0	71.6	70	130				
Yield	1.00			0	0						

Sample ID: **RLCD-67011** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167896**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E904.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506131**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	78.0	50	150				
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **23070747**
15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67011**

Sample ID: **23071031-001AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167896**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E904.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506132**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.64	1.00	5.000	0	52.8	70	130				S
Yield	1.00			1.000	0						

Sample ID: **23071032-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167896**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E904.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506135**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			0.9100	9.42		

Sample ID: **23070816-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167896**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E904.0** **E903-904** Analysis Date: **7/25/2023** SeqNo: **4506137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67011**

Sample ID: **MB-67011** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **PBW** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-67011** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **LCSW** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.50	1.00	5.000	0	90.0	70	130				

Sample ID: **LCSD-67011** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **LCSS02** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.42	1.00	5.000	0	88.4	70	130	4.500	1.79	20	

Sample ID: **RLC-67011** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23070747**
15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67011**

Sample ID: **RLC-67011** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.07	1.00	1.000	0	107	50	150				

Sample ID: **RLCD-67011** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506173**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	91.0	50	150				

Sample ID: **23071031-001AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506174**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.43	1.00	5.000	0	88.6	70	130				

Sample ID: **23071032-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506177**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67011**

Sample ID: **23071032-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506177**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Yield	1.00							1.000	0	0	

Sample ID: **23070816-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/19/2023** RunNo: **167898**
Client ID: **BatchQC** Batch ID: **67011** TestNo: **E903.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4506179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67083**

Sample ID: **MB-67083** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168035**
Client ID: **PBW** Batch ID: **67083** TestNo: **E904.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4510072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-67083** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168035**
Client ID: **LCSW** Batch ID: **67083** TestNo: **E904.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4510073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.91	1.00	5.000	0	78.2	70	130				
Yield	1.00			0	0						

Sample ID: **RLC-67083** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168035**
Client ID: **BatchQC** Batch ID: **67083** TestNo: **E904.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4510076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	76.0	50	150				
Yield	1.00			0	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67083**

Sample ID: **23071034-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168035**
Client ID: **BatchQC** Batch ID: **67083** TestNo: **E904.0** **E903-904** Analysis Date: **7/26/2023** SeqNo: **4510107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.31	1.00		0	0			2.560	10.3	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67083**

Sample ID: **MB-67083** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168045**
Client ID: **PBW** Batch ID: **67083** TestNo: **E903.0** **E903-904** Analysis Date: **7/27/2023** SeqNo: **4510502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	0.990										

Sample ID: **LCSD-67083** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168045**
Client ID: **LCSS02** Batch ID: **67083** TestNo: **E903.0** **E903-904** Analysis Date: **7/27/2023** SeqNo: **4510504**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.56	1.00	5.000	0	111	70	130	6.720	18.9	20	

Sample ID: **RLC-67083** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168045**
Client ID: **BatchQC** Batch ID: **67083** TestNo: **E903.0** **E903-904** Analysis Date: **7/27/2023** SeqNo: **4510506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	75.0	50	150				

Sample ID: **RLCD-67083** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168045**
Client ID: **BatchQC** Batch ID: **67083** TestNo: **E903.0** **E903-904** Analysis Date: **7/27/2023** SeqNo: **4510507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23070747**
15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67083**

Sample ID: **RLCD-67083** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168045**
Client ID: **BatchQC** Batch ID: **67083** TestNo: **E903.0** **E903-904** Analysis Date: **7/27/2023** SeqNo: **4510507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.22	1.00	1.000	0	122	50	150				

Sample ID: **23071033-001AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168045**
Client ID: **BatchQC** Batch ID: **67083** TestNo: **E903.0** **E903-904** Analysis Date: **7/27/2023** SeqNo: **4510508**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.44	1.00	5.000	0	109	70	130				

Sample ID: **23071096-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **7/21/2023** RunNo: **168045**
Client ID: **BatchQC** Batch ID: **67083** TestNo: **E903.0** **E903-904** Analysis Date: **7/27/2023** SeqNo: **4510518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23070747**
15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67719**

Sample ID: **23072069-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **8/10/2023** RunNo: **169062**
Client ID: **BatchQC** Batch ID: **67719** TestNo: **E904.0** **E903-904** Analysis Date: **8/14/2023** SeqNo: **4541097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	
Yield	0.970			0	0			0.8900	8.60		

Sample ID: **23072069-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **8/10/2023** RunNo: **169062**
Client ID: **BatchQC** Batch ID: **67719** TestNo: **E904.0** **E903-904** Analysis Date: **8/14/2023** SeqNo: **4541099**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.04	1.00		0	0			1.340	25.2	30	
Yield	0.900			0	0			0.8700	3.39		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67719**

Sample ID: **MB-67719** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **8/10/2023** RunNo: **169062**
Client ID: **PBW** Batch ID: **67719** TestNo: **E904.0** **E903-904** Analysis Date: **8/14/2023** SeqNo: **4541078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-67719** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **8/10/2023** RunNo: **169062**
Client ID: **LCSW** Batch ID: **67719** TestNo: **E904.0** **E903-904** Analysis Date: **8/14/2023** SeqNo: **4541079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.61	1.00	5.000	0	72.2	70	130				
Yield	0.980			0	0						

Sample ID: **LCSD-67719** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **8/10/2023** RunNo: **169062**
Client ID: **LCSS02** Batch ID: **67719** TestNo: **E904.0** **E903-904** Analysis Date: **8/14/2023** SeqNo: **4541080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.50	1.00	5.000	0	70.0	70	130	3.610	3.09	20	
Yield	1.00			0	0			0.9800	2.02		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

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QC SUMMARY REPORT

WO#: **23070747**

15-Aug-23

Client: TEKLAB Inc,
Project: 23070002 **BatchID:** **67719**

Sample ID: **RLC-67719**	SampType: **RLC**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **8/10/2023**	RunNo: **169062**
Client ID: **BatchQC**	Batch ID: **67719**	TestNo: **E904.0**	**E903-904**	Analysis Date: **8/14/2023**	SeqNo: **4541082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	64.0	50	150				
Yield	1.00			0	0						

Sample ID: **23080067-001AMS**	SampType: **MS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **8/10/2023**	RunNo: **169062**
Client ID: **BatchQC**	Batch ID: **67719**	TestNo: **E904.0**	**E903-904**	Analysis Date: **8/14/2023**	SeqNo: **4541084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.78	1.00	5.000	0	116	70	130				
Yield	1.00			1.000	0						

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	OG1		P	Second column confirmation exceeds
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original

Pg ___ of ___ 23070747

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226, 228, ~~and combined~~) by method EPA903.0/904.0
on standard TAT. Collected in IL SAN 7/10/23

Project# 23070002

Contact: Shelly Hennessy Email: shennessy@teklabinc.com
Requested Due Date: NTAT Billing/PO: 34677 Phone: 618-344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228	com=	diff
	23070002-001	7/6/23 12.23	HNO3	Groundwater	✔	✔	35	
	23070002-002	7/7/23 11.08	HNO3	Groundwater	✔	✔	16	
	23070002-003	7/7/23 12.31	HNO3	Groundwater	✔	✔	23	
	23070002-004	7/7/23 13.16	HNO3	Groundwater	✔	✔	34	
	23070002-005	7/7/23 11.42	HNO3	Groundwater	✔	✔	31	
	23070002-006	7/7/23 13.12	HNO3	Groundwater	✔	✔	36	
	23070002-007	7/6/23 13.30	HNO3	Groundwater	✔	✔	23	
	23070002-008	7/7/23 12.23	HNO3	Groundwater	✔	✔	OK	
	23070002-009	7/7/23 10.39	HNO3	Groundwater	✔	✔	36	
	23070002-010	7/7/23 12.40	HNO3	Groundwater	✔	✔	37	
	23070002-011	7/7/23 11.47	HNO3	Groundwater	✔	✔	36	

*Relinquished By	Date/Time	Received By	Date/Time
Allison Cole (fedex)	7/10/23	C.Cr	7/12/23 1200
		TWO DOT received, no COA	

23.4+0.0=
23.4
fedex
cooler

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights. Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

PDF_0752

Pg ___ of 23070747

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: ____ Sampler: ____ QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226, 228, and combined) by method EPA903.0/904.0
on standard TAT.

Project# 23070002

Contact: Shelly Hennessy Email: shennessy@teklabinc.com
Requested Due Date: NTAT Billing/PO: 34677 Phone: 618-344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228	CDM	pH
	23070002-012	7/7/23 14.34	HNO3	Groundwater	✔	✔	18	1
	23070002-013	7/7/23 14.16	HNO3	Groundwater	✔	✔	32	1
	23070002-014	7/7/23 13.47	HNO3	Groundwater	✔	✔	33	1
	23070002-015	7/7/23 11.21	HNO3	Groundwater	✔	✔	28	1
			HNO3	Groundwater				
			HNO3	Groundwater				
			HNO3	Groundwater				
			HNO3	Groundwater				
			HNO3	Groundwater				
			HNO3	Groundwater				
			HNO3	Groundwater				

*Relinquished By	Date/Time	Received By	Date/Time
Allison Cole (Fedex)	7/10/23		

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: **TEK-IL-62234-A** Work Order Number: **23070747** RcptNo: **1**

Logged by:	**Christina N. Gemma**	**7/12/2023 12:00:00 PM**	C. Gemma
Completed By:	**Jacqueline Rasile**	**7/13/2023 1:07:43 AM**	
Reviewed By:	**Jennifer Woolf**	**7/13/2023 6:52:05 PM**	Jennifer Woolf

Chain of Custody

1.	Were seals intact?	Yes	☑	No ☐	Not Present	☐
2.	Is Chain of Custody complete?	Yes	☐	No ☑	Not Present	☐
3.	How was the sample delivered?	FedEx				

Log In

4.	Coolers are present?	Yes	☑	No ☐	NA	☐
5.	Was an attempt made to cool the samples?	Yes	☐	No ☐	NA	☑
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes	☐	No ☐	NA	☑
7.	Sample(s) in proper container(s)?	Yes	☑	No ☐		
8.	Sufficient sample volume for indicated test(s)?	Yes	☑	No ☐		
9.	Are samples (except VOA and ONG) properly preserved?	Yes	☑	No ☐		
10.	Was preservative added to bottles?	Yes	☐	No ☑	NA	☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes	☐	No ☐	No VOA Vials	☑
12.	Were any sample containers received broken?	Yes	☐	No ☑		
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes	☑	No ☐		
14.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No ☐		
15.	Is it clear what analyses were requested?	Yes	☑	No ☐		
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes	☑	No ☐		

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes	☐	No ☐	NA	☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

confirmed with clinet second bottle labled -001 is the -004 bottle
Two 001 bottles rec'd, no 004 bottle.

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	23.4	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

August 03, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells **WorkOrder:** 23070001

Dear Eric Staley:

TEKLAB, INC received 12 samples on 7/7/2023 4:44:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 23070001
Report Date: 03-Aug-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23070001

Client Project: Landfill Monitoring Wells **Report Date:** 03-Aug-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070001
Client Project: Landfill Monitoring Wells
Report Date: 03-Aug-23

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 23070001
Report Date: 03-Aug-23

Cooler Receipt Temp: 6.2 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070001
Client Project: Landfill Monitoring Wells
Report Date: 03-Aug-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2023	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23070001
Client Project: Landfill Monitoring Wells
Report Date: 03-Aug-23
Lab ID: 23070001-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 07/05/2023 12:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	07/05/2023 12:23	R331691
Depth to water	*	-5.00		**11.94**	ft	1	07/05/2023 12:23	R331691
Depth to water from measuring point	*	0		**14.69**	ft	1	07/05/2023 12:23	R331691
Elevation of groundwater surface	*	0		**540.91**	ft	1	07/05/2023 12:23	R331691
Measuring Point Elevation	*	0		**555.60**	ft	1	07/05/2023 12:23	R331691
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.0**	°F	1	07/05/2023 12:23	R331691
SW-846 9040B								
pH, Field	*	1.00		**6.51**		1	07/05/2023 12:23	R331691
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1310**	µmhos/cm @25C	1	07/05/2023 12:23	R331691
EPA 600 350.1 (DISSOLVED)								
Nitrogen, Ammonia (as N)	NELAP	0.10		**1.83**	mg/L	1	07/06/2023 12:59	R331208
EPA 600 353.2 R2.0 (DISSOLVED)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**0.073**	mg/L	1	07/06/2023 13:09	R331256
STANDARD METHODS 2540 C (DISSOLVED) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1160**	mg/L	2.5	07/06/2023 13:37	R331272
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.005		**< 0.005**	mg/L	1	07/11/2023 16:35	208250
SW-846 9036 (DISSOLVED)								
Sulfate	NELAP	100		**354**	mg/L	10	07/14/2023 19:48	R331653
SW-846 9251 (DISSOLVED)								
Chloride	NELAP	4		**39**	mg/L	1	07/14/2023 19:30	R331669
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0	S	**8150**	µg/L	1	07/07/2023 15:30	207897
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	07/07/2023 15:30	207897
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	07/07/2023 15:30	207897
Magnesium	NELAP	0.050	S	**80.6**	mg/L	1	07/07/2023 15:30	207897
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	07/07/2023 15:30	207897
Matrix spike control limits are not applicable due to high sample/spike ratio.								
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**149**	µg/L	5	07/11/2023 0:37	207897
Lead	NELAP	1.0		**< 1.0**	µg/L	5	07/11/2023 0:37	207897
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	07/07/2023 12:54	208168

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 23070001
Report Date: 03-Aug-23

Carrier: Tracy Carroll

Received By: ANC

Completed by: Allison Colin
On: 05-Jul-23

Reviewed by: Ellie Hopkins
On: 10-Jul-23

Pages to follow: Chain of custody 4 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 6.2
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Additional sodium hydroxide (81662) was needed in all Cyanide containers (G120, G121, AW-1) upon arrival at the laboratory. - acolin - 7/5/2023 4:44:06 PM

Samples collected on 7/5/23 were delivered to the laboratory on 7/5/23 at 1632 (on ice - 6.2C - LTG#5). pH strip #90719/79929 - ANC/ERH 7/7/23

Additional sodium hydroxide (81662) was needed in G113 and G122 upon arrival at the laboratory. CET 7/6/23

Samples collected on 7/6/23 were delivered to the laboratory on 7/6/23 at 1703 (on ice - 5.2C - LTG#5). pH strip #90719/79929 - CET/ERH 7/7/23

Samples collected on 7/7/23 were delivered to the laboratory on 7/7/23 at 1644 (on ice - 13.2C - LTG#5). pH strip #90719/79929 - CET/ERH 7/7/23

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23070001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 6.2 °C
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY #5
LAB NOTES:
PH 90719/79929 Added NaOH (81662) to All Cyanide samples

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
T Carroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Thallium (T)	As B (T)	Magnesium (T)	Boron (T)	Ammonia (T)			
23070001-001	R101		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								
002	G110		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X							
003	R111		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓		X						
004	G112		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X							
005	G113		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X							
006	G120	7/5/23 1311	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X		X					
007	G121	7/5/23 1402	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X			X	X			
008	G122		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								
009	AW-1	7/5/23 1223	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								
010	AW-2		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								
011	RW-3		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								

Relinquished By	Date/Time	Received By	Date/Time
Terry Carroll	7/5/23 1632	[signature]	7/5/23 1632

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23070001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 5.2 °C LTG: 5
Preserved in: ☑ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: PHN 90714/79929. Added NaOH (016623) to G113 and G122. CRS 7-6-23.

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
T Carroll / J Calp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Thallium (T)	As B (T)	Magnesium (T)	Boron (T)	Ammonia (T)			
23070001-001	R101		Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔								
002	G110	7/6/23 1138	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	X							
003	R111	7.6.23/ 1344	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔		X						
004	G112	7.6.23/ 1148	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	X							
005	G113	7.6.23/ 1410	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	X							
006	G120		Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	X		X					
007	G121		Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔	X			X	X			
008	G122	7.6.23/ 1449	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔								
009	AW-1		Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔								
010	AW-2	7/6/23 1409	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔								
011	RW-3	7/6/23 1223	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔								

Relinquished By	Date/Time	Received By	Date/Time
Jimmy Carroll	7/6/23 1703	[signature]	7-6-23 1703

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CRS 7-6-23

Print PDF

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23070001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
TCarroll / JCole

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)
23070001-012	DUPLICATE	7/6/23 1409	Groundwater	1	1	1	1							✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carroll	7/6/23 1703		7-6-23 1703

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23070001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 13.2 °C
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY #5
LAB NOTES: [illegible] 7-7-23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Cole

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Thallium (T)	As B (T)	Magnesium (T)	Boron (T)	Ammonia (T)			
23070001-001	R101	7-7-23 / 1054	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								
002	G110		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X							
003	R111		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓		X						
004	G112		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X							
005	G113		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X							
006	G120		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X		X					
007	G121		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓	X			X	X			
008	G122		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								
009	AW-1		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								
010	AW-2		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								
011	RW-3		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓								

Relinquished By	Date/Time	Received By	Date/Time
Terry Carroll	7/7/23 1644	[illegible]	7/7/23 1644

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[illegible] 7-7-23

Fourth Quarter 2023

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

November 27, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 23101164

Dear Eric Staley:

TEKLAB, INC received 15 samples on 10/25/2023 5:15:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23101164
Report Date: 27-Nov-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	22
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23101164

Client Project: Ash Pond Monitoring Wells **Report Date:** 27-Nov-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101164
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Nov-23

Qualifiers

# -	Unknown hydrocarbon
B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit
E -	Value above quantitation range
H -	Holding times exceeded
I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits
M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit
R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits
T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23101164
Report Date: 27-Nov-23

Cooler Receipt Temp: 4.8 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & Radium-228 analyses were performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23101164
Report Date: 27-Nov-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101164
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Nov-23
Lab ID: 23101164-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 10/25/2023 12:34

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	10/25/2023 12:34	R338505
Depth to water	*	-5.00		**9.09**	ft	1	10/25/2023 12:34	R338505
Depth to water from measuring point	*	0		**11.79**	ft	1	10/25/2023 12:34	R338505
Elevation of groundwater surface	*	0		**527.71**	ft	1	10/25/2023 12:34	R338505
Measuring Point Elevation	*	0		**539.50**	ft	1	10/25/2023 12:34	R338505
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	10/25/2023 12:34	R338505
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.6**	NTU	1	10/25/2023 12:34	R338505
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.3**	°F	1	10/25/2023 12:34	R338505
SW-846 9040B								
pH, Field	*	1.00		**7.31**		1	10/25/2023 12:34	R338505
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**632**	µmhos/cm @25C	1	10/25/2023 12:34	R338505
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**340**	mg/L	5	10/30/2023 11:49	R338538
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**16**	mg/L	1	10/27/2023 19:42	R338425
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.44**	mg/L	1	11/02/2023 14:55	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**31**	mg/L	1	10/27/2023 19:41	R338455
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.165**	mg/L	1	11/02/2023 10:47	213836
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/02/2023 10:47	213836
Boron	NELAP	0.0200		**0.117**	mg/L	1	11/02/2023 10:47	213836
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/02/2023 10:47	213836
Calcium	NELAP	0.100		**58.7**	mg/L	1	11/02/2023 10:47	213836
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 10:47	213836
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 10:47	213836
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/02/2023 10:47	213836
Lithium	NELAP	0.0050		**0.0147**	mg/L	1	11/02/2023 10:47	213836
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/02/2023 10:47	213836
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:03	213836
Arsenic	NELAP	0.0010		**0.740**	mg/L	5	11/02/2023 19:03	213836
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:03	213836
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/02/2023 19:03	213836
PQL recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	10/31/2023 13:26	213968
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727
Radium-228	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101164
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Nov-23
Lab ID: 23101164-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 10/26/2023 13:05

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	10/26/2023 13:05	R338505
Depth to water	*	-5.00		**6.20**	ft	1	10/26/2023 13:05	R338505
Depth to water from measuring point	*	0		**8.70**	ft	1	10/26/2023 13:05	R338505
Elevation of groundwater surface	*	0		**527.40**	ft	1	10/26/2023 13:05	R338505
Measuring Point Elevation	*	0		**536.10**	ft	1	10/26/2023 13:05	R338505
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	10/26/2023 13:05	R338505
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**15**	NTU	1	10/26/2023 13:05	R338505
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.9**	°F	1	10/26/2023 13:05	R338505
SW-846 9040B								
pH, Field	*	1.00		**6.57**		1	10/26/2023 13:05	R338505
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1380**	µmhos/cm @25C	1	10/26/2023 13:05	R338505
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1020**	mg/L	1	10/31/2023 10:25	R338603
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**380**	mg/L	20	10/30/2023 13:50	R338498
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.27**	mg/L	1	11/02/2023 14:58	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**40**	mg/L	2	10/30/2023 13:44	R338509
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0716**	mg/L	1	10/31/2023 17:43	213879
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	10/31/2023 17:43	213879
Boron	NELAP	0.0200		**3.23**	mg/L	1	10/31/2023 17:43	213879
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	10/31/2023 17:43	213879
Calcium	NELAP	0.100		**204**	mg/L	1	10/31/2023 17:43	213879
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 17:43	213879
Cobalt	NELAP	0.0050		**0.0091**	mg/L	1	10/31/2023 17:43	213879
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/31/2023 17:43	213879
Lithium	NELAP	0.0050		**0.0056**	mg/L	1	10/31/2023 17:43	213879
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	10/31/2023 17:43	213879
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 10:52	213879
Arsenic	NELAP	0.0010		**0.0020**	mg/L	5	11/01/2023 10:52	213879
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 10:52	213879
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/01/2023 10:52	213879
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	10/31/2023 14:43	213968
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727
Radium-228	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101164
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Nov-23
Lab ID: 23101164-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 10/26/2023 13:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	10/26/2023 13:25	R338505
Depth to water	*	-5.00		**8.39**	ft	1	10/26/2023 13:25	R338505
Depth to water from measuring point	*	0		**10.09**	ft	1	10/26/2023 13:25	R338505
Elevation of groundwater surface	*	0		**525.31**	ft	1	10/26/2023 13:25	R338505
Measuring Point Elevation	*	0		**535.40**	ft	1	10/26/2023 13:25	R338505
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	10/26/2023 13:25	R338505
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**11**	NTU	1	10/26/2023 13:25	R338505
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**64.8**	°F	1	10/26/2023 13:25	R338505
SW-846 9040B								
pH, Field	*	1.00		**6.69**		1	10/26/2023 13:25	R338505
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1290**	µmhos/cm @25C	1	10/26/2023 13:25	R338505
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1080**	mg/L	2.5	10/31/2023 10:26	R338603
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**495**	mg/L	20	11/02/2023 12:38	R338709
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.25**	mg/L	1	11/02/2023 14:02	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	8	S	**57**	mg/L	2	10/30/2023 14:08	R338509
Matrix spike did not recover within control limits due to matrix interference.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.113**	mg/L	1	10/31/2023 17:46	213879
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	10/31/2023 17:46	213879
Boron	NELAP	0.0200		**15.2**	mg/L	1	10/31/2023 17:46	213879
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	10/31/2023 17:46	213879
Calcium	NELAP	0.100		**181**	mg/L	1	10/31/2023 17:46	213879
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 17:46	213879
Cobalt	NELAP	0.0050		**0.0051**	mg/L	1	10/31/2023 17:46	213879
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/31/2023 17:46	213879
Lithium	NELAP	0.0050		**0.0051**	mg/L	1	10/31/2023 17:46	213879
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	10/31/2023 17:46	213879
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 10:58	213879
Arsenic	NELAP	0.0010		**0.0182**	mg/L	5	11/01/2023 10:58	213879
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 10:58	213879
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/01/2023 10:58	213879
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	10/31/2023 14:45	213968
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727
Radium-228	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101164
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Nov-23
Lab ID: 23101164-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 10/26/2023 13:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	10/26/2023 13:58	R338505
Depth to water	*	-5.00		**9.79**	ft	1	10/26/2023 13:58	R338505
Depth to water from measuring point	*	0		**12.45**	ft	1	10/26/2023 13:58	R338505
Elevation of groundwater surface	*	0		**526.57**	ft	1	10/26/2023 13:58	R338505
Measuring Point Elevation	*	0		**539.02**	ft	1	10/26/2023 13:58	R338505
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	10/26/2023 13:58	R338505
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**7.8**	NTU	1	10/26/2023 13:58	R338505
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.1**	°F	1	10/26/2023 13:58	R338505
SW-846 9040B								
pH, Field	*	1.00		**7.15**		1	10/26/2023 13:58	R338505
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**478**	µmhos/cm @25C	1	10/26/2023 13:58	R338505
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**352**	mg/L	1	10/31/2023 12:06	R338603
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**15**	mg/L	1	10/30/2023 15:04	R338498
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.53**	mg/L	1	11/02/2023 13:57	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**60**	mg/L	2	11/01/2023 14:16	R338688
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.158**	mg/L	1	10/31/2023 18:23	213879
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	10/31/2023 18:23	213879
Boron	NELAP	0.0200		**0.331**	mg/L	1	10/31/2023 18:23	213879
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	10/31/2023 18:23	213879
Calcium	NELAP	0.100		**50.6**	mg/L	1	10/31/2023 18:23	213879
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 18:23	213879
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 18:23	213879
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/31/2023 18:23	213879
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 18:23	213879
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	10/31/2023 18:23	213879
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 12:17	213879
Arsenic	NELAP	0.0010		**0.0750**	mg/L	5	11/01/2023 12:17	213879
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 12:17	213879
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/01/2023 12:17	213879
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	10/31/2023 14:59	213968
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727
Radium-228	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101164
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Nov-23
Lab ID: 23101164-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 10/26/2023 9:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	10/26/2023 9:30	R338505
Depth to water	*	-5.00		**5.17**	ft	1	10/26/2023 9:30	R338505
Depth to water from measuring point	*	0		**8.07**	ft	1	10/26/2023 9:30	R338505
Elevation of groundwater surface	*	0		**529.13**	ft	1	10/26/2023 9:30	R338505
Measuring Point Elevation	*	0		**537.20**	ft	1	10/26/2023 9:30	R338505
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	10/26/2023 9:30	R338505
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.1**	NTU	1	10/26/2023 9:30	R338505
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.4**	°F	1	10/26/2023 9:30	R338505
SW-846 9040B								
pH, Field	*	1.00		**7.01**		1	10/26/2023 9:30	R338505
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**926**	µmhos/cm @25C	1	10/26/2023 9:30	R338505
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**430**	mg/L	2.5	10/31/2023 12:06	R338603
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	10/30/2023 15:06	R338498
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.31**	mg/L	1	11/02/2023 15:04	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**25**	mg/L	1	10/30/2023 15:07	R338509
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.374**	mg/L	1	10/31/2023 18:27	213879
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	10/31/2023 18:27	213879
Boron	NELAP	0.0200		**0.0896**	mg/L	1	10/31/2023 18:27	213879
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	10/31/2023 18:27	213879
Calcium	NELAP	0.100		**101**	mg/L	1	10/31/2023 18:27	213879
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 18:27	213879
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 18:27	213879
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/31/2023 18:27	213879
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 18:27	213879
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	10/31/2023 18:27	213879
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 12:23	213879
Arsenic	NELAP	0.0010		**0.0395**	mg/L	5	11/01/2023 12:23	213879
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 12:23	213879
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/01/2023 12:23	213879
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	10/31/2023 15:01	213968
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727
Radium-228	*	0		**See Attached**	pci/L	1	11/10/2023 0:00	R339727

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 23101164
Report Date: 27-Nov-23

Carrier: Justin Colp

Received By: HAW

Completed by: On: 26-Oct-23 — Timothy W. Mathis

Reviewed by: On: 27-Oct-23 — Ellie Hopkins

Pages to follow: Chain of custody 3 Extra pages included 57

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #90719 CET. - TMathis - 10/26/2023 12:47:39 PM

pH strip #90719. - amberdilallo - 10/27/2023 9:49:59 AM

Samples collected on 10/26/23 were delivered to the laboratory on 10/26/23 at 1707 (on ice - 2.6C - LTG1). - HW/ERH 10/27/23

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23101164

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 4.8 °C CTG
Preserved in: ☐ LAB ☒ FIELD FOR LAB USE ONLY
LAB NOTES: pW90719-CFS 10-26-23
*TE SAH 11/6/23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23101164-001	RW-3	10-25-23 / ~~1235~~ 1234*	Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	AP-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	AP-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	AP-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	AP-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	AP-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	AP-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	AP-7		Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AP-8		Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AP-9		Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	AP-10		Groundwater	1	2								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	10-25-23 1715	[signature]	10/25/23 1715

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CFS 10-21-23

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23101164

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 2.1 °C
Preserved in: ☐ LAB ☒ FIELD
FOR LAB USE ONLY
LAB NOTES: 9079 10/27/23
XTE SH 11/6/23

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Gb

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23101164-001	RW-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	AP-1	10-26-23/ 1222	Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	AP-2	1305	Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	AP-3	* 138525	Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	AP-4	1406	Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	AP-5	1444	Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	AP-6	0909	Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	AP-7	10-26-23/ 1358	Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AP-8	10-26-23/ 0930	Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AP-9	10-26-23/ 1446	Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	AP-10	10-26-23/ 1243	Groundwater	1	2								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
	10-26-23 17:07	Hand in	10/26/23 1707

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23101164

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells
SAMPLE COLLECTOR'S NAME: Justin Gp

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other _____ ☐ 3 Day (50% Surcharge)
BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23101164-012	AP-11	10-26-23 / 1152	Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12	1120	Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13	1033	Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14	1351	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
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			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	10.26.23 17:07	[signature]	10/26/23 1707

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
001	RW-3	Groundwater Sample	70.0	None	S	Clear	Good	Good	Good	No	No
002	AP-1	Groundwater Sample	72.0	Light	S	Cloudy	Good	Good	Good	No	No
003	AP-2	Groundwater Sample	72.0	Light	S	Partly cloudy	Good	Good	Good	No	No
004	AP-3	Groundwater Sample	71.0	Light	S	Partly cloudy	Good	Good	Good	No	No
005	AP-4	Groundwater Sample	71.0	None	S	Partly cloudy	Good	Good	Good	Yes	No
006	AP-5	Groundwater Sample	71.0	Light	S	Partly cloudy	Good	Good	Good	Yes	No
007	AP-6	Groundwater Sample	66.0	None	S	Partly cloudy	Good	Good	Good	No	No
008	AP-7	Groundwater Sample	71.0	Light	S	Cloudy	Good	Good	Good	Yes	No
009	AP-8	Groundwater Sample	66.0	None	S	Partly cloudy	Good	Good	Good	Yes	No
010	AP-9	Groundwater Sample	71.0	Light	S	Cloudy	Good	Good	Good	Yes	No
011	AP-10	Groundwater Sample	72.0	Light	S	Partly cloudy	Good	Good	Good	No	No
012	AP-11	Groundwater Sample	71.0	None	S	Cloudy	Good	Good	Good	No	No
013	AP-12	Groundwater Sample	70.0	None	S	Partly cloudy	Good	Good	Good	No	No
014	AP-13	Groundwater Sample	67.0	None	S	Partly cloudy	Good	Good	Good	Yes	No
015	AP-14	Groundwater Sample	71.0	None	S	Partly cloudy	Good	Good	Good	No	No

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

		GW Level Measurement				Purge Activities							
WO Sample	**Well ID**	**Sampler Initials**	**Date/Time**	**DTW (ft)**	**DTB (ft)**	**Sampler Initials**	**Purge Date**			**Sampling Device**	**Well Diameter (in)**	**Actual Volume Purged (L)**	**Purge Rate (mL/min)**
001	RW-3	BG	10/26/23 12:26	11.79	44.01	BG	10/25/2023	12:24	12:35	Bladder Pump	2"	2.0	181.8
002	AP-1	BG	10/26/23 12:12	11.42	31.08	BG	10/26/2023	12:12	12:22	Bladder Pump	2"	3.0	300.0
003	AP-2	BG	10/26/23 12:52	8.70	21.33	BG	10/26/2023	12:52	13:05	Bladder Pump	2"	2.5	192.3
004	AP-3	BG	10/26/23 13:12	10.09		BG	10/26/2023	13:12	13:35	Bladder Pump	2"	2.0	87.0
005	AP-4	BG	10/26/23 13:57	10.79	60.41	BG	10/26/2023	13:57	14:06	Bladder Pump	2"	2.0	222.2
006	AP-5	BG	10/26/23 14:33	18.17	31.27	BG	10/26/2023	13:32	14:44	Bladder Pump	2"	4.0	55.6
007	AP-6	BG	10/26/23 8:57	10.06	39.62	BG	10/26/2023	08:58	09:09	Submersible Pump	2"	1.7	154.5
008	AP-7	TAC	10/26/23 13:35	12.45	42.52	TAC	10/26/2023	13:12	13:58	Bladder Pump	2"	3.5	76.1
009	AP-8	BG	10/26/23 9:18	8.07	39.60	BG	10/26/2023	09:20	09:30	Submersible Pump	2"	2.0	200.0
010	AP-9	TAC	10/26/23 14:26	13.87	39.60	TAC	10/26/2023	14:30	14:46	Submersible Pump	2"	2.5	156.2
011	AP-10	BG	10/26/23 12:30	6.57	38.07	BG	10/26/2023	12:30	12:43	Submersible Pump	2"	4.0	307.7
012	AP-11	BG	10/26/23 11:30	15.96	22.95	BG	10/26/2023	11:30	11:52	Submersible Pump	2"	6.0	272.7
013	AP-12	BG	10/26/23 10:43	18.44	30.40	BG	10/26/2023	10:43	11:20	Submersible Pump	2"	8.5	229.7
014	AP-13	BG	10/26/23 9:58	19.88	31.00	BG	10/26/2023	09:59	10:33	Submersible Pump	2"	9.5	279.4
015	AP-14	BG	10/26/23 13:37	3.72	31.20	BG	10/26/2023	13:38	13:51	Submersible Pump	2"	5.0	384.6

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

WO Sample	Well ID	Sampling Activities and Observations									
		Sampler Initials	Date	Sample Time	Sampling Method	Field Filtered	Appearance	Odor	Color	Post-Sample DTW (ft)	Drawdown (ft)
001	RW-3	bg	10/25/23	12:34	Low Flow	Yes	Clear	Slight	CLEAR	14.45	**2.66**
002	AP-1	BG	10/26/23	12:22	Low Flow	No	Clear	None	CLEAR	11.69	0.27
003	AP-2	BG	10/26/23	13:05	Low Flow	No	Clear	None	clear	8.82	0.12
004	AP-3	BG	10/26/23	13:25	Low Flow	No	Clear	Slight	Clear	10.43	0.34
005	AP-4	BG	10/26/23	14:06	Low Flow	No	Clear	Slight	Clear	11.11	0.32
006	AP-5	BG	10/26/23	14:44	Low Flow	No	Clear	None	Clear	20.72	**2.55**
007	AP-6	BG	10/26/23	09:09	Low Flow	No	Clear	Slight	clear	12.07	**2.01**
008	AP-7	TAC	10/26/23	13:58	Low Flow	No	Clear	None	None	14.42	**1.97**
009	AP-8	BG	10/26/23	09:30	Low Flow	No	Clear	None	CLEAR	8.54	0.47
010	AP-9	TAC	10/26/23	14:46	Low Flow	No	Clear	None	None	13.87	0.00
011	AP-10	BG	10/26/23	12:43	Low Flow	No	Clear	Slight	clear	6.23	-0.34
012	AP-11	BG	10/26/23	11:52	Low Flow	No	Clear	Slight	clear	16.46	0.50
013	AP-12	BG	10/26/23	11:20	Low Flow	No	Cloudy	Slight	Gray	19.44	**1.00**
014	AP-13	BG	10/26/23	10:33	Low Flow	No	Cloudy	Moderate	Gray	21.27	**1.39**
015	AP-14	BG	10/26/23	13:51	Low Flow	No	Clear	None	Clear	3.60	-0.12

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

WO Sample	Well ID	COMMENTS
001	RW-3	GW Level measurement time should be 1226 not 1504. logged this in the worng column
002	AP-1	
003	AP-2	
004	AP-3	
005	AP-4	
006	AP-5	
007	AP-6	
008	AP-7	
009	AP-8	
010	AP-9	
011	AP-10	
012	AP-11	
013	AP-12	
014	AP-13	
015	AP-14	

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Stabilized Field Parameters Summary
CWLP- 4Q 2023

Well ID	Date	Time	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	DTB (ft)	DTW (ft)	LIMS ID
RW-3	10/25/2023	12:34	15.7	60.3	7.31	632.4	1.39	8.6	-125.8	44.01	11.79	23101164-001A
AP-1	10/26/2023	12:22	15.4	59.7	6.71	1,710.9	1.31	11.94	-103.3	31.08	11.42	23101164-002A
AP-2	10/26/2023	13:05	16.6	61.9	6.57	1,375.8	1.04	15.13	-16.1	21.33	8.70	23101164-003A
AP-3	10/26/2023	13:25	18.2	64.8	6.69	1,293.6	1.28	10.54	-79.9		10.09	23101164-004A
AP-4	10/26/2023	14:06	19.1	66.4	6.99	865.9	1.78	8.84	-91.3	60.41	10.79	23101164-005A
AP-5	10/26/2023	14:44	14.4	57.9	7.17	652.7	2.61	2.05	-2.3	31.27	18.17	23101164-006A
AP-6	10/26/2023	9:09	15.2	59.4	7.17	609.4	1.75	9.52	-101.5	39.62	10.06	23101164-007A
AP-7	10/26/2023	13:58	14.5	58.1	7.15	478.1	0.67	7.82	-155.7	42.52	12.45	23101164-008A
AP-8	10/26/2023	9:30	15.2	59.4	7.01	926.5	1.41	9.1	-111.3	39.60	8.07	23101164-009A
AP-9	10/26/2023	14:46	17.1	62.8	6.81	743.3	1.14	10.37	-111.2	39.60	13.87	23101164-010A
AP-10	10/26/2023	12:43	14.9	58.8	6.82	1,182.1	0.94	12.43	-111.3	38.07	6.57	23101164-011A
AP-11	10/26/2023	11:52	16.7	62.1	6.60	1,038.9	0.91	11.89	-84.2	22.95	15.96	23101164-012A
AP-12	10/26/2023	11:20	15.7	60.3	6.62	1,816.3	0.66	63.28	-144.5	30.40	18.44	23101164-013A
AP-13	10/26/2023	10:33	15.5	59.9	6.74	820.7	1.03	159.47	-94.3	31.00	19.88	23101164-014A
AP-14	10/26/2023	13:51	14.3	57.7	7.06	1,735.5	0.97	6.91	-50.6	31.20	3.72	23101164-015A

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
RW-3	10/25/2023	12:28	11.79	15.0	59.0	7.31	613.2	613.2	3.08	3.23	-61
RW-3	10/25/2023	12:31	11.79	16.0	60.8	7.25	633.4	633.4	1.93	8.1	-95.4
RW-3	10/25/2023	12:34	11.79	15.7	60.3	7.31	632.4	632.4	1.39	8.6	-125.8

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-2	10/26/2023	12:56	8.7	16.8	62.2	6.60	1,378.7	1,378.7	2.31	21.59	-20.8
AP-2	10/26/2023	12:59	8.7	16.7	62.1	6.58	1,375.7	1,375.7	1.54	19.53	-18
AP-2	10/26/2023	13:02	8.7	16.7	62.1	6.57	1,375.2	1,375.2	1.21	13.35	-16.9
AP-2	10/26/2023	13:05	8.7	16.6	61.88	6.57	1,375.8	1,375.8	1.04	15.13	-16.1

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-3	10/26/2023	13:16	10.09	18.3	64.9	6.82	1,258.1	1,258.1	4.12	12.63	-50.7
AP-3	10/26/2023	13:19	10.09	18.0	64.4	6.72	1,280.4	1,280.4	2.34	16.99	-64.5
AP-3	10/26/2023	13:22	10.09	18.2	64.8	6.70	1,289.4	1,289.4	1.58	11.27	-74.9
AP-3	10/26/2023	13:25	10.09	18.2	64.76	6.69	1,293.6	1,293.6	1.28	10.54	-79.9

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-7	10/26/2023	13:49	12.45	14.3	57.7	7.17	455.0	455.0	0.78	25.78	-151
AP-7	10/26/2023	13:52	12.45	14.5	58.1	7.16	456.5	456.5	0.74	21.99	-153.2
AP-7	10/26/2023	13:55	12.45	14.6	58.3	7.15	472.5	472.5	0.7	3.96	-154.3
AP-7	10/26/2023	13:58	12.45	14.5	58.1	7.15	478.1	478.1	0.67	7.82	-155.7

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101164
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-8	10/26/2023	9:24	8.07	15.0	59.0	7.03	927.0	927.0	2.61	17.19	-96.7
AP-8	10/26/2023	9:27	8.07	15.1	59.2	7.02	926.5	926.5	1.77	11.27	-105.8
AP-8	10/26/2023	9:30	8.07	15.2	59.4	7.01	926.5	926.5	1.41	9.1	-111.3

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

November 22, 2023

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 23101164

Dear Shelly Hennessy:

Order No.: 23110120

Summit Environmental Technologies, Inc. received 15 sample(s) on 11/1/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
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Website: http://www.settek.com

Case Narrative

WO#: **23110120**
Date: **11/22/2023**

CLIENT: TEKLAB Inc,
Project: 23101164

WorkOrder Narrative:
23110120: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-44
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **23110120**
Date: **11/22/2023**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **23110120**

22-Nov-23

CLIENT: TEKLAB Inc,
Project: 23101164

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23110120-001	23101164-001		10/25/2023 12:35:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-002	23101164-002		10/26/2023 12:22:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-003	23101164-003		10/26/2023 1:05:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-004	23101164-004		10/26/2023 1:35:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-005	23101164-005		10/26/2023 2:06:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-006	23101164-006		10/26/2023 2:44:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-007	23101164-007		10/26/2023 9:09:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-008	23101164-008		10/26/2023 1:58:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-009	23101164-009		10/26/2023 9:30:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-010	23101164-010		10/26/2023 2:46:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-011	23101164-011		10/26/2023 12:43:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-012	23101164-012		10/26/2023 11:52:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-013	23101164-013		10/26/2023 11:20:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-014	23101164-014		10/26/2023 10:33:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110120-015	23101164-015		10/26/2023 1:51:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water

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DATES REPORT

WO#: **23110120**

22-Nov-23

Client: TEKLAB Inc,
Project: 23101164

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23110120-001A	23101164-001	10/25/2023 12:35:00 PM	Non-Potable Water	Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-002A	23101164-002	10/26/2023 12:22:00 PM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-003A	23101164-003	10/26/2023 1:05:00 PM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-004A	23101164-004	10/26/2023 1:35:00 PM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-005A	23101164-005	10/26/2023 2:06:00 PM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-006A	23101164-006	10/26/2023 2:44:00 PM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-007A	23101164-007	10/26/2023 9:09:00 AM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-008A	23101164-008	10/26/2023 1:58:00 PM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM

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DATES REPORT

WO#: **23110120**

22-Nov-23

Client: TEKLAB Inc,
Project: 23101164

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23110120-008A	23101164-008	10/26/2023 1:58:00 PM	Non-Potable Water	Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-009A	23101164-009	10/26/2023 9:30:00 AM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-010A	23101164-010	10/26/2023 2:46:00 PM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-011A	23101164-011	10/26/2023 12:43:00 PM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-012A	23101164-012	10/26/2023 11:52:00 AM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-013A	23101164-013	10/26/2023 11:20:00 AM		Combined Radium (EPA903+904)			11/15/2023 7:54:51 AM
				Radium-226 (EPA 903.0)		11/7/2023 1:38:00 PM	11/13/2023 10:53:00 AM
				Radium-228 (EPA 904.0)		11/7/2023 1:38:00 PM	11/10/2023 3:00:00 PM
23110120-014A	23101164-014	10/26/2023 10:33:00 AM		Combined Radium (EPA903+904)			11/17/2023 7:27:41 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM
23110120-015A	23101164-015	10/26/2023 1:51:00 PM		Combined Radium (EPA903+904)			11/17/2023 7:27:41 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM

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Analytical Report

(consolidated)

WO#: **23110120**

Date Reported: **11/22/2023**

CLIENT: TEKLAB Inc,
Collection Date: 10/25/2023 12:35:00 PM

Project: 23101164

Lab ID: 23110120-001
Matrix: NON-POTABLE WATER

Client Sample ID: 23101164-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**		Analyst: **CXS**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	1.09	2.00	U	pCi/L	± 0.750	1	11/15/2023 7:54:51 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **HDJ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.19	1.00	U	pCi/L	± 0.0700	1	11/13/2023 10:53:00 A
Yield	1					1	11/13/2023 10:53:00 A
RAD226/228					**E904.0**	**E903-904**	Analyst: **HDJ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.9	1.00	J	pCi/L	± 0.680	1	11/10/2023 3:00:00 PM
Yield	1					1	11/10/2023 3:00:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

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Analytical Report

(consolidated)

WO#: **23110120**

Date Reported: **11/22/2023**

CLIENT: TEKLAB Inc,

Collection Date: 10/26/2023 1:05:00 PM

Project: 23101164

Lab ID: 23110120-003

Matrix: NON-POTABLE WATER

Client Sample ID: 23101164-003

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)					**CALCULATION**		Analyst: **CXS**
Radium-226/Radium-228	0.42	2.00	U	pCi/L	± 0.610	1	11/15/2023 7:54:51 AM
RAD226/228 RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	0.17	1.00	U	pCi/L	± 0.0700	1	11/13/2023 10:53:00 A
Yield	0.99					1	11/13/2023 10:53:00 A
RAD226/228 RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	0.25	1.00	U	pCi/L	± 0.540	1	11/10/2023 3:00:00 PM
Yield	1					1	11/10/2023 3:00:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at test code

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WO#: **23110120**

Date Reported: **11/22/2023**

CLIENT: TEKLAB Inc,
Collection Date: 10/26/2023 1:35:00 PM

Project: 23101164

Lab ID: 23110120-004
Matrix: NON-POTABLE WATER

Client Sample ID: 23101164-004

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**		Analyst: **CXS**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	0.65	2.00	U	pCi/L	± 0.670	1	11/15/2023 7:54:51 AM
RAD226/228					**E903.0**	**E903-904**	Analyst: **HDJ**
RADIUM-226 (EPA 903.0)							
Radium-226	0.17	1.00	U	pCi/L	± 0.0700	1	11/13/2023 10:53:00 A
Yield	1					1	11/13/2023 10:53:00 A
RAD226/228					**E904.0**	**E903-904**	Analyst: **HDJ**
RADIUM-228 (EPA 904.0)							
Radium-228	0.48	1.00	U	pCi/L	± 0.600	1	11/10/2023 3:00:00 PM
Yield	1					1	11/10/2023 3:00:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
U	Samples with CalcVal < MDL
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

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Analytical Report

(consolidated)

WO#: **23110120**

Date Reported: **11/22/2023**

CLIENT: TEKLAB Inc,
Collection Date: 10/26/2023 1:58:00 PM

Project: 23101164

Lab ID: 23110120-008
Matrix: NON-POTABLE WATER

Client Sample ID: 23101164-008

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)					**CALCULATION**		Analyst: **CXS**
Radium-226/Radium-228	0.8	2.00	U	pCi/L	± 0.770	1	11/15/2023 7:54:51 AM
RAD226/228 RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	0.33	1.00	U	pCi/L	± 0.100	1	11/13/2023 10:53:00 A
Yield	0.98					1	11/13/2023 10:53:00 A
RAD226/228 RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	0.47	1.00	U	pCi/L	± 0.670	1	11/10/2023 3:00:00 PM
Yield	1					1	11/10/2023 3:00:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

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Analytical Report

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WO#: **23110120**

Date Reported: **11/22/2023**

CLIENT: TEKLAB Inc,
Collection Date: 10/26/2023 9:30:00 AM

Project: 23101164

Lab ID: 23110120-009
Matrix: NON-POTABLE WATER

Client Sample ID: 23101164-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				**CALCULATION**			Analyst: **CXS**
Radium-226/Radium-228	1.55	2.00	U	pCi/L	± 0.970	1	11/15/2023 7:54:51 AM
RAD226/228 RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	0.05	1.00	U	pCi/L	± 0.160	1	11/13/2023 10:53:00 A
Yield	1					1	11/13/2023 10:53:00 A
RAD226/228 RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	1.5	1.00		pCi/L	± 0.810	1	11/10/2023 3:00:00 PM
Yield	0.99					1	11/10/2023 3:00:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
U	Samples with CalcVal < MDL
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

Original

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70288**

Sample ID: **23110093-002AMS** SampType: **MS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174559**
Client ID: **BatchQC** Batch ID: **70288** TestNo: **E904.0** **E903-904** Analysis Date: **11/10/2023** SeqNo: **4721762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.85	1.00	5.000	1.460	87.8	70	130				
Yield	1.00			1.000	0						

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

Original

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70288**

Sample ID: **MB-70288** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174559**
Client ID: **PBW** Batch ID: **70288** TestNo: **E904.0** **E903-904** Analysis Date: **11/10/2023** SeqNo: **4721756**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						U
Yield	1.00			0	0						

Sample ID: **LCS-70288** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174559**
Client ID: **LCSW** Batch ID: **70288** TestNo: **E904.0** **E903-904** Analysis Date: **11/10/2023** SeqNo: **4721757**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.82	1.00	5.000	0	96.4	70	130				QLR
Yield	1.00			0	0						

Sample ID: **LCSD-70288** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174559**
Client ID: **LCSS02** Batch ID: **70288** TestNo: **E904.0** **E903-904** Analysis Date: **11/10/2023** SeqNo: **4721758**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.74	1.00	5.000	0	74.8	70	130	4.820	25.2	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

Original

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70288**

Sample ID: **RLCD-70288** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174559**
Client ID: **BatchQC** Batch ID: **70288** TestNo: **E904.0** **E903-904** Analysis Date: **11/10/2023** SeqNo: **4721761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.10	1.00	1.000	0	110	50	150				
Yield	0.970			0	0						

Sample ID: **23110191-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174559**
Client ID: **BatchQC** Batch ID: **70288** TestNo: **E904.0** **E903-904** Analysis Date: **11/10/2023** SeqNo: **4721783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0.7400	200	20	RU
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70288**

Sample ID: **23110093-002AMS** SampType: **MS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174560**
Client ID: **BatchQC** Batch ID: **70288** TestNo: **E903.0** **E903-904** Analysis Date: **11/13/2023** SeqNo: **4721797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.76	1.00	5.000	0	115	70	130				

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70288**

Sample ID: **MB-70288** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174560**
Client ID: **PBW** Batch ID: **70288** TestNo: **E903.0** **E903-904** Analysis Date: **11/13/2023** SeqNo: **4721791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									U
Yield	0.990										

Sample ID: **LCS-70288** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174560**
Client ID: **LCSW** Batch ID: **70288** TestNo: **E903.0** **E903-904** Analysis Date: **11/13/2023** SeqNo: **4721792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.76	1.00	5.000	0	95.2	70	130				

Sample ID: **LCSD-70288** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174560**
Client ID: **LCSS02** Batch ID: **70288** TestNo: **E903.0** **E903-904** Analysis Date: **11/13/2023** SeqNo: **4721793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.50	1.00	5.000	0	90.0	70	130	4.760	5.62	20	

Sample ID: **RLC-70288** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174560**
Client ID: **BatchQC** Batch ID: **70288** TestNo: **E903.0** **E903-904** Analysis Date: **11/13/2023** SeqNo: **4721795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70288**

Sample ID: **RLC-70288**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/7/2023**	RunNo: **174560**
Client ID: **BatchQC**	Batch ID: **70288**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/13/2023**	SeqNo: **4721795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.29	1.00	1.000	0	129	50	150				

Sample ID: **RLCD-70288**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/7/2023**	RunNo: **174560**
Client ID: **BatchQC**	Batch ID: **70288**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/13/2023**	SeqNo: **4721796**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.18	1.00	1.000	0	118	50	150				

Sample ID: **23110190-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/7/2023**	RunNo: **174560**
Client ID: **BatchQC**	Batch ID: **70288**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/13/2023**	SeqNo: **4721816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	U
Yield	1.00							1.000	0	0	

Sample ID: **23110191-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/7/2023**	RunNo: **174560**
Client ID: **BatchQC**	Batch ID: **70288**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/13/2023**	SeqNo: **4721818**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

Original

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3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70288**

Sample ID: **23110191-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/7/2023** RunNo: **174560**
Client ID: **BatchQC** Batch ID: **70288** TestNo: **E903.0** **E903-904** Analysis Date: **11/13/2023** SeqNo: **4721818**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	U
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70385**

Sample ID: **23110328-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174694**
Client ID: **BatchQC** Batch ID: **70385** TestNo: **E904.0** **E903-904** Analysis Date: **11/14/2023** SeqNo: **4725143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0.7700	200	30	RU
Yield	0.840			0	0			0.9100	8.00		

Sample ID: **23110328-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174694**
Client ID: **BatchQC** Batch ID: **70385** TestNo: **E904.0** **E903-904** Analysis Date: **11/14/2023** SeqNo: **4725145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.910	1.00		0	0			0	200	30	JR
Yield	0.730			0	0			0.9600	27.2		

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70385**

Sample ID: **MB-70385** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174694**
Client ID: **PBW** Batch ID: **70385** TestNo: **E904.0** **E903-904** Analysis Date: **11/14/2023** SeqNo: **4725103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						U
Yield	1.00			0	0						

Sample ID: **LCS-70385** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174694**
Client ID: **LCSW** Batch ID: **70385** TestNo: **E904.0** **E903-904** Analysis Date: **11/14/2023** SeqNo: **4725104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.03	1.00	5.000	0	80.6	70	130				
Yield	0.850			0	0						

Sample ID: **RLC-70385** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174694**
Client ID: **BatchQC** Batch ID: **70385** TestNo: **E904.0** **E903-904** Analysis Date: **11/14/2023** SeqNo: **4725107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	0.930	1.00	1.000	0	93.0	50	150				J
Yield	0.920			0	0						

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

Original

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70385**

Sample ID: **23110328-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174727**
Client ID: **BatchQC** Batch ID: **70385** TestNo: **E903.0** **E903-904** Analysis Date: **11/15/2023** SeqNo: **4726100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	U
Yield	1.00							1.000	0	0	

Sample ID: **23110328-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174727**
Client ID: **BatchQC** Batch ID: **70385** TestNo: **E903.0** **E903-904** Analysis Date: **11/15/2023** SeqNo: **4726102**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	U
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70385**

Sample ID: **MB-70385**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/9/2023**	RunNo: **174727**
Client ID: **PBW**	Batch ID: **70385**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/15/2023**	SeqNo: **4726091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									U
Yield	0.960										

Sample ID: **LCS-70385**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/9/2023**	RunNo: **174727**
Client ID: **LCSW**	Batch ID: **70385**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/15/2023**	SeqNo: **4726092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.82	1.00	5.000	0	116	70	130				

Sample ID: **LCSD-70385**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/9/2023**	RunNo: **174727**
Client ID: **LCSS02**	Batch ID: **70385**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/15/2023**	SeqNo: **4726093**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.96	1.00	5.000	0	99.2	70	130	5.820	16.0	20	

Sample ID: **RLC-70385**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/9/2023**	RunNo: **174727**
Client ID: **BatchQC**	Batch ID: **70385**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/15/2023**	SeqNo: **4726095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

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QC SUMMARY REPORT

WO#: **23110120**
22-Nov-23

Client: TEKLAB Inc,
Project: 23101164 **BatchID:** **70385**

Sample ID: **RLC-70385** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174727**
Client ID: **BatchQC** Batch ID: **70385** TestNo: **E903.0** **E903-904** Analysis Date: **11/15/2023** SeqNo: **4726095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	60.0	50	150				

Sample ID: **RLCD-70385** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/9/2023** RunNo: **174727**
Client ID: **BatchQC** Batch ID: **70385** TestNo: **E903.0** **E903-904** Analysis Date: **11/15/2023** SeqNo: **4726096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	0.820	1.00	1.000	0	82.0	50	150				J

Qualifiers:

H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as spec

Original

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TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Teklab INC | QC Level: 1

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226, 228, and combined) by method EPA903.0/904.0
on standard TAT Please include negative values (no ND).
Batch QC and CCR EDD are required. Receipt summary requested.

Project# 23101164

Contact: Shelly Hennessy | Email: shennessy
Requested Due Date: 20 business days or less | Billing/PO: 35260
Phone: 618 344 1004

State of Origin: IL

PLEASE NOTE:
NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.
Changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228	Combined Radium										pH	cpm
	23101164-001	10/25/23 1235	HNO3	Groundwater	✔	✔	✔										1	25
	23101164-002	10/26/23 1222	HNO3	Groundwater	✔	✔	✔										1	21
	23101164-003	10/26/23 1305	~~Unpres~~ HNO3	Groundwater	✔	✔	✔										1	31
	23101164-004	10/26/23 1335	~~Unpres~~	Groundwater	✔	✔	✔										1	31
	23101164-005	10/26/23 1406	~~Unpres~~	Groundwater	✔	✔	✔										1	18
	23101164-006	10/26/23 1444	~~Unpres~~	Groundwater	✔	✔	✔										1	31
	23101164-007	10/26/23 0909	~~Unpres~~	Groundwater	✔	✔	✔										1	18
	23101164-008	10/26/23 1358	~~Unpres~~	Groundwater	✔	✔	✔										1	18
	23101164-009	10/26/23 0930	~~Unpres~~	Groundwater	✔	✔	✔										1	31
	23101164-010	10/26/23 1446	~~Unpres~~	Groundwater	✔	✔	✔										1	27
	23101164-011	10/26/23 1243	~~Unpres~~	Groundwater	✔	✔	✔										1	15

*Relinquished By	Date/Time	Received By	Date/Time
		Jackie Reisle	11-1-23 / 11:45

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

17.7, 13.5, 13.6 / doors / FedEx

17.6, 13.4, 13.5

Pg 2 of 2

TEKLAB, INC. Chain of Custody

2311012O

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Teklab INC QC Level: 1

Project# 23101164

Comments: Please Issue reports and invoices via email only
Please analyze for Radium (226, 228, and combined) by method EPA903.0/904.0
on standard TAT Please include negative values (no ND).
Batch QC and CCR EDD are required. Receipt summary requested.

Contact: Shelly Hennessy Email: shennessy
Requested Due Date: 20 business days or less Billing/PO: 35260
Phone: 618 344 1004 State of Origin:

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228	Combined Radium										
	23101164-012 10/26/23	~~10/25/23~~ 1152	HNO3	Groundwater	✔	✔	✔								11		
	23101164-013	10/26/23 1120	HNO3	Groundwater	✔	✔	✔								1		
	23101164-014	10/26/23 1033	~~Unpres~~ HNO3	Groundwater	✔	✔	✔								1		
	23101164-015	10/26/23 1351	~~Unpres~~ ↓	Groundwater	✔	✔	✔								1		
			Unpres	Groundwater													
			Unpres	Groundwater													
			Unpres	Groundwater													
			Unpres	Groundwater													
			Unpres	Groundwater													
			Unpres	Groundwater													
			Unpres	Groundwater													

CPM
11
15
18
50

*Relinquished By	Date/Time	Received By	Date/Time
			11-1-23/1145

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SubCocRevA
3/2/2016

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Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 23110120 RcptNo: 1

Logged by:	Jacqueline Rasile	11/1/2023 11:45:00 AM	Jackie Rasile
Completed By:	Jacqueline Rasile	11/2/2023 11:10:56 AM	Jackie Rasile
Reviewed By:	Jennifer Woolf	11/2/2023 1:45:17 PM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date: Signed By:			
5.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☐	NA ☑
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	13.5	Good	Not Present			

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 23110120 RcptNo: 1

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	13.6	Good	Not Present			
3	17.7	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

November 14, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells **WorkOrder:** 23101166

Dear Eric Staley:

TEKLAB, INC received 12 samples on 10/25/2023 5:15:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 23101166
Report Date: 14-Nov-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
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Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23101166

Client Project: Landfill Monitoring Wells **Report Date:** 14-Nov-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101166
Client Project: Landfill Monitoring Wells
Report Date: 14-Nov-23

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101166
Client Project: Landfill Monitoring Wells
Report Date: 14-Nov-23

Cooler Receipt Temp: 4.8 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101166
Client Project: Landfill Monitoring Wells
Report Date: 14-Nov-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101166
Client Project: Landfill Monitoring Wells
Report Date: 14-Nov-23
Lab ID: 23101166-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 10/25/2023 9:59

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	10/25/2023 9:59	R338510
Depth to water	*	-5.00		**14.63**	ft	1	10/25/2023 9:59	R338510
Depth to water from measuring point	*	0		**17.38**	ft	1	10/25/2023 9:59	R338510
Elevation of groundwater surface	*	0		**538.22**	ft	1	10/25/2023 9:59	R338510
Measuring Point Elevation	*	0		**555.60**	ft	1	10/25/2023 9:59	R338510
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.1**	°F	1	10/25/2023 9:59	R338510
SW-846 9040B								
pH, Field	*	1.00		**6.54**		1	10/25/2023 9:59	R338510
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1450**	µmhos/cm @25C	1	10/25/2023 9:59	R338510
EPA 600 350.1 (DISSOLVED)								
Nitrogen, Ammonia (as N)	NELAP	0.10		**1.56**	mg/L	1	10/27/2023 13:38	R338368
EPA 600 353.2 R2.0 (DISSOLVED)								
Nitrogen, Nitrate (as N)	NELAP	0.050		**0.086**	mg/L	1	10/26/2023 13:49	R338390
STANDARD METHODS 2540 C (DISSOLVED) 1997, 2011								
Total Dissolved Solids	NELAP	50		**965**	mg/L	2.5	10/30/2023 12:58	R338538
SW-846 9012A (TOTAL)								
Cyanide	NELAP	0.005		**< 0.005**	mg/L	1	10/31/2023 16:41	213865
SW-846 9036 (DISSOLVED)								
Sulfate	NELAP	100		**360**	mg/L	10	10/27/2023 17:47	R338425
SW-846 9251 (DISSOLVED)								
Chloride	NELAP	4		**43**	mg/L	1	10/27/2023 17:41	R338455
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**7880**	µg/L	1	11/02/2023 9:07	214021
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	11/01/2023 15:45	214021
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	11/01/2023 15:45	214021
Magnesium	NELAP	0.050		**80.3**	mg/L	1	11/01/2023 15:45	214021
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	11/01/2023 15:45	214021
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**216**	µg/L	5	11/01/2023 20:20	214021
Lead	NELAP	1.0		**< 1.0**	µg/L	5	11/01/2023 20:20	214021
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	11/01/2023 13:17	214030

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 23101166
Report Date: 14-Nov-23

Carrier: Justin Colp

Received By: HAW

Completed by: Timothy W. Mathis
On: 26-Oct-23

Reviewed by: Ellie Hopkins
On: 26-Oct-23

Pages to follow: Chain of custody 3 Extra pages included 12

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #90719/79929 CET. - TMathis - 10/26/2023 12:35:55 PM

Additional NaOH (81662) was needed in all Cyanide containers; Additional H2SO4 (90128) was needed upon arrival at the laboratory in G120.- TMathis - 10/26/2023 12:36:37 PM

Samples collected on 10/26/23 were delivered to the laboratory on 10/26/23 at 1707 (on ice - 2.4C - LTG1). - AMD/ERH 10/27/23

Additional NaOH (81662) was needed upon arrival at the laboratory in G113. - amberdilallo - 10/27/2023 9:42:38 AM

pH strip #79929/90719. - amberdilallo - 10/27/2023 9:42:58 AM

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23101166

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 4.8 °C CTG
Preserved in: ☑ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: pH 90719/79929. Added NaOH(81662) to all NaOH Samples. Added H2SO4(90218) to G120. CKS 10-26-23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
*TE SAH 11/6/23

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)
23101166-001	R101	10-25-23 / 1442	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
002	G110		Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
003	R111		Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
004	G112	10-25-23 / 1053	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
005	G113		Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
006	G120	10-25-23 / 1339	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
007	G121	1201	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
008	G122	1129	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
009	AW-1	0959	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
010	AW-2	1318	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔
011	RW-3	10-25-23 / *1235	Groundwater	2	1	1	1						✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	10-25-23 1715	[signature]	10/25/23 1715

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CKS 10-26-23

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 23101166

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)
23101166-012	DUPLICATE	10-25-23 1201	Groundwater	1	1	1	1							✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	10-25-23 1715	[signature]	10/25/23 1715

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 23101166

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 2.4 °C
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY LTCL
LAB NOTES: Added NaOH (8/16/23) to G113. pH ✓
*TE 8/11/6/23 7992919079
[illegible] 10/27/23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
Quarters 1, 3, & 4
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Cole

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)
23101166-001	R101		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
002	G110	10-25-23 / 1220	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
003	R111	10-25-23 / 1135	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
004	G112		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
005	G113	10-25-23 / ~~1422~~ 1422	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
006	G120	1422 ~~1415~~ *	Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
007	G121		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
008	G122		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓
011	RW-3		Groundwater	2	1	1	1						✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
[signature]	10-26-23 1707	[signature]	10/26/23 1707

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101166
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AW-1	10/25/2023	9:38	17.38	15.1	6.44	1,447.0	1,447.0	2.11	123.41	-45.2
AW-1	10/25/2023	9:41	17.38	15.0	6.48	1,448.4	1,448.4	1.63	117.73	-59.6
AW-1	10/25/2023	9:44	17.38	15.0	6.50	1,447.7	1,447.7	1.38	121.79	-68.3
AW-1	10/25/2023	9:47	17.38	15.1	6.51	1,448.1	1,448.1	1.22	117.33	-74.4
AW-1	10/25/2023	9:50	17.38	15.1	6.52	1,449.6	1,449.6	1.11	103.92	-79.5
AW-1	10/25/2023	9:53	17.38	14.9	6.53	1,449.9	1,449.9	0.99	97.27	-83.9
AW-1	10/25/2023	9:56	17.38	15.1	6.54	1,448.8	1,448.8	0.91	86.14	-87
AW-1	10/25/2023	9:59	17.38	15.1	6.54	1,449.2	1,449.2	0.86	80.77	-89.9

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

November 30, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 23101165

Dear Eric Staley:

TEKLAB, INC received 11 samples on 10/25/2023 5:15:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 23101165
Report Date: 30-Nov-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23101165

Client Project: FGDS Landfill **Report Date:** 30-Nov-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 23101165
Report Date: 30-Nov-23

Cooler Receipt Temp: 4.8 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & Radium-228 analyses were performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23
Lab ID: 23101165-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 10/25/2023 9:59

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	10/25/2023 9:59	R338823
Depth to water	*	-5.00		**14.63**	ft	1	10/25/2023 9:59	R338823
Depth to water from measuring point	*	0		**17.38**	ft	1	10/25/2023 9:59	R338823
Elevation of groundwater surface	*	0		**538.22**	ft	1	10/25/2023 9:59	R338823
Measuring Point Elevation	*	0		**555.60**	ft	1	10/25/2023 9:59	R338823
Measuring Point Height Above Land Surface	*	0		**2.75**	ft	1	10/25/2023 9:59	R338823
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**81**	NTU	1	10/25/2023 9:59	R338823
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.1**	°F	1	10/25/2023 9:59	R338823
SW-846 9040B								
pH, Field	*	1.00		**6.54**		1	10/25/2023 9:59	R338823
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1450**	µmhos/cm @25C	1	10/25/2023 9:59	R338823
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**1220**	mg/L	5	10/30/2023 11:50	R338538
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**384**	mg/L	10	10/27/2023 20:51	R338425
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	11/02/2023 15:50	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**40**	mg/L	1	10/27/2023 20:45	R338455
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**1.96**	mg/L	1	11/02/2023 11:49	213836
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/02/2023 11:49	213836
Boron	NELAP	0.0200		**8.66**	mg/L	1	11/02/2023 11:49	213836
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/02/2023 11:49	213836
Calcium	NELAP	0.100		**197**	mg/L	1	11/02/2023 11:49	213836
Chromium	NELAP	0.0050		**0.0101**	mg/L	1	11/02/2023 11:49	213836
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 11:49	213836
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/02/2023 11:49	213836
Lithium	NELAP	0.0050		**0.0739**	mg/L	1	11/02/2023 11:49	213836
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/02/2023 11:49	213836
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 20:16	213836
Arsenic	NELAP	0.0010		**0.208**	mg/L	5	11/02/2023 20:16	213836
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 20:16	213836
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/02/2023 20:16	213836
PQL recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/01/2023 12:24	214005
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/21/2023 0:00	R339861
Radium-228	*	0		**See Attached**	pci/L	1	11/21/2023 0:00	R339861

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 23101165
Report Date: 30-Nov-23

Carrier: Justin Colp

Completed by: Timothy W. Mathis
On: 26-Oct-23

Received By: HAW

Reviewed by: Ellie Hopkins
On: 27-Oct-23

Pages to follow: Chain of custody 2 Extra pages included 45

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #90719 CET. - TMathis - 10/26/2023 12:50:41 PM

Additional Nitric Acid (92447) was needed in AW-2 250 and G120 2L upon arrival at the laboratory. - TMathis - 10/26/2023 12:55:07 PM

pH strip #90719. - amberdilallo - 10/27/2023 9:46:53 AM

Samples collected on 10/26/23 were delivered to the laboratory on 10/26/23 at 1707 (on ice - 2.4C - LTG1). - HW/ERH 10/27/23

CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 23101165

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 4.8 °C CTGS
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: pH 0.9 0719, Added HNO3 (92447) to AW-2 250m and G120 2L. CFO 10-26-23.

Client Comments: *TE 1234 SAH 11/7/23
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 23101164-001

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

PROJECT NAME/NUMBER: FGDS Landfill
SAMPLE COLLECTOR'S NAME: Justin Colp

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23101165-001	R101	10-25-23 / 1442	Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	G110		Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	R111		Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	G112	10-25-23 / 1053	Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	G113		Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	G120	10-25-23 / 1339	Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	G121	1201	Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	G122	1129	Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AW-1	0959	Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AW-2	1318	Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	RW-3 ⊛	* 12354	Groundwater	0	0								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
J Colp	10-25-23 1715	[signature]	10/25/23 1715

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CFO 10-26-23

CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 23101165

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 2.4 °C TC01
Preserved in: ☐ LAB ☒ FIELD
LAB NOTES: 907A SUM 10/27/23

FOR LAB USE ONLY

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 23101164-001

PROJECT NAME/NUMBER: FGDS Landfill
SAMPLE COLLECTOR'S NAME: Justin Gelp

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ☐ 3 Day (50% Surcharge)
BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23101165-001	R101		Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	G110	10-26-23/1220	Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	R111	10-26-23/1135	Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	G112		Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	G113 *	10-26-23/~~1422~~	Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	G120	10/25 1422 1415	Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	G121	TE SAN 11/7/23	Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	G122		Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AW-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AW-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	RW-3 ⊛		Groundwater	0	0								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
Brett Hyde	10-26-23 17:07	Hand Del	10/26/23 1707

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
001	R101	Groundwater Sample	74.0	None	S	Clear	Good	Good	Good	Yes	**No**
002	G110	Groundwater Sample	71.0	Light	S	Cloudy	Good	Good	Good	**No**	**No**
003	R111	Groundwater Sample	71.0	None	S	Cloudy	Good	Good	Good	Yes	**No**
004	G112	Groundwater Sample	64.0	None	SW	Cloudy	Good	Good	Good	Yes	**No**
005	G113	Groundwater Sample	73.0	None	S	Clear	Good	Good	Good	Yes	**No**
006	G120	Groundwater Sample	71.0	None	S	Clear	Good	Good	Good	Yes	**No**
007	G121	Groundwater Sample	68.0	None	S	Cloudy	Good	Good	Good	Yes	**No**
008	G122	Groundwater Sample	67.0	None	S	Partly cloudy	Good	Good	Good	Yes	**No**
009	AW-1	Groundwater Sample	64.0	None	SW	Cloudy	Good	Good	Good	Yes	**No**
010	AW-2	Groundwater Sample	71.0	None	S	Partly cloudy	Good	Good	Good	Yes	**No**
011	RW-3	Groundwater Sample	70.0	None	S	Clear	Good	Good	Good	**No**	**No**

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

		GW Level Measurement				Purge Activities							
WO Sample	**Well ID**	**Sampler Initials**	**Date/Time**	**DTW (ft)**	**DTB (ft)**	**Sampler Initials**	**Purge Date**			**Sampling Device**	**Well Diameter (in)**	**Actual Volume Purged (L)**	**Purge Rate (mL/min)**
001	R101	BG	10/25/23 14:35	8.73	35.27	BG	10/25/2023	14:34	14:42	Submersible Pump	2"	3.0	375.0
002	G110	TAC	10/26/23 12:00	25.72	57.15	TAC	10/26/2023	12:05	12:20	Peristaltic Pump	2"	3.5	233.3
003	R111	TAC	10/26/23 11:14	26.87	55.75	TAC	10/26/2023	11:18	11:35	Submersible Pump	2"	6.0	352.9
004	G112	BG	10/25/23 10:22	30.42	58.81	BG	10/25/2023	10:23	10:53	Submersible Pump	2"	7.0	233.3
005	G113	BG	10/25/23 14:10	9.62	12.85	BG	10/25/2023	14:11	14:22	Submersible Pump	2"	3.0	272.7
006	G120	bg	10/25/23 13:30	18.61	50.37	BG	10/25/2023	13:32	13:39	Submersible Pump	2"	2.0	285.7
007	G121	BG	10/25/23 11:39	30.54	58.56	BG	10/25/2023	11:40	12:01	Submersible Pump	2"	8.0	381.0
008	G122	BG	10/25/23 11:07	32.24	49.29	BG	10/25/2023	11:09	11:29	Submersible Pump	2"	7.0	350.0
009	AW-1	BG	10/25/23 9:25	17.38	54.81	BG	10/25/2023	09:28	09:59	Submersible Pump	2"	7.0	225.8
010	AW-2	BG	10/25/23 12:51	7.41	32.64	BG	10/25/2023	12:52	13:18	Submersible Pump	2"	6.0	230.8
011	RW-3	BG	10/26/23 12:26	11.79	44.01	BG	10/25/2023	12:24	12:35	Bladder Pump	2"	2.0	181.8

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

November 28, 2023

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 23101165

Order No.: 23110123

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 11 sample(s) on 11/1/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **23110123**
Date: **11/28/2023**

CLIENT: TEKLAB Inc,
Project: 23101165

WorkOrder Narrative:
23110123: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-44
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **23110123**
Date: **11/28/2023**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **23110123**

28-Nov-23

CLIENT: TEKLAB Inc,
Project: 23101165

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23110123-001	23101165-001		10/25/2023 2:42:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-002	23101165-002		10/26/2023 12:20:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-003	23101165-003		10/26/2023 11:35:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-004	23101165-004		10/25/2023 10:53:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-005	23101165-005		10/26/2023 2:15:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-006	23101165-006		10/25/2023 1:39:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-007	23101165-007		10/25/2023 12:01:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-008	23101165-008		10/25/2023 11:29:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-009	23101165-009		10/25/2023 9:59:00 AM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-010	23101165-010		10/25/2023 1:18:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water
23110123-011	23101165-011		10/25/2023 12:35:00 PM	11/1/2023 11:45:00 AM	Non-Potable Water

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Website: http://www.settek.com

DATES REPORT

WO#: **23110123**

28-Nov-23

Client: TEKLAB Inc,
Project: 23101165

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23110123-001A	23101165-001	10/25/2023 2:42:00 PM	Non-Potable Water	Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM
23110123-002A	23101165-002	10/26/2023 12:20:00 PM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM
23110123-003A	23101165-003	10/26/2023 11:35:00 AM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM
23110123-004A	23101165-004	10/25/2023 10:53:00 AM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM
23110123-005A	23101165-005	10/26/2023 2:15:00 PM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM
23110123-006A	23101165-006	10/25/2023 1:39:00 PM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM
23110123-007A	23101165-007	10/25/2023 12:01:00 PM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/9/2023 2:11:46 PM	11/15/2023 10:35:00 AM
				Radium-228 (EPA 904.0)		11/9/2023 2:11:46 PM	11/14/2023 2:13:00 PM
23110123-008A	23101165-008	10/25/2023 11:29:00 AM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/21/2023 12:03:19 PM	11/22/2023 9:43:00 AM

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

DATES REPORT

WO#: **23110123**

28-Nov-23

Client: TEKLAB Inc,

Project: 23101165

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23110123-008A	23101165-008	10/25/2023 11:29:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		11/21/2023 12:03:19 PM	11/21/2023 2:30:00 PM
23110123-009A	23101165-009	10/25/2023 9:59:00 AM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/21/2023 12:03:19 PM	11/22/2023 9:43:00 AM
				Radium-228 (EPA 904.0)		11/21/2023 12:03:19 PM	11/21/2023 2:30:00 PM
23110123-010A	23101165-010	10/25/2023 1:18:00 PM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/21/2023 12:03:19 PM	11/22/2023 9:43:00 AM
				Radium-228 (EPA 904.0)		11/21/2023 12:03:19 PM	11/21/2023 2:30:00 PM
23110123-011A	23101165-011	10/25/2023 12:35:00 PM		Combined Radium (EPA903+904)			11/28/2023 8:32:00 AM
				Radium-226 (EPA 903.0)		11/21/2023 12:03:19 PM	11/22/2023 9:43:00 AM
				Radium-228 (EPA 904.0)		11/21/2023 12:03:19 PM	11/21/2023 2:30:00 PM

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **23110123**

Date Reported: **11/28/2023**

CLIENT: TEKLAB Inc,
Collection Date: 10/25/2023 9:59:00 AM

Project: 23101165

Lab ID: 23110123-009
Matrix: NON-POTABLE WATER

Client Sample ID: 23101165-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				**CALCULATION**			Analyst: **CXS**
Radium-226/Radium-228	0.45	2.00	U	pCi/L	± 0.450	1	11/28/2023 8:32:00 AM
RAD226/228 RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	0.11	1.00	U	pCi/L	± 0.0600	1	11/22/2023 9:43:00 AM
Yield	0.94					1	11/22/2023 9:43:00 AM
RAD226/228 RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	0.34	1.00	U	pCi/L	± 0.390	1	11/21/2023 2:30:00 PM
Yield	0.95					1	11/21/2023 2:30:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
U	Samples with CalcVal < MDL
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode

Original

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

November 30, 2023

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 23101165

Dear Eric Staley:

TEKLAB, INC received 11 samples on 10/25/2023 5:15:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 23101165
Report Date: 30-Nov-23

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	19
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 23101165

Client Project: FGDS Landfill **Report Date:** 30-Nov-23

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23

Cooler Receipt Temp: 4.8 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & Radium-228 analyses were performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2024	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2024	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23
Lab ID: 23101165-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 10/25/2023 14:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.53**	ft	1	10/25/2023 14:42	R338823
Depth to water	*	-5.00		**5.93**	ft	1	10/25/2023 14:42	R338823
Depth to water from measuring point	*	0		**8.73**	ft	1	10/25/2023 14:42	R338823
Elevation of groundwater surface	*	0		**538.07**	ft	1	10/25/2023 14:42	R338823
Measuring Point Elevation	*	0		**546.80**	ft	1	10/25/2023 14:42	R338823
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	10/25/2023 14:42	R338823
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**14**	NTU	1	10/25/2023 14:42	R338823
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.2**	°F	1	10/25/2023 14:42	R338823
SW-846 9040B								
pH, Field	*	1.00		**6.81**		1	10/25/2023 14:42	R338823
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1200**	µmhos/cm @25C	1	10/25/2023 14:42	R338823
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**840**	mg/L	1	10/30/2023 11:49	R338538
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**271**	mg/L	10	10/27/2023 19:55	R338425
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.13**	mg/L	1	11/02/2023 15:24	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**112**	mg/L	5	10/27/2023 19:49	R338455
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0621**	mg/L	1	11/02/2023 10:48	213836
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/02/2023 10:48	213836
Boron	NELAP	0.0200		**0.126**	mg/L	1	11/02/2023 10:48	213836
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/02/2023 10:48	213836
Calcium	NELAP	0.100		**162**	mg/L	1	11/02/2023 10:48	213836
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 10:48	213836
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 10:48	213836
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/02/2023 10:48	213836
Lithium	NELAP	0.0050		**0.0524**	mg/L	1	11/02/2023 10:48	213836
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/02/2023 10:48	213836
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:09	213836
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:09	213836
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:09	213836
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/02/2023 19:09	213836
PQL recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/01/2023 10:30	214005
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861
Radium-228	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23
Lab ID: 23101165-002
Client Sample ID: G110
Matrix: GROUNDWATER
Collection Date: 10/26/2023 12:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.05**	ft	1	10/26/2023 12:20	R338823
Depth to water	*	-5.00		**23.11**	ft	1	10/26/2023 12:20	R338823
Depth to water from measuring point	*	0		**25.72**	ft	1	10/26/2023 12:20	R338823
Elevation of groundwater surface	*	0		**531.48**	ft	1	10/26/2023 12:20	R338823
Measuring Point Elevation	*	0		**557.20**	ft	1	10/26/2023 12:20	R338823
Measuring Point Height Above Land Surface	*	0		**2.61**	ft	1	10/26/2023 12:20	R338823
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.9**	NTU	1	10/26/2023 12:20	R338823
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.8**	°F	1	10/26/2023 12:20	R338823
SW-846 9040B								
pH, Field	*	1.00		**6.84**		1	10/26/2023 12:20	R338823
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**603**	µmhos/cm @25C	1	10/26/2023 12:20	R338823
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**418**	mg/L	1	10/31/2023 12:12	R338603
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	10/30/2023 16:19	R338498
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.14**	mg/L	1	11/02/2023 15:27	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**6**	mg/L	1	10/30/2023 16:19	R338509
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.174**	mg/L	1	10/31/2023 15:55	213981
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	10/31/2023 15:55	213981
Boron	NELAP	0.0200		**0.0951**	mg/L	1	10/31/2023 15:55	213981
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	10/31/2023 15:55	213981
Calcium	NELAP	0.100		**103**	mg/L	1	10/31/2023 15:55	213981
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 15:55	213981
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 15:55	213981
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/31/2023 15:55	213981
Lithium	NELAP	0.0050		**0.0248**	mg/L	1	11/02/2023 10:17	213981
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	10/31/2023 15:55	213981
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	10/31/2023 19:47	213981
Arsenic	NELAP	0.0010		**0.0053**	mg/L	5	10/31/2023 19:47	213981
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 14:21	213981
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	10/31/2023 19:47	213981
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/01/2023 12:04	214005
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861
Radium-228	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23
Lab ID: 23101165-004
Client Sample ID: G112
Matrix: GROUNDWATER
Collection Date: 10/25/2023 10:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.99**	ft	1	10/25/2023 10:53	R338823
Depth to water	*	-5.00		**28.24**	ft	1	10/25/2023 10:53	R338823
Depth to water from measuring point	*	0		**30.42**	ft	1	10/25/2023 10:53	R338823
Elevation of groundwater surface	*	0		**524.38**	ft	1	10/25/2023 10:53	R338823
Measuring Point Elevation	*	0		**554.80**	ft	1	10/25/2023 10:53	R338823
Measuring Point Height Above Land Surface	*	0		**2.18**	ft	1	10/25/2023 10:53	R338823
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**39**	NTU	1	10/25/2023 10:53	R338823
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.9**	°F	1	10/25/2023 10:53	R338823
SW-846 9040B								
pH, Field	*	1.00		**7.01**		1	10/25/2023 10:53	R338823
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1410**	µmhos/cm @25C	1	10/25/2023 10:53	R338823
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**950**	mg/L	5	10/30/2023 11:50	R338538
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**223**	mg/L	10	10/27/2023 20:03	R338425
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.18**	mg/L	1	11/02/2023 15:40	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**135**	mg/L	5	10/27/2023 19:57	R338455
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.462**	mg/L	1	11/02/2023 10:50	213836
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/02/2023 10:50	213836
Boron	NELAP	0.0200		**0.387**	mg/L	1	11/02/2023 10:50	213836
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/02/2023 10:50	213836
Calcium	NELAP	0.100	S	**202**	mg/L	1	11/02/2023 10:50	213836
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 10:50	213836
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 10:50	213836
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/02/2023 10:50	213836
Lithium	NELAP	0.0050		**0.0496**	mg/L	1	11/02/2023 10:50	213836
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/02/2023 10:50	213836
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:34	213836
Arsenic	NELAP	0.0010		**0.0021**	mg/L	5	11/02/2023 19:34	213836
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:34	213836
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/02/2023 19:34	213836
PQL recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/01/2023 12:13	214005
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23
Lab ID: 23101165-005
Client Sample ID: G113
Matrix: GROUNDWATER
Collection Date: 10/25/2023 14:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**524.85**	ft	1	10/25/2023 14:22	R338823
Depth to water	*	-5.00		**7.12**	ft	1	10/25/2023 14:22	R338823
Depth to water from measuring point	*	0		**9.62**	ft	1	10/25/2023 14:22	R338823
Elevation of groundwater surface	*	0		**528.08**	ft	1	10/25/2023 14:22	R338823
Measuring Point Elevation	*	0		**537.70**	ft	1	10/25/2023 14:22	R338823
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	10/25/2023 14:22	R338823
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**7.8**	NTU	1	10/25/2023 14:22	R338823
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.0**	°F	1	10/25/2023 14:22	R338823
SW-846 9040B								
pH, Field	*	1.00		**6.21**		1	10/25/2023 14:22	R338823
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1790**	µmhos/cm @25C	1	10/25/2023 14:22	R338823
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1300**	mg/L	1	10/31/2023 12:13	R338603
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**366**	mg/L	20	10/30/2023 16:47	R338498
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.32**	mg/L	1	11/02/2023 15:43	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**61**	mg/L	5	10/30/2023 16:29	R338509
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.437**	mg/L	1	10/31/2023 15:56	213981
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	10/31/2023 15:56	213981
Boron	NELAP	0.0200		**1.88**	mg/L	1	10/31/2023 15:56	213981
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	10/31/2023 15:56	213981
Calcium	NELAP	0.100		**323**	mg/L	1	10/31/2023 15:56	213981
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 15:56	213981
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	10/31/2023 15:56	213981
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/31/2023 15:56	213981
Lithium	NELAP	0.0050		**0.0682**	mg/L	1	11/02/2023 10:21	213981
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	10/31/2023 15:56	213981
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	10/31/2023 19:57	213981
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	10/31/2023 19:57	213981
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/01/2023 14:32	213981
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	10/31/2023 19:57	213981
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/01/2023 12:15	214005
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861
Radium-228	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23
Lab ID: 23101165-007
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 10/25/2023 12:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	10/25/2023 12:01	R338823
Depth to water	*	-5.00		**28.67**	ft	1	10/25/2023 12:01	R338823
Depth to water from measuring point	*	0		**30.54**	ft	1	10/25/2023 12:01	R338823
Elevation of groundwater surface	*	0		**525.06**	ft	1	10/25/2023 12:01	R338823
Measuring Point Elevation	*	0		**555.60**	ft	1	10/25/2023 12:01	R338823
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	10/25/2023 12:01	R338823
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**15**	NTU	1	10/25/2023 12:01	R338823
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.0**	°F	1	10/25/2023 12:01	R338823
SW-846 9040B								
pH, Field	*	1.00		**6.83**		1	10/25/2023 12:01	R338823
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1410**	µmhos/cm @25C	1	10/25/2023 12:01	R338823
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**1040**	mg/L	5	10/30/2023 11:50	R338538
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**293**	mg/L	10	10/27/2023 20:34	R338425
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.18**	mg/L	1	11/02/2023 15:47	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**31**	mg/L	1	10/27/2023 20:29	R338455
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.527**	mg/L	1	11/02/2023 11:46	213836
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/02/2023 11:46	213836
Boron	NELAP	0.0200		**3.09**	mg/L	1	11/02/2023 11:46	213836
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/02/2023 11:46	213836
Calcium	NELAP	0.100		**180**	mg/L	1	11/02/2023 11:46	213836
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 11:46	213836
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 11:46	213836
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/02/2023 11:46	213836
Lithium	NELAP	0.0050		**0.0433**	mg/L	1	11/02/2023 11:46	213836
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/02/2023 11:46	213836
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:22	213836
Arsenic	NELAP	0.0010		**0.0221**	mg/L	5	11/02/2023 19:22	213836
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:22	213836
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/02/2023 19:22	213836
PQL recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/01/2023 12:20	214005
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861
Radium-228	*	0		**See Attached**	pci/L	1	11/14/2023 0:00	R339861

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23
Lab ID: 23101165-008
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 10/25/2023 11:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**505.11**	ft	1	10/25/2023 11:29	R338823
Depth to water	*	-5.00		**30.50**	ft	1	10/25/2023 11:29	R338823
Depth to water from measuring point	*	0		**32.24**	ft	1	10/25/2023 11:29	R338823
Elevation of groundwater surface	*	0		**522.16**	ft	1	10/25/2023 11:29	R338823
Measuring Point Elevation	*	0		**554.40**	ft	1	10/25/2023 11:29	R338823
Measuring Point Height Above Land Surface	*	0		**1.74**	ft	1	10/25/2023 11:29	R338823
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**7.0**	NTU	1	10/25/2023 11:29	R338823
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.4**	°F	1	10/25/2023 11:29	R338823
SW-846 9040B								
pH, Field	*	1.00		**6.70**		1	10/25/2023 11:29	R338823
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1670**	µmhos/cm @25C	1	10/25/2023 11:29	R338823
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**1470**	mg/L	5	10/30/2023 11:50	R338538
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**554**	mg/L	20	10/27/2023 20:42	R338425
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.16**	mg/L	1	11/02/2023 15:48	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**40**	mg/L	1	10/27/2023 20:37	R338455
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.396**	mg/L	1	11/02/2023 11:48	213836
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/02/2023 11:48	213836
Boron	NELAP	0.0200		**12.0**	mg/L	1	11/02/2023 11:48	213836
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/02/2023 11:48	213836
Calcium	NELAP	0.100		**252**	mg/L	1	11/02/2023 11:48	213836
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 11:48	213836
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 11:48	213836
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/02/2023 11:48	213836
Lithium	NELAP	0.0050		**0.0567**	mg/L	1	11/02/2023 11:48	213836
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/02/2023 11:48	213836
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:28	213836
Arsenic	NELAP	0.0010		**0.0046**	mg/L	5	11/02/2023 19:28	213836
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 19:28	213836
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/02/2023 19:28	213836
PQL recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/01/2023 12:22	214005
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/21/2023 0:00	R339861
Radium-228	*	0		**See Attached**	pci/L	1	11/21/2023 0:00	R339861

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 23101165
Client Project: FGDS Landfill
Report Date: 30-Nov-23
Lab ID: 23101165-010
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 10/25/2023 13:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	10/25/2023 13:18	R338823
Depth to water	*	-5.00		**4.11**	ft	1	10/25/2023 13:18	R338823
Depth to water from measuring point	*	0		**7.41**	ft	1	10/25/2023 13:18	R338823
Elevation of groundwater surface	*	0		**522.57**	ft	1	10/25/2023 13:18	R338823
Measuring Point Elevation	*	0		**529.98**	ft	1	10/25/2023 13:18	R338823
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	10/25/2023 13:18	R338823
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**21**	NTU	1	10/25/2023 13:18	R338823
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**62.1**	°F	1	10/25/2023 13:18	R338823
SW-846 9040B								
pH, Field	*	1.00		**6.89**		1	10/25/2023 13:18	R338823
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1200**	µmhos/cm @25C	1	10/25/2023 13:18	R338823
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**850**	mg/L	5	10/30/2023 11:51	R338538
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**163**	mg/L	5	10/27/2023 20:59	R338425
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.13**	mg/L	1	11/02/2023 15:54	R338693
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**32**	mg/L	1	10/27/2023 20:53	R338455
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.629**	mg/L	1	11/02/2023 11:51	213836
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/02/2023 11:51	213836
Boron	NELAP	0.0200		**2.92**	mg/L	1	11/02/2023 11:51	213836
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/02/2023 11:51	213836
Calcium	NELAP	0.100		**151**	mg/L	1	11/02/2023 11:51	213836
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 11:51	213836
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/02/2023 11:51	213836
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	11/02/2023 11:51	213836
Lithium	NELAP	0.0050		**0.0381**	mg/L	1	11/02/2023 11:51	213836
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/02/2023 11:51	213836
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 20:22	213836
Arsenic	NELAP	0.0010		**0.0266**	mg/L	5	11/02/2023 20:22	213836
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/02/2023 20:22	213836
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/02/2023 20:22	213836
PQL recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/01/2023 12:43	214030
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/21/2023 0:00	R339861
Radium-228	*	0		**See Attached**	pci/L	1	11/21/2023 0:00	R339861

Receiving Check List

Teklab, Inc. Environmental Laboratory

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 23101165
Report Date: 30-Nov-23

Carrier: Justin Colp

Completed by: Timothy W. Mathis
On: 26-Oct-23

Received By: HAW

Reviewed by: Ellie Hopkins
On: 27-Oct-23

Pages to follow: Chain of custody 2 Extra pages included 45

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #90719 CET. - TMathis - 10/26/2023 12:50:41 PM

Additional Nitric Acid (92447) was needed in AW-2 250 and G120 2L upon arrival at the laboratory. - TMathis - 10/26/2023 12:55:07 PM

pH strip #90719. - amberdilallo - 10/27/2023 9:46:53 AM

Samples collected on 10/26/23 were delivered to the laboratory on 10/26/23 at 1707 (on ice - 2.4C - LTG1). - HW/ERH 10/27/23

CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 23101165

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 4.8 °C CTGS
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: pH 9.0719, Added HNO3 (92447) to AW-2 250m and G120 2L. CFO 10-26-23.

Client Comments: *TE 1234 SAH 11/7/23
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 23101164-001

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

PROJECT NAME/NUMBER: FGDS Landfill
SAMPLE COLLECTOR'S NAME: Justin Colp

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23101165-001	R101	10-25-23 / 1442	Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	G110		Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	R111		Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	G112	10-25-23 / 1053	Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	G113		Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	G120	10-25-23 / 1339	Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	G121	1201	Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	G122	1129	Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AW-1	0959	Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AW-2	1318	Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	RW-3 ⊛	* 12354	Groundwater	0	0								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
J Colp	10-25-23 1715	[signature]	10/25/23 1715

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CFO 10-26-23

CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 23101165

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 2.4 °C LTCU
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: 9019 SVM 10/27/23

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 23101164-001

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Cop

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
23101165-001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110	10-26-23/1220	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111	10-26-23/1135	Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113	* 10-26-23 / ~~1422~~	Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120	10/25 1422 1415	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121	TE SAN 11/7/23	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3 ⊛		Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
[signature]	10-26-23 17:07	[signature]	10/26/23 1707

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
001	R101	Groundwater Sample	74.0	None	S	Clear	Good	Good	Good	Yes	**No**
002	G110	Groundwater Sample	71.0	Light	S	Cloudy	Good	Good	Good	**No**	**No**
003	R111	Groundwater Sample	71.0	None	S	Cloudy	Good	Good	Good	Yes	**No**
004	G112	Groundwater Sample	64.0	None	SW	Cloudy	Good	Good	Good	Yes	**No**
005	G113	Groundwater Sample	73.0	None	S	Clear	Good	Good	Good	Yes	**No**
006	G120	Groundwater Sample	71.0	None	S	Clear	Good	Good	Good	Yes	**No**
007	G121	Groundwater Sample	68.0	None	S	Cloudy	Good	Good	Good	Yes	**No**
008	G122	Groundwater Sample	67.0	None	S	Partly cloudy	Good	Good	Good	Yes	**No**
009	AW-1	Groundwater Sample	64.0	None	SW	Cloudy	Good	Good	Good	Yes	**No**
010	AW-2	Groundwater Sample	71.0	None	S	Partly cloudy	Good	Good	Good	Yes	**No**
011	RW-3	Groundwater Sample	70.0	None	S	Clear	Good	Good	Good	**No**	**No**

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

		GW Level Measurement				Purge Activities							
WO Sample	**Well ID**	**Sampler Initials**	**Date/Time**	**DTW (ft)**	**DTB (ft)**	**Sampler Initials**	**Purge Date**			**Sampling Device**	**Well Diameter (in)**	**Actual Volume Purged (L)**	**Purge Rate (mL/min)**
001	R101	BG	10/25/23 14:35	8.73	35.27	BG	10/25/2023	14:34	14:42	Submersible Pump	2"	3.0	375.0
002	G110	TAC	10/26/23 12:00	25.72	57.15	TAC	10/26/2023	12:05	12:20	Peristaltic Pump	2"	3.5	233.3
003	R111	TAC	10/26/23 11:14	26.87	55.75	TAC	10/26/2023	11:18	11:35	Submersible Pump	2"	6.0	352.9
004	G112	BG	10/25/23 10:22	30.42	58.81	BG	10/25/2023	10:23	10:53	Submersible Pump	2"	7.0	233.3
005	G113	BG	10/25/23 14:10	9.62	12.85	BG	10/25/2023	14:11	14:22	Submersible Pump	2"	3.0	272.7
006	G120	bg	10/25/23 13:30	18.61	50.37	BG	10/25/2023	13:32	13:39	Submersible Pump	2"	2.0	285.7
007	G121	BG	10/25/23 11:39	30.54	58.56	BG	10/25/2023	11:40	12:01	Submersible Pump	2"	8.0	381.0
008	G122	BG	10/25/23 11:07	32.24	49.29	BG	10/25/2023	11:09	11:29	Submersible Pump	2"	7.0	350.0
009	AW-1	BG	10/25/23 9:25	17.38	54.81	BG	10/25/2023	09:28	09:59	Submersible Pump	2"	7.0	225.8
010	AW-2	BG	10/25/23 12:51	7.41	32.64	BG	10/25/2023	12:52	13:18	Submersible Pump	2"	6.0	230.8
011	RW-3	BG	10/26/23 12:26	11.79	44.01	BG	10/25/2023	12:24	12:35	Bladder Pump	2"	2.0	181.8

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

		Sampling Activities and Observations									
WO Sample	**Well ID**	**Sampler Initials**	**Date**	**Sample Time**	**Sampling Method**	**Field Filtered**	**Appearance**	**Odor**	**Color**	**Post-Sample DTW (ft)**	**Drawdown (ft)**
001	R101	BG	10/25/23	14:42	Low Flow	Yes	Clear	Slight	clear	10.19	**1.46**
002	G110	TAC	10/26/23	12:20	Low Flow	Yes	Clear	None	Lt Brown	26.68	0.96
003	R111	TAC	10/26/23	11:35	Low Flow	Yes	Clear	None	Lt Brown	27.23	0.36
004	G112	BG	10/25/23	10:53	Low Flow	Yes	Slightly cloudy	Slight	clear	34.62	**4.20**
005	G113	BG	10/25/23	14:22	Low Flow	Yes	Clear	Slight	clear	12.85	**3.23**
006	G120	BG	10/25/23	13:39	Low Flow	Yes	Clear	None	clear	19.72	**1.11**
007	G121	BG	10/25/23	12:01	Low Flow	Yes	Clear	None	Clear	31.61	**1.07**
008	G122	BG	10/25/23	11:29	Low Flow	Yes	Clear	Strong	Clear	31.45	-0.79
009	AW-1	bg	10/25/23	09:59	Low Flow	Yes	Slightly cloudy	Moderate	clear	20.81	**3.43**
010	AW-2	BG	10/25/23	13:18	Low Flow	Yes	Clear	None	clear	7.65	0.24
011	RW-3	bg	10/25/23	12:34	Low Flow	Yes	Clear	Slight	CLEAR	14.45	**2.66**

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Summary
CWLP- 4Q 2023

WO Sample	Well ID	COMMENTS
001	R101	
002	G110	
003	R111	
004	G112	
005	G113	went dry during filling, filled on 10-26 at 1415
006	G120	
007	G121	
008	G122	
009	AW-1	
010	AW-2	
011	RW-3	GW Level measurement time should be 1226 not 1504. logged this in the worng column

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Stabilized Field Parameters Summary
CWLP- 4Q 2023

Well ID	Date	Time	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	DTB (ft)	DTW (ft)	LIMS ID
R101	10/25/2023	14:42	14.6	58.2	6.81	1,201.5	1,201.5	2.81	13.78	-76.1	35.27	8.73	23101165-001A
G110	10/26/2023	12:20	16.6	61.8	6.84	603.1	603.1	2.93	2.89	-105.0	57.15	25.72	23101165-002A
R111	10/26/2023	11:35	14.6	58.3	6.42	87.5	87.5	0.81	7.18	40.6	55.75	26.87	23101165-003A
G112	10/25/2023	10:53	14.9	58.9	7.01	1,406.9	1,406.9	0.72	39.35	-116.2	58.81	30.42	23101165-004A
G113	10/25/2023	14:22	17.2	63.0	6.21	1,793.3	1,793.3	1.36	7.81	-150.8	12.85	9.62	23101165-005A
G120	10/25/2023	13:39	17.3	63.2	6.78	1,775.7	1,775.7	1.36	8.15	-80.0	50.37	18.61	23101165-006A
G121	10/25/2023	12:01	15.0	59.0	6.83	1,409.2	1,409.2	0.71	14.82	-111.9	58.56	30.54	23101165-007A
G122	10/25/2023	11:29	14.7	58.4	6.70	1,666.1	1,666.1	0.82	7.04	-88.9	49.29	32.24	23101165-008A
AW-1	10/25/2023	9:59	15.1	59.1	6.54	1,449.2	1,449.2	0.86	80.77	-89.9	54.81	17.38	23101165-009A
AW-2	10/25/2023	13:18	16.7	62.1	6.89	1,198.1	1,198.1	0.92	20.56	-115.0	32.64	7.41	23101165-010A
RW-3	10/25/2023	12:34	15.7	60.2	7.31	632.4	632.4	1.39	8.60	-125.8	44.01	11.79	23101165-011A

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
R101	10/25/2023	14:36	8.73	13.6	56.4	7.00	1,208.2	1,208.2	3.95	13.42	-104.5
R101	10/25/2023	14:39	8.73	14.0	57.2	6.86	1,203.6	1,203.6	2.99	12.73	-85.3
R101	10/25/2023	14:42	8.73	14.6	58.2	6.81	1,201.5	1,201.5	2.81	13.78	-76.1

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G110	10/26/2023	12:14	25.72	16.7	62.1	6.86	606.4	606.4	3.54	3.27	-108.7
G110	10/26/2023	12:17	25.72	16.6	61.9	6.85	604.5	604.5	3.15	2.77	-106.0
G110	10/26/2023	12:20	25.72	16.6	61.8	6.84	603.1	603.1	2.93	2.89	-105.0

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G112	10/25/2023	10:26	30.42	14.7	58.5	7.03	1,467.7	1,467.7	3.81	13.11	-64.9
G112	10/25/2023	10:29	30.42	14.8	58.7	7.00	1,466.2	1,466.2	2.24	14.96	-88.7
G112	10/25/2023	10:32	30.42	15.0	59.0	7.01	1,465.6	1,465.6	1.66	17.03	-99.1
G112	10/25/2023	10:35	30.42	14.7	58.5	7.01	1,468.9	1,468.9	1.35	20.96	-105.5
G112	10/25/2023	10:38	30.42	14.7	58.5	7.02	1,464.1	1,464.1	1.14	25.49	-109.5
G112	10/25/2023	10:41	30.42	15.2	59.3	7.01	1,455.7	1,455.7	0.99	29.35	-112.3
G112	10/25/2023	10:44	30.42	15.7	60.2	7.01	1,447.9	1,447.9	0.88	32.21	-114.4
G112	10/25/2023	10:47	30.42	15.7	60.2	7.01	1,442.7	1,442.7	0.81	35.27	-115.7
G112	10/25/2023	10:50	30.42	15.4	59.7	7.01	1,426.0	1,426.0	0.76	37.25	-116.2
G112	10/25/2023	10:53	30.42	14.9	58.9	7.01	1,406.9	1,406.9	0.72	39.35	-116.2

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G113	10/25/2023	14:13	9.62	17.2	62.9	6.23	1,811.9	1,811.9	3.63	27.15	-100.8
G113	10/25/2023	14:16	9.62	17.2	63.0	6.17	1,806.8	1,806.8	2.18	21.61	-122.1
G113	10/25/2023	14:19	9.62	17.2	62.9	6.19	1,807.4	1,807.4	1.63	12.74	-137.5
G113	10/25/2023	14:22	9.62	17.2	63.0	6.21	1,793.3	1,793.3	1.36	7.81	-150.8

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G121	10/25/2023	11:49	30.54	14.7	58.5	6.83	1,402.0	1,402.0	1.10	17.33	-86.3
G121	10/25/2023	11:52	30.54	15.1	59.1	6.83	1,405.7	1,405.7	0.94	15.48	-97.8
G121	10/25/2023	11:55	30.54	15.2	59.3	6.83	1,408.8	1,408.8	0.84	13.70	-104.5
G121	10/25/2023	11:58	30.54	15.1	59.1	6.83	1,409.9	1,409.9	0.77	14.05	-108.9
G121	10/25/2023	12:01	30.54	15.0	59.0	6.83	1,409.2	1,409.2	0.71	14.82	-111.9

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G122	10/25/2023	11:23	32.24	14.6	58.3	6.72	1,623.5	1,623.5	1.12	15.04	-76.0
G122	10/25/2023	11:26	32.24	14.7	58.4	6.70	1,650.4	1,650.4	0.92	9.29	-83.4
G122	10/25/2023	11:29	32.24	14.7	58.4	6.70	1,666.1	1,666.1	0.82	7.04	-88.9

Site Samping Event: CWLP- 4Q 2023
LIMS Workorder: 23101165
Technician(s): JC, BG

Groundwater Sampling Field Form- Groundwater Quality Parameters
CWLP- 4Q 2023

Well ID	Date	Time	DTW	Temp (deg C)	Temp (deg F)	pH (SU)	Sp Cond (µS/cm)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AW-2	10/25/2023	12:54	7.41	16.7	62.0	6.96	1,151.6	1,151.6	3.89	16.12	-66.3
AW-2	10/25/2023	12:57	7.41	17.1	62.7	6.90	1,179.7	1,179.7	2.15	14.72	-90.5
AW-2	10/25/2023	13:00	7.41	17.2	62.9	6.89	1,192.8	1,192.8	1.72	28.68	-98.4
AW-2	10/25/2023	13:03	7.41	17.0	62.6	6.89	1,198.4	1,198.4	1.46	35.49	-103.8
AW-2	10/25/2023	13:06	7.41	17.1	62.7	6.89	1,199.1	1,199.1	1.27	29.18	-107.5
AW-2	10/25/2023	13:09	7.41	16.8	62.3	6.89	1,200.0	1,200.0	1.13	25.13	-110.4
AW-2	10/25/2023	13:12	7.41	16.7	62.1	6.89	1,198.6	1,198.6	1.05	25.23	-112.5
AW-2	10/25/2023	13:15	7.41	16.6	61.9	6.89	1,198.8	1,198.8	0.99	20.08	-113.7
AW-2	10/25/2023	13:18	7.41	16.7	62.1	6.89	1,198.1	1,198.1	0.92	20.56	-115.0

First Quarter 2024

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 18, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 24010117

Dear Eric Staley:

TEKLAB, INC received 15 samples on 2/26/2024 6:45:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24010117
Report Date: 18-Mar-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	27
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24010117

Client Project: Ash Pond Monitoring Wells **Report Date:** 18-Mar-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010117
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Mar-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010117
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Mar-24

Cooler Receipt Temp: 3.3 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24010117
Report Date: 18-Mar-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010117
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Mar-24
Lab ID: 24010117-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 02/21/2024 11:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	02/21/2024 11:38	R343702
Depth to water	*	-5.00		**6.40**	ft	1	02/21/2024 11:38	R343702
Depth to water from measuring point	*	0		**9.10**	ft	1	02/21/2024 11:38	R343702
Elevation of groundwater surface	*	0		**530.40**	ft	1	02/21/2024 11:38	R343702
Measuring Point Elevation	*	0		**539.50**	ft	1	02/21/2024 11:38	R343702
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	02/21/2024 11:38	R343702
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**120**	NTU	1	02/21/2024 11:38	R343702
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.2**	°F	1	02/21/2024 11:38	R343702
SW-846 9040B								
pH, Field	*	1.00		**7.10**		1	02/21/2024 11:38	R343702
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**648**	µmhos/cm @25C	1	02/21/2024 11:38	R343702
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**335**	mg/L	2.5	02/23/2024 9:53	R343558
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**14**	mg/L	1	02/22/2024 22:24	R343452
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.37**	mg/L	1	02/23/2024 13:07	R343485
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**27**	mg/L	1	02/22/2024 22:24	R343454
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.166**	mg/L	1	02/26/2024 18:50	219117
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/26/2024 18:50	219117
Boron	NELAP	0.0200		**0.116**	mg/L	1	02/26/2024 18:50	219117
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/26/2024 18:50	219117
Calcium	NELAP	0.100		**63.4**	mg/L	1	02/26/2024 18:50	219117
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 18:50	219117
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 18:50	219117
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/26/2024 18:50	219117
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 18:50	219117
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/26/2024 18:50	219117
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 2:18	219117
Arsenic	NELAP	0.0010		**0.306**	mg/L	5	02/28/2024 2:18	219117
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 2:18	219117
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/28/2024 2:18	219117
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/23/2024 15:29	219103
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494
Radium-228	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010117
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Mar-24
Lab ID: 24010117-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 02/22/2024 11:24

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	02/22/2024 11:24	R343702
Depth to water	*	-5.00		**4.61**	ft	1	02/22/2024 11:24	R343702
Depth to water from measuring point	*	0		**7.11**	ft	1	02/22/2024 11:24	R343702
Elevation of groundwater surface	*	0		**528.99**	ft	1	02/22/2024 11:24	R343702
Measuring Point Elevation	*	0		**536.10**	ft	1	02/22/2024 11:24	R343702
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	02/22/2024 11:24	R343702
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**20**	NTU	1	02/22/2024 11:24	R343702
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.6**	°F	1	02/22/2024 11:24	R343702
SW-846 9040B								
pH, Field	*	1.00		**6.41**		1	02/22/2024 11:24	R343702
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1190**	µmhos/cm @25C	1	02/22/2024 11:24	R343702
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1020**	mg/L	2.5	02/23/2024 12:34	R343558
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**393**	mg/L	20	02/23/2024 12:55	R343641
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.21**	mg/L	1	02/23/2024 13:26	R343485
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**39**	mg/L	2	02/23/2024 12:50	R343643
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0678**	mg/L	1	02/26/2024 19:01	219117
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/26/2024 19:01	219117
Boron	NELAP	0.0200		**3.38**	mg/L	1	02/26/2024 19:01	219117
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/26/2024 19:01	219117
Calcium	NELAP	0.100		**210**	mg/L	1	02/26/2024 19:01	219117
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:01	219117
Cobalt	NELAP	0.0050		**0.0068**	mg/L	1	02/26/2024 19:01	219117
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/26/2024 19:01	219117
Lithium	NELAP	0.0050		**0.0059**	mg/L	1	02/26/2024 19:01	219117
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/26/2024 19:01	219117
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 2:30	219117
Arsenic	NELAP	0.0010		**0.0027**	mg/L	5	02/28/2024 2:30	219117
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 2:30	219117
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/28/2024 2:30	219117
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/23/2024 15:33	219103
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494
Radium-228	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010117
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Mar-24
Lab ID: 24010117-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 02/22/2024 12:03

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	02/22/2024 12:03	R343702
Depth to water	*	-5.00		**7.62**	ft	1	02/22/2024 12:03	R343702
Depth to water from measuring point	*	0		**9.32**	ft	1	02/22/2024 12:03	R343702
Elevation of groundwater surface	*	0		**526.08**	ft	1	02/22/2024 12:03	R343702
Measuring Point Elevation	*	0		**535.40**	ft	1	02/22/2024 12:03	R343702
Measuring Point Height Above Land Surface	*	0		**1.70**	ft	1	02/22/2024 12:03	R343702
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**22**	NTU	1	02/22/2024 12:03	R343702
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.0**	°F	1	02/22/2024 12:03	R343702
SW-846 9040B								
pH, Field	*	1.00		**6.55**		1	02/22/2024 12:03	R343702
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1050**	µmhos/cm @25C	1	02/22/2024 12:03	R343702
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**935**	mg/L	2.5	02/23/2024 12:34	R343558
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**512**	mg/L	20	02/23/2024 13:03	R343641
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.17**	mg/L	1	02/23/2024 13:28	R343485
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**54**	mg/L	2	02/23/2024 12:58	R343643
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0952**	mg/L	1	02/26/2024 19:02	219117
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/26/2024 19:02	219117
Boron	NELAP	0.0200		**14.8**	mg/L	1	02/26/2024 19:02	219117
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/26/2024 19:02	219117
Calcium	NELAP	0.100		**177**	mg/L	1	02/26/2024 19:02	219117
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:02	219117
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:02	219117
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/26/2024 19:02	219117
Lithium	NELAP	0.0050		**0.0062**	mg/L	1	02/26/2024 19:02	219117
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/26/2024 19:02	219117
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 11:23	219117
Arsenic	NELAP	0.0010		**0.0101**	mg/L	5	02/28/2024 3:18	219117
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 3:18	219117
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/28/2024 3:18	219117
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/23/2024 15:36	219103
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494
Radium-228	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010117
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Mar-24
Lab ID: 24010117-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 02/26/2024 14:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	02/26/2024 14:20	R343702
Depth to water	*	-5.00		**8.42**	ft	1	02/26/2024 14:20	R343702
Depth to water from measuring point	*	0		**11.08**	ft	1	02/26/2024 14:20	R343702
Elevation of groundwater surface	*	0		**527.94**	ft	1	02/26/2024 14:20	R343702
Measuring Point Elevation	*	0		**539.02**	ft	1	02/26/2024 14:20	R343702
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	02/26/2024 14:20	R343702
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**34**	NTU	1	02/26/2024 14:20	R343702
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.2**	°F	1	02/26/2024 14:20	R343702
SW-846 9040B								
pH, Field	*	1.00		**7.15**		1	02/26/2024 14:20	R343702
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**646**	µmhos/cm @25C	1	02/26/2024 14:20	R343702
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**330**	mg/L	5	02/28/2024 7:46	R343743
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**17**	mg/L	1	02/28/2024 17:04	R343726
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.44**	mg/L	1	02/27/2024 9:22	R343589
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**42**	mg/L	1	02/28/2024 17:04	R343732
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.118**	mg/L	1	02/29/2024 16:41	219241
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/29/2024 16:41	219241
Boron	NELAP	0.0200		**0.173**	mg/L	1	02/29/2024 16:41	219241
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/29/2024 16:41	219241
Calcium	NELAP	0.100	B	**55.6**	mg/L	1	02/29/2024 16:41	219241
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/29/2024 16:41	219241
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/29/2024 16:41	219241
Lead	NELAP	0.0150	B	**< 0.0150**	mg/L	1	02/29/2024 16:41	219241
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/29/2024 16:41	219241
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/29/2024 16:41	219241
Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
Contamination present in the MBLK for Pb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/29/2024 0:00	219241
Arsenic	NELAP	0.0010		**0.0555**	mg/L	5	03/01/2024 12:00	219241
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/29/2024 0:00	219241
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	03/01/2024 4:48	219241
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/04/2024 17:37	219343
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010117
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Mar-24
Lab ID: 24010117-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 02/26/2024 14:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-228	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010117
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Mar-24
Lab ID: 24010117-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 02/21/2024 12:24

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	02/21/2024 12:24	R343702
Depth to water	*	-5.00		**1.58**	ft	1	02/21/2024 12:24	R343702
Depth to water from measuring point	*	0		**4.48**	ft	1	02/21/2024 12:24	R343702
Elevation of groundwater surface	*	0		**532.72**	ft	1	02/21/2024 12:24	R343702
Measuring Point Elevation	*	0		**537.20**	ft	1	02/21/2024 12:24	R343702
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	02/21/2024 12:24	R343702
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.7**	NTU	1	02/21/2024 12:24	R343702
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.3**	°F	1	02/21/2024 12:24	R343702
SW-846 9040B								
pH, Field	*	1.00		**6.83**		1	02/21/2024 12:24	R343702
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**861**	µmhos/cm @25C	1	02/21/2024 12:24	R343702
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**520**	mg/L	2.5	02/23/2024 10:04	R343558
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	02/22/2024 22:34	R343452
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.26**	mg/L	1	02/23/2024 13:23	R343485
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**24**	mg/L	1	02/22/2024 22:34	R343454
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.374**	mg/L	1	02/26/2024 19:07	219117
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/26/2024 19:07	219117
Boron	NELAP	0.0200		**0.0866**	mg/L	1	02/26/2024 19:07	219117
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/26/2024 19:07	219117
Calcium	NELAP	0.100		**99.3**	mg/L	1	02/26/2024 19:07	219117
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:07	219117
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:07	219117
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/26/2024 19:07	219117
Lithium	NELAP	0.0050		**0.0069**	mg/L	1	02/26/2024 19:07	219117
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/26/2024 19:07	219117
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 3:36	219117
Arsenic	NELAP	0.0010		**0.0426**	mg/L	5	02/28/2024 3:36	219117
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 3:36	219117
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/28/2024 3:36	219117
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/23/2024 15:54	219103
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494
Radium-228	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344494

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24010117
Report Date: 18-Mar-24

Carrier: Tracy Carroll

Received By: AMD

Completed by: Amber Dilallo
On: 22-Feb-24

Reviewed by: Ellie Hopkins
On: 27-Feb-24

Pages to follow: Chain of custody 6 Extra pages included 50

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.3
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #90719. - amberdilallo - 2/22/2024 8:40:42 AM

Samples were received on 2/22/24 at 15:40 on ice [7.3C - LTG5]. pH strip #90719. Collection date per Tracy Carroll. - amberdilallo - 2/22/2024 4:41:18 PM

Samples were received on 2/23/24 at 13:07 on ice [6.7C - LTG#7]. pH strip #90719. Additional Nitric Acid (96331) preservative was needed for AP-4 & AP-14 upon arrival at the laboratory. - nickreed - 2/23/2024 2:35:40 PM

Samples were received on 2/26/24 at 18:45 on ice [5.3c - LTG5]. pH strip #90719. - amberdilallo - 2/27/2024 8:11:24 AM

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24010117

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 3.3 °C
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY LTG5
LAB NOTES: 90719 SM 2/22/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
TCarroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24010117-001	RW-3	2/21/24 1138	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1	2/21/24 1341	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8	2/21/24 1224	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10	2/21/24 1436	Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carroll	2/21/24 1715	Sonia Ocalla	2/21/24 1715

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 24010117

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 9.3 °C L105
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: 9079 2/22/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring
Date per Tracy Carroll. SMM 2/22/24

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
T Carroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24010117-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2	2/22/24 1124	Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3	1203	Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5	1344	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6	1640	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carroll	2/22/24 3:40	Emily Sackett	2/22/24 1540

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24010117

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 6.7 °C 7
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: ph ✓ 4071a added HNO3 (96331) ES 2/23/24 to 2 liters

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
TCarroll

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24010117-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4	2/23/24 1121	Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carroll	2/23/24 1:07	Whitney Dunger	2/23/24 1:07

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24010117

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
TCarrell

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24010117-012	AP-11		Groundwater	1	2								✓	✓	✓	✓	✓	✓
013	AP-12		Groundwater	1	2								✓	✓	✓	✓	✓	✓
014	AP-13		Groundwater	1	2								✓	✓	✓	✓	✓	✓
015	AP-14	2/23/24 1025	Groundwater	1	2								✓	✓	✓	✓	✓	✓
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carrell	2/23/24 1:07	Whitney Lewis	2/23/24 1:15

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24010117

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 5.3 °C

Preserved in: [ ] LAB [✓] FIELD FOR LAB USE ONLY LTG 5

LAB NOTES: 901A GM 2/27/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No

Are these samples known to be hazardous? [ ] Yes [✓] No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:

*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME: TCarroll

RESULTS REQUESTED: [✓] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24010117-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7	2/26/24 1410	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9	2/26/24 1350	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carroll	2/26/24 1845	Omar Villalpando	2/26/24 1845

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24010117

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C

Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES:

AP-11, AP-12 & AP-13 tinted per Tracy Carroll JM 2/27/24

Client Comments:

*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME: TCarroll

RESULTS REQUESTED

☑ Standard ☐ 1-2 Day (100% Surcharge)

☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24010117-012	AP-11	2/26/24 1108	Groundwater	1	2								✔	✔	✔	✔	✔	✔
-013	AP-12	1 1200	Groundwater	1	2								✔	✔	✔	✔	✔	✔
-014	AP-13	1 1234	Groundwater	1	2								✔	✔	✔	✔	✔	✔
-015	AP-14		Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Jeremy Carroll	2/26/24 1845	[signature]	2/26/24 1845

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Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- Ash Pond- 1Q 2024

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
001	RW-3	Groundwater Sample	57.0	None	N	Clear	Good	Good	Good	Yes	**No**
002	AP-1	Groundwater Sample	59.0	None	N	Clear	Good	Good	Good	**No**	**No**
003	AP-2	Groundwater Sample	60.0	None	W	Cloudy	Good	Good	Good	**No**	**No**
004	AP-3	Groundwater Sample	62.0	None	W	Clear	Good	Good	Good	Yes	**No**
005	AP-4	Groundwater Sample	50.0	None	SE	Clear	Good	Good	Good	Yes	**No**
006	AP-5	Groundwater Sample	63.0	None	W	Clear	Good	Good	Good	Yes	**No**
007	AP-6	Groundwater Sample	60.0	None	W	Cloudy	Good	Good	Good	**No**	**No**
008	AP-7	Groundwater Sample	74.0	None	N	Clear	Good	Good	Good	**No**	**No**
009	AP-8	Groundwater Sample	57.0	None	N	Clear	Good	Good	Good	**No**	**No**
010	AP-9	Groundwater Sample	74.0	None	N	Clear	Good	Good	Good	**No**	**No**
011	AP-10	Groundwater Sample	60.0	None	N	Clear	Good	Good	Good	**No**	**No**
012	AP-11	Groundwater Sample	64.0	None	N	Clear	Good	Good	Good	**No**	**No**
013	AP-12	Groundwater Sample	67.0	None	N	Clear	Good	Good	Good	**No**	**No**
014	AP-13	Groundwater Sample	70.0	None	N	Clear	Good	Good	Good	**No**	**No**
015	AP-14	Groundwater Sample	45.0	None	SE	Clear	Good	Good	Good	Yes	**No**

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- Ash Pond- 1Q 2024

		GW Level Measurement				Purge Activities							
WO Sample	**Well ID**	**Sampler Initials**	**Date/Time**	**DTW (ft)**	**DTB (ft)**	**Sampler Initials**	**Purge Date**	**Purge Start Time**	**Purge End Time**	**Purging Device**	**Well Diameter (in)**	**Actual Volume Purged (L)**	**Purge Rate (mL/min)**
001	RW-3	DC	2/21/24 11:20	9.10	44.01	DC	2/21/2024	11:21	11:38	Bladder Pump	2"	4.0	235.3
002	AP-1	DC	2/21/24 12:42	8.48	31.08	DC	2/21/2024	13:27	13:41	Bladder Pump	2"	3.0	214.3
003	AP-2	DC	2/22/24 10:58	7.11	21.33	DC	2/22/2024	10:59	11:24	Bladder Pump	2"	6.0	240.0
004	AP-3	DC	2/22/24 11:44	9.32	-	DC	2/22/2024	11:45	12:03	Bladder Pump	2"	4.0	222.2
005	AP-4	DC	2/23/24 10:46	9.04	60.41	DC	2/23/2024	10:47	11:21	Bladder Pump	2"	9.0	264.7
006	AP-5	DC	2/22/24 13:21	15.95	31.27	DC	2/22/2024	13:22	13:44	Bladder Pump	2"	5.0	227.3
007	AP-6	DC	2/22/24 10:22	7.85	39.62	DC	2/22/2024	10:24	10:40	Bladder Pump	2"	3.0	187.5
008	AP-7	DC	2/26/24 14:04	11.08	42.52	DC	2/26/2024	14:05	14:20	Bladder Pump	2"	3.0	200.0
009	AP-8	DC	2/21/24 12:07	4.48	39.60	DC	2/21/2024	12:08	12:24	Peristaltic Pump	2"	4.0	250.0
010	AP-9	DC	2/26/24 13:27	12.05	39.60	DC	2/26/2024	13:30	13:50	Peristaltic Pump	2"	5.0	250.0
011	AP-10	DC	2/21/24 14:04	2.82	38.07	DC	2/21/2024	14:05	14:36	Peristaltic Pump	2"	6.0	193.5
012	AP-11	DC	2/26/24 10:46	14.42	22.95	DC	2/26/2024	10:50	11:08	Peristaltic Pump	2"	4.0	222.2
013	AP-12	DC	2/26/24 11:22	17.35	30.40	DC	2/26/2024	11:22	12:00	Peristaltic Pump	2"	8.0	210.5
014	AP-13	DC	2/26/24 12:11	17.10	31.00	DC	2/26/2024	12:12	12:34	Peristaltic Pump	2"	6.0	272.7
015	AP-14	DC	2/23/24 9:57	1.72	31.20	DC	2/23/2024	09:58	10:25	Peristaltic Pump	2"	6.0	222.2

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- Ash Pond- 1Q 2024

WO Sample	Well ID	Sampling Activities and Observations									
		Sampler Initials	Date	Time	Sampling Method	Field Filtered	Appearance	Odor	Color	Post-Sample DTW (ft)	Drawdown (ft)
001	RW-3	TAC	02/21/24	11:38	Low Flow	Yes	Clear	None	None	13.25	**4.15**
002	AP-1	TAC	02/21/24	13:41	Low Flow	No	Clear	None	None	9.00	**0.52**
003	AP-2	TAC	02/22/24	11:24	Low Flow	No	Clear	None	None	7.20	0.09
004	AP-3	TAC	02/22/24	12:03	Low Flow	No	Clear	None	None	9.68	0.36
005	AP-4	TAC	02/23/24	11:21	Low Flow	No	Clear	None	None	9.21	0.17
006	AP-5	TAC	02/22/24	13:44	Low Flow	No	Clear	None	None	17.45	**1.5**
007	AP-6	TAC	02/22/24	10:40	Low Flow	No	Clear	None	None	12.45	**4.6**
008	AP-7	TAC	02/26/24	14:20	Low Flow	No	Clear	None	None	13.29	**2.21**
009	AP-8	TAC	02/21/24	12:24	Low Flow	No	Clear	None	None	4.84	0.36
010	AP-9	TAC	02/26/24	13:50	Low Flow	No	Clear	None	None	16.30	**4.25**
011	AP-10	TAC	02/21/24	14:36	Low Flow	No	Clear	Slight	None	3.11	0.29
012	AP-11	TAC	02/26/24	11:08	Low Flow	No	Clear	None	None	14.95	**0.53**
013	AP-12	TAC	02/26/24	12:00	Low Flow	No	Slightly cloudy	Slight	light grey	18.64	**1.29**
014	AP-13	TAC	02/26/24	12:34	Low Flow	No	Clear	Slight	None	18.86	**1.76**
015	AP-14	TAC	02/23/24	10:25	Low Flow	No	Cloudy	None	None	1.90	0.18

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- Ash Pond- 1Q 2024

WO Sample	Well ID	COMMENTS
001	RW-3	
002	AP-1	
003	AP-2	
004	AP-3	
005	AP-4	
006	AP-5	
007	AP-6	
008	AP-7	
009	AP-8	
010	AP-9	
011	AP-10	
012	AP-11	
013	AP-12	
014	AP-13	
015	AP-14	

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Stabilized Field Parameters Summary
CWLP- Ash Pond- 1Q 2024

Well ID	Date	Time	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW (ft)	LIMS ID
RW-3	2/21/2024	11:38	14.0	57.2	7.10	647.6	0.78	124.34	-134.4	9.10	24010117-001A
AP-1	2/21/2024	13:41	15.0	59.0	6.51	1,473.8	1.00	28.16	-3.1	8.48	24010117-002A
AP-2	2/22/2024	11:24	13.1	55.6	6.41	1,190.1	0.56	20.20	115.3	7.11	24010117-003A
AP-3	2/22/2024	12:03	12.8	55.0	6.55	1,048.2	0.65	21.97	78.1	9.32	24010117-004A
AP-4	2/23/2024	11:21	15.5	59.9	6.86	847.4	0.50	38.35	-53.3	9.04	24010117-005A
AP-5	2/22/2024	13:44	14.0	57.2	7.01	590.8	2.26	0.66	63.7	15.95	24010117-006A
AP-6	2/22/2024	10:40	12.8	55.0	6.97	612.2	3.76	12.97	113.0	7.85	24010117-007A
AP-7	2/26/2024	14:20	14.0	57.2	7.15	646.0	1.56	33.97	-88.6	11.08	24010117-008A
AP-8	2/21/2024	12:24	13.5	56.3	6.83	860.7	0.74	6.66	-76.0	4.48	24010117-009A
AP-9	2/26/2024	13:50	15.1	59.2	6.82	813.3	1.06	23.11	-49.8	12.05	24010117-010A
AP-10	2/21/2024	14:36	13.7	56.7	6.65	1,006.6	2.23	34.31	-18.7	2.82	24010117-011A
AP-11	2/26/2024	11:08	12.8	55.0	6.45	1,103.0	1.12	5.21	86.7	14.42	24010117-012A
AP-12	2/26/2024	12:00	14.2	57.6	6.53	1,396.3	0.67	27.25	-25.8	17.35	24010117-013A
AP-13	2/26/2024	12:34	13.8	56.8	6.73	709.8	0.87	10.08	-47.2	17.10	24010117-014A
AP-14	2/23/2024	10:25	11.4	52.5	6.93	1,529.4	1.44	24.44	97.8	1.72	24010117-015A

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Ash Pond- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
RW-3	2/21/2024	11:32	9.10	13.9	57.0	7.11	648.4	0.89	46.09	-126.70
RW-3	2/21/2024	11:35	9.10	13.9	57.0	7.10	647.6	0.83	90.21	-131.90
RW-3	2/21/2024	11:38	9.10	14.0	57.2	7.10	647.6	0.78	124.34	-134.40

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Ash Pond- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-1	2/21/2024	13:35	8.48	14.8	58.6	6.51	1,441.3	1.21	29.57	50.10
AP-1	2/21/2024	13:38	8.48	14.7	58.5	6.51	1,459.6	1.04	30.53	22.00
AP-1	2/21/2024	13:41	8.48	15.0	59.0	6.51	1,473.8	1.00	28.16	-3.10

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Ash Pond- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-2	2/22/2024	11:15	7.11	12.8	55.0	6.42	1,189.9	0.69	66.56	119.50
AP-2	2/22/2024	11:18	7.11	12.9	55.2	6.42	1,185.7	0.64	39.12	118.10
AP-2	2/22/2024	11:21	7.11	12.9	55.2	6.42	1,187.5	0.60	30.02	116.60
AP-2	2/22/2024	11:24	7.11	13.1	55.6	6.41	1,190.1	0.56	20.20	115.30

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Ash Pond- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-3	2/22/2024	11:54	9.32	12.6	54.7	6.61	1,022.4	1.28	128.69	98.60
AP-3	2/22/2024	11:57	9.32	12.7	54.9	6.57	1,030.4	0.91	56.27	91.00
AP-3	2/22/2024	12:00	9.32	12.8	55.0	6.56	1,040.2	0.75	39.31	84.30
AP-3	2/22/2024	12:03	9.32	12.8	55.0	6.55	1,048.2	0.65	21.97	78.10

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Ash Pond- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-7	2/26/2024	14:14	11.08	14.5	58.1	7.19	666.9	2.50	15.92	-43.90
AP-7	2/26/2024	14:17	11.08	14.0	57.2	7.15	651.6	1.80	30.93	-71.30
AP-7	2/26/2024	14:20	11.08	14.0	57.2	7.15	646.0	1.56	33.97	-88.60

Site Samping Event: CWLP Ash Pond- 1Q24
LIMS Workorder: 24010117
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Ash Pond- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-8	2/21/2024	12:18	4.48	13.5	56.3	6.84	857.8	0.91	6.45	-50.90
AP-8	2/21/2024	12:21	4.48	13.5	56.3	6.83	860.3	0.82	7.31	-66.90
AP-8	2/21/2024	12:24	4.48	13.5	56.3	6.83	860.7	0.74	6.66	-76.00

Summit Environmental Technologies, Inc.
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Website: http://www.settek.com

March 15, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24010117

Order No.: 24030039

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 15 sample(s) on 2/29/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **24030039**
Date: **3/15/2024**

CLIENT: TEKLAB Inc,
Project: 24010117

WorkOrder Narrative:
24030039: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Cuyahoga Falls, Ohio 4422
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Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24030039**
Date: **3/15/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Website: http://www.settek.com

Workorder Sample Summary

WO#: **24030039**

15-Mar-24

CLIENT: TEKLAB Inc,
Project: 24010117

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24030039-001	24010117-001		2/21/2024 11:38:00 AM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-002	24010117-002		2/21/2024 1:41:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-003	24010117-003		2/22/2024 11:24:00 AM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-004	24010117-004		2/22/2024 12:03:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-005	24010117-005		2/23/2024 11:21:00 AM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-006	24010117-006		2/22/2024 1:44:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-007	24010117-007		2/22/2024 10:40:00 AM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-008	24010117-008		2/26/2024 2:20:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-009	24010117-009		2/21/2024 12:24:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-010	24010117-010		2/26/2024 1:50:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-011	24010117-011		2/21/2024 2:36:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-012	24010117-012		2/26/2024 11:08:00 AM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-013	24010117-013		2/26/2024 12:00:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-014	24010117-014		2/26/2024 12:34:00 PM	2/29/2024 12:25:00 PM	Non-Potable Water
24030039-015	24010117-015		2/23/2024 10:25:00 AM	2/29/2024 12:25:00 PM	Non-Potable Water

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DATES REPORT

WO#: **24030039**

15-Mar-24

Client: TEKLAB Inc,
Project: 24010117

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24030039-001A	24010117-001	2/21/2024 11:38:00 AM	Non-Potable Water	Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-002A	24010117-002	2/21/2024 1:41:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-003A	24010117-003	2/22/2024 11:24:00 AM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-004A	24010117-004	2/22/2024 12:03:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-005A	24010117-005	2/23/2024 11:21:00 AM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-006A	24010117-006	2/22/2024 1:44:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-007A	24010117-007	2/22/2024 10:40:00 AM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-008A	24010117-008	2/26/2024 2:20:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM

Original

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DATES REPORT

WO#: **24030039**

15-Mar-24

Client: TEKLAB Inc,
Project: 24010117

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24030039-008A	24010117-008	2/26/2024 2:20:00 PM	Non-Potable Water	Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-009A	24010117-009	2/21/2024 12:24:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-010A	24010117-010	2/26/2024 1:50:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-011A	24010117-011	2/21/2024 2:36:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-012A	24010117-012	2/26/2024 11:08:00 AM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-013A	24010117-013	2/26/2024 12:00:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-014A	24010117-014	2/26/2024 12:34:00 PM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM
24030039-015A	24010117-015	2/23/2024 10:25:00 AM		Combined Radium (EPA903+904)			3/15/2024 7:25:39 AM
				Radium-226 (EPA 903.0)		3/5/2024 11:12:34 AM	3/11/2024 10:03:00 AM
				Radium-228 (EPA 904.0)		3/5/2024 11:12:34 AM	3/8/2024 2:17:00 PM

Original

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Analytical Report

(consolidated)

WO#: **24030039**

Date Reported: **3/15/2024**

CLIENT: TEKLAB Inc,

Collection Date: 2/21/2024 11:38:00 AM

Project: 24010117

Lab ID: 24030039-001

Matrix: NON-POTABLE WATER

Client Sample ID: 24010117-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
COMBINED RADIUM (EPA903+904)				**CALCULATION**			Analyst: **CXS**
Radium-226/Radium-228	ND	2.00		pCi/L	± 0.340	1	3/15/2024 7:25:39 AM
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.0800	1	3/11/2024 10:03:00 AM
Yield	1.00					1	3/11/2024 10:03:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.260	1	3/8/2024 2:17:00 PM
Yield	1.00					1	3/8/2024 2:17:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Report

(consolidated)

WO#: **24030039**

Date Reported: **3/15/2024**

CLIENT: TEKLAB Inc,
Collection Date: 2/22/2024 11:24:00 AM
Project: 24010117
Lab ID: 24030039-003
Matrix: NON-POTABLE WATER
Client Sample ID: 24010117-003

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
COMBINED RADIUM (EPA903+904)				**CALCULATION**			Analyst: **CXS**
Radium-226/Radium-228	ND	2.00		pCi/L	± 0.410	1	3/15/2024 7:25:39 AM
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.0600	1	3/11/2024 10:03:00 AM
Yield	0.980					1	3/11/2024 10:03:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.350	1	3/8/2024 2:17:00 PM
Yield	1.00					1	3/8/2024 2:17:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
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Analytical Report

(consolidated)

WO#: **24030039**

Date Reported: **3/15/2024**

CLIENT: TEKLAB Inc,
Collection Date: 2/22/2024 12:03:00 PM

Project: 24010117

Lab ID: 24030039-004
Matrix: NON-POTABLE WATER

Client Sample ID: 24010117-004

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
COMBINED RADIUM (EPA903+904)				**CALCULATION**			Analyst: **CXS**
Radium-226/Radium-228	ND	2.00		pCi/L	± 0.320	1	3/15/2024 7:25:39 AM
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.0500	1	3/11/2024 10:03:00 AM
Yield	1.00					1	3/11/2024 10:03:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.270	1	3/8/2024 2:17:00 PM
Yield	1.00					1	3/8/2024 2:17:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **24030039**

Date Reported: **3/15/2024**

CLIENT: TEKLAB Inc,

Collection Date: 2/26/2024 2:20:00 PM

Project: 24010117

Lab ID: 24030039-008

Matrix: NON-POTABLE WATER

Client Sample ID: 24010117-008

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
COMBINED RADIUM (EPA903+904)				**CALCULATION**			Analyst: **CXS**
Radium-226/Radium-228	ND	2.00		pCi/L	± 0.530	1	3/15/2024 7:25:39 AM
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.0900	1	3/11/2024 10:03:00 AM
Yield	1.00					1	3/11/2024 10:03:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.440	1	3/8/2024 2:17:00 PM
Yield	1.00					1	3/8/2024 2:17:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **24030039**

Date Reported: **3/15/2024**

CLIENT: TEKLAB Inc,
Collection Date: 2/21/2024 12:24:00 PM

Project: 24010117

Lab ID: 24030039-009
Matrix: NON-POTABLE WATER

Client Sample ID: 24010117-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
COMBINED RADIUM (EPA903+904)				**CALCULATION**			Analyst: **CXS**
Radium-226/Radium-228	ND	2.00		pCi/L	± 0.540	1	3/15/2024 7:25:39 AM
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.120	1	3/11/2024 10:03:00 AM
Yield	1.00					1	3/11/2024 10:03:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.420	1	3/8/2024 2:17:00 PM
Yield	1.00					1	3/8/2024 2:17:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Laboratories

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24030039**
15-Mar-24

Client: TEKLAB Inc,
Project: 24010117 **BatchID:** **73522**

Sample ID: **MB-73522** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181655**
Client ID: **PBW** Batch ID: **73522** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2024** SeqNo: **4923941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-73522** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181655**
Client ID: **LCSW** Batch ID: **73522** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2024** SeqNo: **4923942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.32	1.00	5.000	0	66.4	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-73522** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181655**
Client ID: **LCSS02** Batch ID: **73522** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2024** SeqNo: **4923943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.49	1.00	5.000	0	69.8	50	130	3.320	4.99	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24030039**
15-Mar-24

Client: TEKLAB Inc,
Project: 24010117 **BatchID:** **73522**

Sample ID: **RLC-73522** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181655**
Client ID: **BatchQC** Batch ID: **73522** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2024** SeqNo: **4923945**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.01	1.00	1.000	0	101	50	150				
Yield	1.00			0	0						

Sample ID: **RLCD-73522** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181655**
Client ID: **BatchQC** Batch ID: **73522** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2024** SeqNo: **4923946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	1.000	0	70.0	50	150				
Yield	1.00			0	0						

Sample ID: **24030092-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181655**
Client ID: **BatchQC** Batch ID: **73522** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2024** SeqNo: **4923950**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24030039**
15-Mar-24

Client: TEKLAB Inc,
Project: 24010117 **BatchID:** **73522**

Sample ID: **24030092-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181655**
Client ID: **BatchQC** Batch ID: **73522** TestNo: **E904.0** **E903-904** Analysis Date: **3/8/2024** SeqNo: **4923952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.41	1.00		0	0			2.380	1.25	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Analytical Laboratories

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24030039**
15-Mar-24

Client: TEKLAB Inc,
Project: 24010117 **BatchID:** **73522**

Sample ID: **MB-73522** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181663**
Client ID: **PBW** Batch ID: **73522** TestNo: **E903.0** **E903-904** Analysis Date: **3/11/2024** SeqNo: **4924195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-73522** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181663**
Client ID: **LCSW** Batch ID: **73522** TestNo: **E903.0** **E903-904** Analysis Date: **3/11/2024** SeqNo: **4924196**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.34	1.00	5.000	0	107	70	130				

Sample ID: **LCSD-73522** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181663**
Client ID: **LCSS02** Batch ID: **73522** TestNo: **E903.0** **E903-904** Analysis Date: **3/11/2024** SeqNo: **4924197**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.64	1.00	5.000	0	92.8	70	130	5.340	14.0	20	

Sample ID: **RLC-73522** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2024** RunNo: **181663**
Client ID: **BatchQC** Batch ID: **73522** TestNo: **E903.0** **E903-904** Analysis Date: **3/11/2024** SeqNo: **4924199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24030039**
15-Mar-24

Client: TEKLAB Inc,
Project: 24010117 **BatchID:** **73522**

Sample ID: **RLC-73522**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **3/5/2024**	RunNo: **181663**
Client ID: **BatchQC**	Batch ID: **73522**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/11/2024**	SeqNo: **4924199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	91.0	50	150				

Sample ID: **RLCD-73522**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **3/5/2024**	RunNo: **181663**
Client ID: **BatchQC**	Batch ID: **73522**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/11/2024**	SeqNo: **4924200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	78.0	50	150				

Sample ID: **24030092-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **3/5/2024**	RunNo: **181663**
Client ID: **BatchQC**	Batch ID: **73522**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/11/2024**	SeqNo: **4924202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Pg ___ of ___ 2403 0039

SN ~~2402t~~

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

11.0-0.2=10.8°C, 11.2-0.2=11.0°C
13.5-0.2=13.3°C

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Teklab Sampler QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226, 228, and combined) on your standard turnaround time.
Receipt summary requested.

Project# 24010117

Contact: Shelly Hennessy Email: shennessy@teklabinc.com
Requested Due Date: 20 business days or less Billing/PO: 35852
Phone: 618 344 1004 ext 36

State of Origin: IL

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228	Combined Radium		cpm				pH			
	24010117-001	2/21/24 1138	HNO3	Groundwater	✔	✔	✔	☐	~~15~~	18	☐	☐	☐	☐	☐	☐
	24010117-002	2/21/24 1341	HNO3	Groundwater	✔	✔	✔	☐	~~18~~	15	☐	☐	☐	☐	☐	☐
	24010117-003	2/22/24 1124	HNO3	Groundwater	✔	✔	✔	☐	18	☐	☐	☐	☐	☐	☐	☐
	24010117-004	2/22/24 1203	HNO3	Groundwater	✔	✔	✔	☐	18	34	☐	☐	☐	☐	☐	☐
	24010117-005	2/23/24 1121	HNO3	Groundwater	✔	✔	✔	☐	~~3~~	18	☐	☐	☐	☐	☐	☐
	24010117-006	2/22/24 1344	HNO3	Groundwater	✔	✔	✔	☐	TR	3	☐	☐	☐	☐	☐	☐
	24010117-007	2/22/24 1040	HNO3	Groundwater	✔	✔	✔	☐	2/23/24 MS	☐	☐	☐	☐	☐	☐	☐
	24010117-008	2/26/24 1420	HNO3	Groundwater	✔	✔	✔	☐	15	☐	☐	☐	☐	☐	☐	☐
	24010117-009	2/21/24 1224	HNO3	Groundwater	✔	✔	✔	☐	15	☐	☐	☐	☐	☐	☐	☐
	24010117-010	2/26/24 1350	HNO3	Groundwater	✔	✔	✔	☐	~~38~~	19	☐	☐	☐	☐	☐	☐
	24010117-011	2/21/24 1436	HNO3	Groundwater	✔	✔	✔	☐	~~23~~	88	☐	☐	☐	☐	☐	☐
									23		☐	☐	☐	☐	☐	☐

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	2/23/24 1700	[signature]	2/29/24, 1225

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Teklab Sampler QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226, 228, and combined) on your standard turnaround time.
Receipt summary requested.

Project# 24010117

Contact: Shelly Hennessy Email: shennessy@teklabinc.com
Requested Due Date: 20 business days or less Billing/PO: 35852 Phone: 618 344 1004 ext 36

State of Origin: IL

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228	Combined Radium		CPM			PH				
	24010117-012	2/26/24 1108	HNO3	Groundwater	✔	✔	✔		31			1				
	24010117-013	2/26/24 1200	HNO3	Groundwater	✔	✔	✔		23			1				
	24010117-014	2/26/24 1234	HNO3	Groundwater	✔	✔	✔		31			1				
	24010117-015	2/23/24 1025	HNO3	Groundwater	✔	✔	✔		27			1				
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												

*Relinquished By	Date/Time	Received By	Date/Time
[illegible]	2/27/24 1700		

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

February 21, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 24010118

Dear Eric Staley:

TEKLAB, INC received 11 samples on 2/1/2024 4:45:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 24010118
Report Date: 21-Feb-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	13
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24010118

Client Project: FGDS Landfill **Report Date:** 21-Feb-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24

Cooler Receipt Temp: 8.5 °C

An employee of Teklab, Inc. collected the sample(s).

R101, G112, G113, AW-2 and RW-3 will be recollected at a later date.

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
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Kansas City

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Lenexa, KS 66214
Phone (913) 541-1998
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Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
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Email EHurley@teklabinc.com

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Downers Grove, IL 60515
Phone (630) 324-6855
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Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24
Lab ID: 24010118-002
Client Sample ID: G110
Matrix: GROUNDWATER
Collection Date: 02/01/2024 13:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.05**	ft	1	02/01/2024 13:16	R342908
Depth to water	*	-5.00		**20.75**	ft	1	02/01/2024 13:16	R342908
Depth to water from measuring point	*	0		**23.36**	ft	1	02/01/2024 13:16	R342908
Elevation of groundwater surface	*	0		**533.84**	ft	1	02/01/2024 13:16	R342908
Measuring Point Elevation	*	0		**557.20**	ft	1	02/01/2024 13:16	R342908
Measuring Point Height Above Land Surface	*	0		**2.61**	ft	1	02/01/2024 13:16	R342908
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.4**	NTU	1	02/01/2024 13:16	R342908
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.1**	°F	1	02/01/2024 13:16	R342908
SW-846 9040B								
pH, Field	*	1.00		**6.85**		1	02/01/2024 13:16	R342908
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**658**	µmhos/cm @25C	1	02/01/2024 13:16	R342908
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**480**	mg/L	2.5	02/02/2024 14:05	R342621
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	02/05/2024 15:22	R342640
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.13**	mg/L	1	02/02/2024 13:25	R342565
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**8**	mg/L	1	02/05/2024 15:23	R342647
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.158**	mg/L	1	02/05/2024 8:43	218215
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/05/2024 8:43	218215
Boron	NELAP	0.0200		**0.105**	mg/L	1	02/05/2024 8:43	218215
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/05/2024 8:43	218215
Calcium	NELAP	0.100		**112**	mg/L	1	02/06/2024 16:01	218215
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/05/2024 8:43	218215
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/05/2024 8:43	218215
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/05/2024 8:43	218215
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/07/2024 15:33	218215
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/05/2024 8:43	218215
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/05/2024 19:59	218215
Arsenic	NELAP	0.0010		**0.0057**	mg/L	5	02/05/2024 19:59	218215
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/05/2024 19:59	218215
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/05/2024 19:59	218215
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/05/2024 15:18	218217
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341
Radium-228	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24
Lab ID: 24010118-003
Client Sample ID: R111
Matrix: GROUNDWATER
Collection Date: 02/02/2024 11:02

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**498.25**	ft	1	02/02/2024 11:02	R342908
Depth to water	*	-5.00		**24.34**	ft	1	02/02/2024 11:02	R342908
Depth to water from measuring point	*	0		**24.34**	ft	1	02/02/2024 11:02	R342908
Elevation of groundwater surface	*	0		**529.66**	ft	1	02/02/2024 11:02	R342908
Measuring Point Elevation	*	0		**554.00**	ft	1	02/02/2024 11:02	R342908
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	02/02/2024 11:02	R342908
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.9**	NTU	1	02/02/2024 11:02	R342908
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.4**	°F	1	02/02/2024 11:02	R342908
SW-846 9040B								
pH, Field	*	1.00		**6.14**		1	02/02/2024 11:02	R342908
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**90.9**	µmhos/cm @25C	1	02/02/2024 11:02	R342908
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**78**	mg/L	1	02/06/2024 11:33	R342760
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	02/05/2024 15:30	R342640
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	02/07/2024 11:16	R342758
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**6**	mg/L	1	02/05/2024 15:31	R342647
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0139**	mg/L	1	02/06/2024 12:01	218254
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/06/2024 12:01	218254
Boron	NELAP	0.0200		**< 0.0200**	mg/L	1	02/06/2024 12:01	218254
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/06/2024 12:01	218254
Calcium	NELAP	0.100		**11.0**	mg/L	1	02/06/2024 12:01	218254
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:01	218254
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:01	218254
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/06/2024 12:01	218254
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:01	218254
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/06/2024 12:01	218254
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2024 2:30	218254
Arsenic	NELAP	0.0010		**0.0015**	mg/L	5	02/07/2024 2:30	218254
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2024 2:30	218254
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/09/2024 16:43	218254
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/06/2024 11:07	218284
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341
Radium-228	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24
Lab ID: 24010118-006
Client Sample ID: G120
Matrix: GROUNDWATER
Collection Date: 02/02/2024 10:07

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**502.73**	ft	1	02/02/2024 10:07	R342908
Depth to water	*	-5.00		**14.63**	ft	1	02/02/2024 10:07	R342908
Depth to water from measuring point	*	0		**14.63**	ft	1	02/02/2024 10:07	R342908
Elevation of groundwater surface	*	0		**538.47**	ft	1	02/02/2024 10:07	R342908
Measuring Point Elevation	*	0		**553.10**	ft	1	02/02/2024 10:07	R342908
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	02/02/2024 10:07	R342908
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**10**	NTU	1	02/02/2024 10:07	R342908
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.7**	°F	1	02/02/2024 10:07	R342908
SW-846 9040B								
pH, Field	*	1.00		**6.47**		1	02/02/2024 10:07	R342908
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1460**	µmhos/cm @25C	1	02/02/2024 10:07	R342908
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**1320**	mg/L	5	02/05/2024 9:56	R342697
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**503**	mg/L	20	02/05/2024 15:43	R342640
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.17**	mg/L	1	02/07/2024 14:39	R342758
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**39**	mg/L	1	02/05/2024 15:39	R342647
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.628**	mg/L	1	02/06/2024 12:16	218254
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/06/2024 12:16	218254
Boron	NELAP	0.0200		**7.12**	mg/L	1	02/06/2024 12:16	218254
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/06/2024 12:16	218254
Calcium	NELAP	0.100		**265**	mg/L	1	02/06/2024 12:16	218254
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:16	218254
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:16	218254
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/06/2024 12:16	218254
Lithium	NELAP	0.0050		**0.0080**	mg/L	1	02/06/2024 12:16	218254
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/06/2024 12:16	218254
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2024 2:36	218254
Arsenic	NELAP	0.0010		**0.0116**	mg/L	5	02/07/2024 2:36	218254
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2024 2:36	218254
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/09/2024 16:48	218254
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/06/2024 11:09	218284
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341
Radium-228	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24
Lab ID: 24010118-007
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 02/02/2024 10:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	02/02/2024 10:29	R342908
Depth to water	*	-5.00		**24.67**	ft	1	02/02/2024 10:29	R342908
Depth to water from measuring point	*	0		**26.54**	ft	1	02/02/2024 10:29	R342908
Elevation of groundwater surface	*	0		**529.06**	ft	1	02/02/2024 10:29	R342908
Measuring Point Elevation	*	0		**555.60**	ft	1	02/02/2024 10:29	R342908
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	02/02/2024 10:29	R342908
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.3**	NTU	1	02/02/2024 10:29	R342908
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.5**	°F	1	02/02/2024 10:29	R342908
SW-846 9040B								
pH, Field	*	1.00		**6.62**		1	02/02/2024 10:29	R342908
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1200**	µmhos/cm @25C	1	02/02/2024 10:29	R342908
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**1000**	mg/L	5	02/05/2024 9:56	R342697
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**290**	mg/L	20	02/05/2024 15:52	R342640
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.17**	mg/L	1	02/07/2024 14:41	R342758
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**30**	mg/L	1	02/05/2024 15:47	R342647
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.555**	mg/L	1	02/06/2024 12:18	218254
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/06/2024 12:18	218254
Boron	NELAP	0.0200		**3.30**	mg/L	1	02/06/2024 12:18	218254
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/06/2024 12:18	218254
Calcium	NELAP	0.100		**189**	mg/L	1	02/06/2024 12:18	218254
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:18	218254
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:18	218254
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/06/2024 12:18	218254
Lithium	NELAP	0.0050		**0.0073**	mg/L	1	02/06/2024 12:18	218254
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/06/2024 12:18	218254
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2024 2:42	218254
Arsenic	NELAP	0.0010		**0.0173**	mg/L	5	02/07/2024 2:42	218254
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2024 2:42	218254
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/09/2024 16:53	218254
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/06/2024 11:12	218284
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341
Radium-228	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24
Lab ID: 24010118-008
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 02/02/2024 10:54

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**505.11**	ft	1	02/02/2024 10:54	R342908
Depth to water	*	-5.00		**24.97**	ft	1	02/02/2024 10:54	R342908
Depth to water from measuring point	*	0		**26.71**	ft	1	02/02/2024 10:54	R342908
Elevation of groundwater surface	*	0		**527.69**	ft	1	02/02/2024 10:54	R342908
Measuring Point Elevation	*	0		**554.40**	ft	1	02/02/2024 10:54	R342908
Measuring Point Height Above Land Surface	*	0		**1.74**	ft	1	02/02/2024 10:54	R342908
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.4**	NTU	1	02/02/2024 10:54	R342908
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.2**	°F	1	02/02/2024 10:54	R342908
SW-846 9040B								
pH, Field	*	1.00		**6.56**		1	02/02/2024 10:54	R342908
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1390**	µmhos/cm @25C	1	02/02/2024 10:54	R342908
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**1270**	mg/L	5	02/05/2024 9:56	R342697
SW-846 9036 (TOTAL)								
Sulfate	NELAP	500		**532**	mg/L	50	02/07/2024 9:49	R342767
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.13**	mg/L	1	02/07/2024 14:43	R342758
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**40**	mg/L	1	02/05/2024 16:11	R342647
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.474**	mg/L	1	02/06/2024 12:19	218254
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/06/2024 12:19	218254
Boron	NELAP	0.0200		**11.3**	mg/L	1	02/06/2024 12:19	218254
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/06/2024 12:19	218254
Calcium	NELAP	0.100		**251**	mg/L	1	02/06/2024 12:19	218254
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:19	218254
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/06/2024 12:19	218254
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/06/2024 12:19	218254
Lithium	NELAP	0.0050		**0.0070**	mg/L	1	02/06/2024 12:19	218254
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/06/2024 12:19	218254
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2024 2:47	218254
Arsenic	NELAP	0.0010		**0.0028**	mg/L	5	02/07/2024 2:47	218254
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/07/2024 2:47	218254
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/09/2024 16:58	218254
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/06/2024 11:14	218284
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341
Radium-228	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24010118
Client Project: FGDS Landfill
Report Date: 21-Feb-24
Lab ID: 24010118-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 02/01/2024 14:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	02/01/2024 14:27	R342908
Depth to water	*	-5.00		**9.12**	ft	1	02/01/2024 14:27	R342908
Depth to water from measuring point	*	0		**11.87**	ft	1	02/01/2024 14:27	R342908
Elevation of groundwater surface	*	0		**543.73**	ft	1	02/01/2024 14:27	R342908
Measuring Point Elevation	*	0		**555.60**	ft	1	02/01/2024 14:27	R342908
Measuring Point Height Above Land Surface	*	0		**2.75**	ft	1	02/01/2024 14:27	R342908
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**160**	NTU	1	02/01/2024 14:27	R342908
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.8**	°F	1	02/01/2024 14:27	R342908
SW-846 9040B								
pH, Field	*	1.00		**6.55**		1	02/01/2024 14:27	R342908
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1030**	µmhos/cm @25C	1	02/01/2024 14:27	R342908
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**1120**	mg/L	5	02/02/2024 14:05	R342621
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**369**	mg/L	20	02/05/2024 16:23	R342640
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	02/02/2024 13:27	R342565
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**40**	mg/L	1	02/05/2024 16:19	R342647
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**2.02**	mg/L	1	02/05/2024 8:43	218215
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/05/2024 8:43	218215
Boron	NELAP	0.0200		**8.24**	mg/L	1	02/05/2024 8:43	218215
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/05/2024 8:43	218215
Calcium	NELAP	0.100		**203**	mg/L	1	02/06/2024 16:02	218215
Chromium	NELAP	0.0050		**0.0087**	mg/L	1	02/05/2024 8:43	218215
Cobalt	NELAP	0.0050		**0.0055**	mg/L	1	02/05/2024 8:43	218215
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/05/2024 8:43	218215
Lithium	NELAP	0.0050		**0.0184**	mg/L	1	02/07/2024 15:34	218215
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/05/2024 8:43	218215
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/05/2024 20:04	218215
Arsenic	NELAP	0.0010		**0.160**	mg/L	5	02/05/2024 20:04	218215
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/05/2024 20:04	218215
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/05/2024 20:04	218215
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/05/2024 15:25	218217
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341
Radium-228	*	0		**See Attached**	pci/L	1	02/19/2024 14:24	R343341

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 24010118
Report Date: 21-Feb-24

Carrier: Tracy Carroll

Received By: AMD

Completed by: Amber Dilallo
On: 02-Feb-24

Reviewed by: Ellie Hopkins
On: 05-Feb-24

Pages to follow: Chain of custody 2 Extra pages included 29

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 8.5
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #90719. - amberdilallo - 2/2/2024 8:41:47 AM

pH strip #90719. - nickreed - 2/2/2024 3:02:17 PM

Samples collected on 2/2/24 were received at 7.3 degrees C on Ice (LTG#5) -NR 2/2/24

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # ~~240110~~ 24010118 TE SAH 1/2/24

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 8.5 °C #5
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: 90719 [illegible] 2/2/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24010117-001

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Carroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24010118 001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110	2/1/24 1316	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1	2/1/24 1427	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
[illegible] Carroll	2/1/24 1645	[illegible]	2/1/24 1645

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # ~~240110~~ 24010118 TE SAH 1/2/24

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 7.3 °C LTG3
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: PhV 90719 DS2/2

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24010117-001

Courier

PROJECT NAME/NUMBER: FGDS Landfill
SAMPLE COLLECTOR'S NAME: Justin Colp

RESULTS REQUESTED: [✓] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS:

and Type of Containers / INDICATE ANALYSIS REQUESTED

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24010118 001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111	2/2/24 1102	Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120	2/2/24 1007	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121	2/2/24 1029	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122	2/2/24 1054	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	2-2-24 / 1300	[signature]	2/2 1300

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions DS2/2

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- 1Q 2024

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
002	G110	Groundwater Sample	56.0	None	SW	Cloudy	Good	Good	Good	**No**	**No**
003	R111	Groundwater Sample	42.0	None	E	Partly cloudy	Good	Good	Good	Yes	**No**
006	G120	Groundwater Sample	39.0	None	W	Cloudy	Good	Good	Good	Yes	**No**
007	G121	Groundwater Sample	41.0	None	W	Cloudy	Good	Good	Good	Yes	**No**
008	G122	Groundwater Sample	42.0	None	W	Partly cloudy	Good	Good	Good	Yes	**No**
009	AW-1	Groundwater Sample	56.0	None	SW	Cloudy	Good	Good	Good	Yes	**No**
012	DUPLICATE	QA/QC Sample	42.0	None	E	Partly cloudy	Good	Good	Good	Yes	**No**

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- 1Q 2024

		GW Level Measurement				Purge Activities							
WO Sample	**Well ID**	**Sampler Initials**	**Date/Time**	**DTW (ft)**	**DTB (ft)**	**Sampler Initials**	**Purge Date**	**Purge Start Time**	**Purge End Time**	**Purging Device**	**Well Diameter (in)**	**Actual Volume Purged (L)**	**Purge Rate (mL/min)**
002	G110	TAC	2/1/24 12:45	23.36	57.15	TAC	2/1/2024	12:50	13:16	Peristaltic Pump	2"	5.0	192.3
003	R111	DC	2/2/24 10:36	24.34	55.75	TAC	2/2/2024	10:40	11:02	Peristaltic Pump	2"	4.0	181.8
006	G120	JC	2/2/24 9:50	14.63	50.37	JC	2/2/2024	09:55	10:07	Submersible Pump	2"	4.0	333.3
007	G121	JC	2/2/24 10:17	26.54	58.56	JC	2/2/2024	10:19	10:29	Submersible Pump	2"	4.0	**400.0**
008	G122	JC	2/2/24 10:44	26.71	49.29	JC	2/2/2024	10:44	10:54	Submersible Pump	2"	3.0	300.0
009	AW-1	DC	2/1/24 13:47	11.87	54.81	TAC	2/1/2024	14:00	14:27	Submersible Pump	2"	6.0	222.2
012	DUPLICATE	DC	2/2/24 11:22	24.34		TAC	2/2/2024	10:40	11:02	Peristaltic Pump	2"	4.0	181.8

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- 1Q 2024

		Sampling Activities and Observations									
WO Sample	**Well ID**	**Sampler Initials**	**Date**	**Time**	**Sampling Method**	**Field Filtered**	**Appearance**	**Odor**	**Color**	**Post-Sample DTW (ft)**	**Drawdown (ft)**
002	G110	DC	02/01/24	13:16	Low Flow	Yes	Clear	Slight	None	23.38	0.02
003	R111	DC	02/02/24	11:02	Low Flow	Yes	Clear	None	None	24.45	0.11
006	G120	JC	02/02/24	10:07	Low Flow	Yes	Clear	None	none	19.04	**4.41**
007	G121	JC	02/02/24	10:29	Low Flow	Yes	Clear	None	none	31.10	**4.56**
008	G122	JC	02/02/24	10:54	Low Flow	Yes	Clear	None	none	28.57	**1.86**
009	AW-1	DC	02/01/24	14:27	Low Flow	Yes	Slightly cloudy	None	Lt Brown	15.90	**4.03**
012	DUPLICATE	DC	02/02/24	11:02	Low Flow	Yes	Clear	None	None	24.45	0.11

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- 1Q 2024

WO Sample	Well ID	COMMENTS
002	G110	
003	R111	
006	G120	
007	G121	
008	G122	
009	AW-1	
012	DUPLICATE	

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Stabilized Field Parameters Summary
CWLP- 1Q 2024

Well ID	Date	Time	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW (ft)	LIMS ID
G110	2/01/2024	13:16	14.5	58.1	6.85	657.8	1.89	6.40	-61.3	23.36	24010116-002A
R111	2/02/2024	11:02	13.0	55.4	6.14	90.9	2.47	4.87	135.4	24.34	24010116-003A
G120	2/02/2024	10:07	13.7	56.7	6.47	1,462.1	1.67	10.45	144.9	14.63	24010116-006A
G121	2/02/2024	10:29	12.5	54.5	6.62	1,195.9	1.91	8.32	143.8	26.54	24010116-007A
G122	2/02/2024	10:54	12.9	55.2	6.56	1,390.5	1.72	9.40	143.3	26.71	24010116-008A
AW-1	2/01/2024	14:27	13.8	56.8	6.55	1,025.6	0.56	155.98	-79.6	11.87	24010116-009A
DUPLICATE	2/02/2024	11:02	13.0	55.4	6.14	90.9	2.47	4.87	135.4	24.34	24010116-012A

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Forms- Groundwter Quality Parameters
CWLP- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G110	2/01/2024	13:07	23.36	14.3	57.7	6.84	668.3	1.880	4.6	-35.6
G110	2/01/2024	13:10	23.36	14.3	57.7	6.84	665.1	1.750	5.1	-47.8
G110	2/01/2024	13:13	23.36	14.5	58.1	6.85	660.4	1.710	5.4	-56.0
G110	2/01/2024	13:16	23.36	14.5	58.1	6.85	657.8	1.890	6.4	-61.3

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Forms- Groundwter Quality Parameters
CWLP- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
R111	2/02/2024	10:53	24.34	12.8	55.0	6.17	91.6	2.730	7.5	136.1
R111	2/02/2024	10:56	24.34	13.0	55.4	6.15	91.6	2.620	5.8	136.1
R111	2/02/2024	10:59	24.34	12.9	55.2	6.14	91.0	2.520	5.1	135.7
R111	2/02/2024	11:02	24.34	13.0	55.4	6.14	90.9	2.470	4.9	135.4

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Forms- Groundwter Quality Parameters
CWLP- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G120	2/02/2024	9:58	14.63	13.8	56.8	6.46	1,385.6	4.040	15.0	136.4
G120	2/02/2024	10:01	14.63	13.9	57.0	6.57	1,392.8	2.640	12.5	138.0
G120	2/02/2024	10:04	14.63	13.7	56.7	6.50	1,431.0	2.020	11.1	143.3
G120	2/02/2024	10:07	14.63	13.7	56.7	6.47	1,462.1	1.670	10.5	144.9

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Forms- Groundwter Quality Parameters
CWLP- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G121	2/02/2024	10:23	26.54	12.0	53.6	6.67	1,176.4	3.660	24.3	143.8
G121	2/02/2024	10:26	26.54	12.2	54.0	6.63	1,195.2	2.460	12.5	144.5
G121	2/02/2024	10:29	26.54	12.5	54.5	6.62	1,195.9	1.910	8.3	143.8

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Forms- Groundwter Quality Parameters
CWLP- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G122	2/02/2024	10:48	26.71	12.8	55.0	6.59	1,368.6	2.790	17.4	143.6
G122	2/02/2024	10:51	26.71	12.9	55.2	6.57	1,372.2	2.100	14.3	143.9
G122	2/02/2024	10:54	26.71	12.9	55.2	6.56	1,390.5	1.720	9.4	143.3

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Forms- Groundwter Quality Parameters
CWLP- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AW-1	2/01/2024	14:18	11.87	13.7	56.7	6.55	1,059.4	1.190	151.8	-66.2
AW-1	2/01/2024	14:21	11.87	13.7	56.7	6.55	1,052.9	1.010	133.9	-71.6
AW-1	2/01/2024	14:24	11.87	13.6	56.5	6.55	1,040.5	0.930	161.2	-75.8
AW-1	2/01/2024	14:27	11.87	13.8	56.8	6.55	1,025.6	0.560	156.0	-79.6

Site Samping Event: CWLP-LF 1Q24
LIMS Workorder: 24010118
Technician(s): DC, JC, TC, BG

Groundwater Sampling Forms- Groundwter Quality Parameters
CWLP- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
DUPLICATE	2/02/2024	10:53	24.34	12.8	55.0	6.17	91.6	2.730	7.5	136.1
DUPLICATE	2/02/2024	10:56	24.34	13.0	55.4	6.15	91.6	2.620	5.8	136.1
DUPLICATE	2/02/2024	10:59	24.34	12.9	55.2	6.14	91.0	2.520	5.1	135.7
DUPLICATE	2/02/2024	11:02	24.34	13.0	55.4	6.14	90.9	2.470	4.9	135.4

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24030039 RcptNo: 1

Logged by:	Tegan A. Richards	2/29/2024 12:25:00 PM	Tegan Richards
Completed By:	Salwa A. Najjar	3/1/2024 1:22:39 PM	Salwa Najjar
Reviewed By:	Jennifer Woolf	3/1/2024 2:15:22 PM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	10.8	Good	Not Present			

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Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24030039 RcptNo: 1

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	11.0	Good	Not Present			
3	13.3	Good	Not Present			

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February 21, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24010118

Dear Shelly Hennessy:

Order No.: 24020447

Summit Environmental Technologies, Inc. received 6 sample(s) on 2/7/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **24020447**
Date: **2/21/2024**

CLIENT: TEKLAB Inc,
Project: 24010118

WorkOrder Narrative:
24020447: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

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Qualifiers and Acronyms

WO#: **24020447**
Date: **2/21/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **24020447**

21-Feb-24

CLIENT: TEKLAB Inc,
Project: 24010118

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24020447-001	24010118-002		2/1/2024 1:16:00 PM	2/7/2024 11:30:00 AM	Non-Potable Water
24020447-002	24010118-003		2/2/2024 11:02:00 AM	2/7/2024 11:30:00 AM	Non-Potable Water
24020447-003	24010118-006		2/2/2024 10:07:00 AM	2/7/2024 11:30:00 AM	Non-Potable Water
24020447-004	24010118-007		2/2/2024 10:29:00 AM	2/7/2024 11:30:00 AM	Non-Potable Water
24020447-005	24010118-008		2/2/2024 10:54:00 AM	2/7/2024 11:30:00 AM	Non-Potable Water
24020447-006	24010118-009		2/1/2024 2:27:00 PM	2/7/2024 11:30:00 AM	Non-Potable Water

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DATES REPORT

WO#: **24020447**

21-Feb-24

Client: TEKLAB Inc,
Project: 24010118

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24020447-001A	24010118-002	2/1/2024 1:16:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		2/14/2024 12:42:04 PM	2/20/2024 4:53:33 PM
				Radium-228 (EPA 904.0)		2/14/2024 12:42:04 PM	2/19/2024 2:24:00 PM
24020447-002A	24010118-003	2/2/2024 11:02:00 AM		Radium-226 (EPA 903.0)		2/14/2024 12:42:04 PM	2/20/2024 4:53:33 PM
				Radium-228 (EPA 904.0)		2/14/2024 12:42:04 PM	2/19/2024 2:24:00 PM
24020447-003A	24010118-006	2/2/2024 10:07:00 AM		Radium-226 (EPA 903.0)		2/14/2024 12:42:04 PM	2/20/2024 4:53:33 PM
				Radium-228 (EPA 904.0)		2/14/2024 12:42:04 PM	2/19/2024 2:24:00 PM
24020447-004A	24010118-007	2/2/2024 10:29:00 AM		Radium-226 (EPA 903.0)		2/14/2024 12:42:04 PM	2/20/2024 4:53:33 PM
				Radium-228 (EPA 904.0)		2/14/2024 12:42:04 PM	2/19/2024 2:24:00 PM
24020447-005A	24010118-008	2/2/2024 10:54:00 AM		Radium-226 (EPA 903.0)		2/14/2024 12:42:04 PM	2/20/2024 4:53:33 PM
				Radium-228 (EPA 904.0)		2/14/2024 12:42:04 PM	2/19/2024 2:24:00 PM
24020447-006A	24010118-009	2/1/2024 2:27:00 PM		Radium-226 (EPA 903.0)		2/14/2024 12:42:04 PM	2/20/2024 4:53:33 PM
				Radium-228 (EPA 904.0)		2/14/2024 12:42:04 PM	2/19/2024 2:24:00 PM

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Analytical Report

(consolidated)

WO#: **24020447**

Date Reported: **2/21/2024**

CLIENT: TEKLAB Inc,

Collection Date: 2/1/2024 2:27:00 PM

Project: 24010118

Lab ID: 24020447-006

Matrix: NON-POTABLE WATER

Client Sample ID: 24010118-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	1.96	1.00		pCi/L	± 0.260	1	2/20/2024 4:53:33 PM
Yield	1.00					1	2/20/2024 4:53:33 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	1.43	1.00		pCi/L	± 0.410	1	2/19/2024 2:24:00 PM
Yield	1.00					1	2/19/2024 2:24:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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QC SUMMARY REPORT

WO#: **24020447**
21-Feb-24

Client: TEKLAB Inc,
Project: 24010118 **BatchID:** **72958**

Sample ID: **MB-72958** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/14/2024** RunNo: **180457**
Client ID: **PBW** Batch ID: **72958** TestNo: **E904.0** **E903-904** Analysis Date: **2/19/2024** SeqNo: **4892947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-72958** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/14/2024** RunNo: **180457**
Client ID: **LCSW** Batch ID: **72958** TestNo: **E904.0** **E903-904** Analysis Date: **2/19/2024** SeqNo: **4892948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.28	1.00	7.170	0	59.7	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-72958** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/14/2024** RunNo: **180457**
Client ID: **LCSS02** Batch ID: **72958** TestNo: **E904.0** **E903-904** Analysis Date: **2/19/2024** SeqNo: **4892949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.67	1.00	7.170	0	65.1	50	130	4.280	8.72	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24020447**
21-Feb-24

Client: TEKLAB Inc,
Project: 24010118 **BatchID:** **72958**

Sample ID: **RLC1-72958** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/14/2024** RunNo: **180457**
Client ID: **BatchQC** Batch ID: **72958** TestNo: **E904.0** **E903-904** Analysis Date: **2/19/2024** SeqNo: **4892951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00	0.8962	0	74.8	50	150				
Yield	1.00			0	0						

Sample ID: **RLC2-72958** SampType: **RLC** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/14/2024** RunNo: **180457**
Client ID: **BatchQC** Batch ID: **72958** TestNo: **E904.0** **E903-904** Analysis Date: **2/19/2024** SeqNo: **4892952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.32	1.00	0.8962	0	147	50	150				
Yield	1.00			0	0						

Sample ID: **24020780-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **2/14/2024** RunNo: **180457**
Client ID: **BatchQC** Batch ID: **72958** TestNo: **E904.0** **E903-904** Analysis Date: **2/19/2024** SeqNo: **4892954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24020447**
21-Feb-24

Client: TEKLAB Inc,
Project: 24010118 **BatchID:** **72958**

Sample ID: **MB-72958**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/14/2024**	RunNo: **180466**
Client ID: **PBW**	Batch ID: **72958**	TestNo: **E903.0**	**E903-904**	Analysis Date: **2/20/2024**	SeqNo: **4893053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-72958**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/14/2024**	RunNo: **180466**
Client ID: **LCSW**	Batch ID: **72958**	TestNo: **E903.0**	**E903-904**	Analysis Date: **2/20/2024**	SeqNo: **4893054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	7.56	1.00	8.260	0	91.5	70	130				

Sample ID: **LCSD-72958**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/14/2024**	RunNo: **180466**
Client ID: **LCSS02**	Batch ID: **72958**	TestNo: **E903.0**	**E903-904**	Analysis Date: **2/20/2024**	SeqNo: **4893055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	6.97	1.00	8.260	0	84.4	70	130	7.560	8.12	20	

Sample ID: **RLC3-72958**	SampType: **RLC**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **2/14/2024**	RunNo: **180466**
Client ID: **BatchQC**	Batch ID: **72958**	TestNo: **E903.0**	**E903-904**	Analysis Date: **2/20/2024**	SeqNo: **4893057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24020447**
21-Feb-24

Client: TEKLAB Inc,
Project: 24010118 **BatchID:** **72958**

Sample ID: **RLC3-72958** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/14/2024** RunNo: **180466**
Client ID: **BatchQC** Batch ID: **72958** TestNo: **E903.0** **E903-904** Analysis Date: **2/20/2024** SeqNo: **4893057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	1.02	1.00	1.000	0	102	50	150				

Sample ID: **RLC4-72958** SampType: **RLC** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **2/14/2024** RunNo: **180466**
Client ID: **BatchQC** Batch ID: **72958** TestNo: **E903.0** **E903-904** Analysis Date: **2/20/2024** SeqNo: **4893058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00	1.000	0	79.0	50	150				

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005 24020447

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

12.6-0.2: Cooler Temp: 12.4C Sampler: Teklab Sampler QC Level: 2
Fedex, cooler

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium (226 and 228) by method EPA903.0/904.0
on your standard turnaround time.
Batch QC is required with the report. Receipt summary requested.

Project# 24010118

Contact: Shelly Hennessy Email: shennessy@teklabinc.com
Requested Due Date: 20 business days or less Billing/PO: 35748 Phone: (618) 344-1004 ext. 36

State of Origin: IL

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Any changes to analysis/methods must be approved by Teklab, Inc.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226	Radium 228		CPM					PH			
	24010118-002	2/1/24 1316	HNO3	Groundwater	✔	✔		15					1			
	24010118-003	2/2/24 1102	HNO3	Groundwater	✔	✔		15					1			
	24010118-006	2/2/24 1007	HNO3	Groundwater	✔	✔		31					1			
	24010118-007	2/2/24 1029	HNO3	Groundwater	✔	✔		34					1			
	24010118-008	2/2/24 1054	HNO3	Groundwater	✔	✔		31					1			
	24010118-009	2/1/24 1427	HNO3	Groundwater	✔	✔		27					1			
			Unpres	Aqueous												
			Unpres	Aqueous												
			Unpres	Aqueous												
			Unpres	Aqueous												
			Unpres	Aqueous												

*Relinquished By	Date/Time	Received By	Date/Time
Simon Divallo	2/5/24 1700	[signature]	2/7/24, 1130

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24020447 RcptNo: 1

Logged by:	Tegan A. Richards	2/7/2024 11:30:00 AM	Tegan Richards
Completed By:	Tegan A. Richards	2/7/2024 1:22:39 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	2/7/2024 2:34:24 PM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date: Signed By:			
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	12.4	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 21, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 24020902

Dear Eric Staley:

TEKLAB, INC received 5 samples on 2/23/2024 1:07:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 24020902
Report Date: 21-Mar-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	12
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24020902

Client Project: FGDS Landfill **Report Date:** 21-Mar-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24020902
Client Project: FGDS Landfill
Report Date: 21-Mar-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24020902
Client Project: FGDS Landfill
Report Date: 21-Mar-24

Cooler Receipt Temp: 3.3 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24020902
Client Project: FGDS Landfill
Report Date: 21-Mar-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2024	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2024	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2024	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24020902
Client Project: FGDS Landfill
Report Date: 21-Mar-24
Lab ID: 24020902-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 02/23/2024 10:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.53**	ft	1	02/23/2024 10:00	R343711
Depth to water	*	-5.00		**3.86**	ft	1	02/23/2024 10:00	R343711
Depth to water from measuring point	*	0		**6.66**	ft	1	02/23/2024 10:00	R343711
Elevation of groundwater surface	*	0		**540.14**	ft	1	02/23/2024 10:00	R343711
Measuring Point Elevation	*	0		**546.80**	ft	1	02/23/2024 10:00	R343711
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	02/23/2024 10:00	R343711
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	02/23/2024 10:00	R343711
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**50.9**	°F	1	02/23/2024 10:00	R343711
SW-846 9040B								
pH, Field	*	1.00		**6.91**		1	02/23/2024 10:00	R343711
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1270**	µmhos/cm @25C	1	02/23/2024 10:00	R343711
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**830**	mg/L	2.5	02/26/2024 12:48	R343638
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**275**	mg/L	10	02/28/2024 15:25	R343726
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.13**	mg/L	1	02/26/2024 13:12	R343547
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**106**	mg/L	5	02/28/2024 15:20	R343732
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0302**	mg/L	1	02/26/2024 19:46	219154
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/26/2024 19:46	219154
Boron	NELAP	0.0200		**0.126**	mg/L	1	02/26/2024 19:46	219154
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/26/2024 19:46	219154
Calcium	NELAP	0.100		**161**	mg/L	1	02/26/2024 19:46	219154
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:46	219154
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:46	219154
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/26/2024 19:46	219154
Lithium	NELAP	0.0050		**0.0139**	mg/L	1	02/26/2024 19:46	219154
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/26/2024 19:46	219154
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	02/28/2024 16:16	219154
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 16:16	219154
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 16:16	219154
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/28/2024 16:16	219154
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/06/2024 11:10	219512
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344590
Radium-228	*	0		**See Attached**	pci/L	1	03/08/2024 0:00	R344590

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24020902
Client Project: FGDS Landfill
Report Date: 21-Mar-24
Lab ID: 24020902-002
Client Sample ID: G112
Matrix: GROUNDWATER
Collection Date: 02/22/2024 12:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.99**	ft	1	02/22/2024 12:49	R343711
Depth to water	*	-5.00		**24.32**	ft	1	02/22/2024 12:49	R343711
Depth to water from measuring point	*	0		**26.50**	ft	1	02/22/2024 12:49	R343711
Elevation of groundwater surface	*	0		**528.30**	ft	1	02/22/2024 12:49	R343711
Measuring Point Elevation	*	0		**554.80**	ft	1	02/22/2024 12:49	R343711
Measuring Point Height Above Land Surface	*	0		**2.18**	ft	1	02/22/2024 12:49	R343711
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	02/22/2024 12:49	R343711
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.6**	°F	1	02/22/2024 12:49	R343711
SW-846 9040B								
pH, Field	*	1.00		**6.93**		1	02/22/2024 12:49	R343711
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1020**	µmhos/cm @25C	1	02/22/2024 12:49	R343711
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**875**	mg/L	2.5	02/23/2024 12:35	R343558
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**229**	mg/L	10	02/23/2024 13:32	R343641
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.15**	mg/L	1	02/23/2024 13:41	R343485
SW-846 9251 (TOTAL)								
Chloride	NELAP	40		**130**	mg/L	10	02/23/2024 13:32	R343643
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.436**	mg/L	1	02/26/2024 19:31	219117
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/26/2024 19:31	219117
Boron	NELAP	0.0200		**0.276**	mg/L	1	02/26/2024 19:31	219117
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/26/2024 19:31	219117
Calcium	NELAP	0.100		**185**	mg/L	1	02/26/2024 19:31	219117
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:31	219117
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:31	219117
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/26/2024 19:31	219117
Lithium	NELAP	0.0050		**0.0132**	mg/L	1	02/26/2024 19:31	219117
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/26/2024 19:31	219117
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 5:12	219117
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 5:12	219117
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 5:12	219117
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/28/2024 5:12	219117
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/06/2024 11:13	219512
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/11/2024 0:00	R344590
Radium-228	*	0		**See Attached**	pci/L	1	03/11/2024 0:00	R344590

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24020902
Client Project: FGDS Landfill
Report Date: 21-Mar-24
Lab ID: 24020902-003
Client Sample ID: G113
Matrix: GROUNDWATER
Collection Date: 02/23/2024 9:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**524.85**	ft	1	02/23/2024 9:28	R343711
Depth to water	*	-5.00		**1.62**	ft	1	02/23/2024 9:28	R343711
Depth to water from measuring point	*	0		**4.12**	ft	1	02/23/2024 9:28	R343711
Elevation of groundwater surface	*	0		**533.58**	ft	1	02/23/2024 9:28	R343711
Measuring Point Elevation	*	0		**537.70**	ft	1	02/23/2024 9:28	R343711
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	02/23/2024 9:28	R343711
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**16**	NTU	1	02/23/2024 9:28	R343711
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**46.9**	°F	1	02/23/2024 9:28	R343711
SW-846 9040B								
pH, Field	*	1.00		**6.08**		1	02/23/2024 9:28	R343711
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1980**	µmhos/cm @25C	1	02/23/2024 9:28	R343711
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1540**	mg/L	2.5	02/26/2024 12:49	R343638
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**393**	mg/L	20	02/28/2024 15:33	R343726
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.24**	mg/L	1	02/26/2024 13:15	R343547
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**78**	mg/L	5	02/28/2024 15:28	R343732
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.374**	mg/L	1	02/26/2024 19:48	219154
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/26/2024 19:48	219154
Boron	NELAP	0.0200		**1.10**	mg/L	1	02/26/2024 19:48	219154
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/26/2024 19:48	219154
Calcium	NELAP	0.100		**363**	mg/L	1	02/26/2024 19:48	219154
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:48	219154
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:48	219154
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/26/2024 19:48	219154
Lithium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:48	219154
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/26/2024 19:48	219154
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/01/2024 16:52	219154
Arsenic	NELAP	0.0010		**0.0029**	mg/L	5	02/28/2024 16:22	219154
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 16:22	219154
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/28/2024 16:22	219154
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/06/2024 11:15	219512
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/11/2024 0:00	R344590
Radium-228	*	0		**See Attached**	pci/L	1	03/11/2024 0:00	R344590

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24020902
Client Project: FGDS Landfill
Report Date: 21-Mar-24
Lab ID: 24020902-004
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 02/21/2024 10:51

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	02/21/2024 10:51	R343711
Depth to water	*	-5.00		**0.57**	ft	1	02/21/2024 10:51	R343711
Depth to water from measuring point	*	0		**3.87**	ft	1	02/21/2024 10:51	R343711
Elevation of groundwater surface	*	0		**526.11**	ft	1	02/21/2024 10:51	R343711
Measuring Point Elevation	*	0		**529.98**	ft	1	02/21/2024 10:51	R343711
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	02/21/2024 10:51	R343711
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**37**	NTU	1	02/21/2024 10:51	R343711
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.9**	°F	1	02/21/2024 10:51	R343711
SW-846 9040B								
pH, Field	*	1.00		**6.71**		1	02/21/2024 10:51	R343711
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1110**	µmhos/cm @25C	1	02/21/2024 10:51	R343711
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**760**	mg/L	5	02/23/2024 13:45	R343558
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**155**	mg/L	5	02/22/2024 22:21	R343452
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.12**	mg/L	1	02/23/2024 13:21	R343485
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**31**	mg/L	1	02/22/2024 22:16	R343454
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.626**	mg/L	1	02/26/2024 19:54	219134
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/26/2024 19:54	219134
Boron	NELAP	0.0200		**2.79**	mg/L	1	02/26/2024 19:54	219134
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/26/2024 19:54	219134
Calcium	NELAP	0.100	S	**150**	mg/L	1	02/26/2024 19:54	219134
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:54	219134
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/26/2024 19:54	219134
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	02/26/2024 19:54	219134
Lithium	NELAP	0.0050		**0.0064**	mg/L	1	02/26/2024 19:54	219134
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/26/2024 19:54	219134
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 3:31	219134
Arsenic	NELAP	0.0010		**0.0235**	mg/L	5	02/28/2024 17:34	219134
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/28/2024 3:31	219134
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/28/2024 17:34	219134
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/06/2024 11:17	219512
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/11/2024 0:00	R344590
Radium-228	*	0		**See Attached**	pci/L	1	03/11/2024 0:00	R344590

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24020902
Client Project: FGDS Landfill
Report Date: 21-Mar-24

Carrier: Tracy Carroll
Received By: AMD

Completed by: Amber Dilallo
On: 22-Feb-24

Reviewed by: Ellie Hopkins
On: 23-Feb-24

Pages to follow: Chain of custody 3 Extra pages included 33

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 3.3
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #90719. - amberdilallo - 2/22/2024 8:43:14 AM

Samples were received on 2/22/24 at 15:40 on ice [7.3C - LTG5]. pH strip #90719. - amberdilallo - 2/22/2024 4:38:19 PM

Samples were received on 2/23/24 at 13:07 on ice [6.7C - LTG#7]. pH strip #90719. Additional Nitric Acid (96331) was needed for R101 & G113 upon arrival at the laboratory. - nickreed - 2/23/2024 2:44:53 PM

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 24020902

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 3.3 °C
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY LTG 5
LAB NOTES: Q0719

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24010117-001

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
TCandl

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24020902-001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
-002	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
-003	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
-004	AW-2	2/21/24 1051	Groundwater	1	2								✓	✓	✓	✓	✓	✓
-005	RW-3	2/21/24 1138	Groundwater	0	0								✓	✓	✓	✓	✓	✓
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
TCandl	2/21/24 1715		2/21/24 1715

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 24020902

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 1.3 °C
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: 2/22/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24010117-001

PROJECT NAME/NUMBER	SAMPLE COLLECTOR'S NAME
FGDS Landfill	TCarroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24020902-001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
-002	G112	2/22/24 1249	Groundwater	1	2								✓	✓	✓	✓	✓	✓
-003	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
-004	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
-005	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Tiffany Carroll	2/22/24 3:40	Emily Sackett	2/22/24 1540

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 24020902

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [x] ICE [ ] BLUE ICE [ ] NO ICE 6.7 °C 7
Preserved in: [x] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: ph ✓ 90719 added HNO3 to 2 liters ES 2/23/24 (96331)

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [x] No
Are these samples known to be hazardous? [ ] Yes [x] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [x] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24010117-001

PROJECT NAME/NUMBER	SAMPLE COLLECTOR'S NAME
FGDS Landfill	Justin Culp

RESULTS REQUESTED
[x] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24020902-001	R101	2-23-24 / 1000	Groundwater	1	2								✓	✓	✓	✓	✓	✓
-002	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
-003	G113	2-23-24 / 0928	Groundwater	1	2								✓	✓	✓	✓	✓	✓
-004	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
-005	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Daniel Culp	2-23-24 1:07	Whitney Quinn	2/23/24 1:07

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Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- Landfill- 1Q 2024

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
001	R101	Groundwater Sample	43.0	None	SE	Clear	Good	Good	Good	Yes	Yes
002	G112	Groundwater Sample	62.0	None	W	Clear	Good	Good	Good	Yes	**No**
003	G113	Groundwater Sample	42.0	None	SE	Clear	Good	Good	Good	Yes	**No**
004	AW-2	Groundwater Sample	54.0	None	N	Clear	Good	Good	Good	Yes	**No**
005	RW-3	Groundwater Sample	57.0	None	N	Clear	Good	Good	Good	Yes	**No**

Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- Landfill- 1Q 2024

		GW Level Measurement					Purge Activities							
WO Sample	**Well ID**	**Sampler Initials**	**Date/Time**	**DTW (ft)**	**DTB (ft)**	**Water Column**	**Sampler Initials**	**Purge Date**	**Purge Start Time**	**Purge End Time**	**Purging Device**	**Well Diameter (in)**	**Actual Volume Purged (L)**	**Purge Rate (mL/min)**
001	R101	JC	2/23/24 9:47	6.66	35.27	28.61	JC	2/23/2024	09:47	10:00	Submersible Pump	2"	3.0	230.8
002	G112	TAC	2/22/24 12:25	26.50	58.81	32.31	DC	2/22/2024	12:25	12:49	Submersible Pump	2"	7.0	291.7
003	G113	JC	2/23/24 9:11	4.12	12.85	8.73	JC	2/23/2024	09:18	09:28	Submersible Pump	2"	2.5	250.0
004	AW-2	DC	2/21/24 10:07	3.87	32.64	28.77	DC	2/21/2024	10:26	10:51	Peristaltic Pump	2"	6.0	240.0
005	RW-3	DC	2/21/24 11:20	9.10	44.01	34.91	DC	2/21/2024	11:21	11:38	Bladder Pump	2"	4.0	235.3

Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- Landfill- 1Q 2024

		Sampling Activities and Observations									
WO Sample	**Well ID**	**Sampler Initials**	**Date**	**Time**	**Sampling Method**	**Field Filtered**	**Appearance**	**Odor**	**Color**	**Post-Sample DTW (ft)**	**Drawdown (ft)**
001	R101	JC	02/23/24	10:00	Low Flow	Yes	Clear	Slight	none	9.12	**2.46**
002	G112	TAC	02/22/24	12:49	Low Flow	Yes	Clear	None	None	32.75	**6.25**
003	G113	JC	02/23/24	09:28	Low Flow	Yes	Clear	Moderate	none	7.21	**3.09**
004	AW-2	TAC	02/21/24	10:51	Low Flow	Yes	Clear	None	Lt Rust	4.00	0.13
005	RW-3	TAC	02/21/24	11:38	Low Flow	Yes	Clear	None	None	13.25	**4.15**

Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Groundwater Sampling Summary
CWLP- Landfill- 1Q 2024

WO Sample	Well ID	COMMENTS
001	R101	
002	G112	
003	G113	
004	AW-2	
005	RW-3	

Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Stabilized Field Parameters Summary
CWLP- Landfill- 1Q 2024

Well ID	Date	Time	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW (ft)	LIMS ID
R101	2/23/2024	10:00	10.5	50.9	6.91	1,266.9	6.73	12.31	14.7	6.66	24020902-001A
G112	2/22/2024	12:49	13.1	55.6	6.93	1,022.2	0.48	11.94	-55.2	26.50	24020902-002A
G113	2/23/2024	9:28	8.3	46.9	6.08	1,981.9	4.34	15.80	-104.4	4.12	24020902-003A
AW-2	2/21/2024	10:51	13.3	55.9	6.71	1,106.3	1.45	36.78	-66.4	3.87	24020902-004A
RW-3	2/21/2024	11:38	14.0	57.2	7.10	647.6	0.78	124.34	-134.4	9.10	24020902-005A

Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Landfill- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
R101	2/23/2024	9:51	6.66	10.4	50.7	6.92	1,279.1	7.66	18.12	-0.8
R101	2/23/2024	9:54	6.66	10.8	51.4	6.91	1,267.1	7.08	16.26	4.7
R101	2/23/2024	9:57	6.66	10.5	50.9	6.91	1,265.3	6.88	14.27	10.0
R101	2/23/2024	10:00	6.66	10.5	50.9	6.91	1,266.9	6.73	12.31	14.7

Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Landfill- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G112	2/22/2024	12:40	26.50	13.2	55.8	6.95	1,059.2	0.59	10.72	-26.5
G112	2/22/2024	12:43	26.50	13.1	55.6	6.95	1,043.5	0.54	10.44	-39.3
G112	2/22/2024	12:46	26.50	13.1	55.6	6.94	1,029.5	0.51	10.93	-48.5
G112	2/22/2024	12:49	26.50	13.1	55.6	6.93	1,022.2	0.48	11.94	-55.2

Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Landfill- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G113	2/23/2024	9:22	4.12	8.0	46.4	6.00	1,974.6	5.56	49.84	-72.7
G113	2/23/2024	9:25	4.12	8.3	46.9	6.06	1,973.4	4.78	17.04	-93.0
G113	2/23/2024	9:28	4.12	8.3	46.9	6.08	1,981.9	4.34	15.80	-104.4

Site Samping Event: CWLP Landfill- 1Q24
LIMS Workorder: 24020902
Technician(s): DC, JC, TC, BG

Groundwater Sampling Form- Groundwater Quality Parameters
CWLP- Landfill- 1Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µS/cm)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AW-2	2/21/2024	10:42	3.87	13.2	55.8	6.70	1,123.6	1.69	67.26	-33.8
AW-2	2/21/2024	10:45	3.87	13.3	55.9	6.70	1,119.4	1.61	84.98	-49.2
AW-2	2/21/2024	10:48	3.87	13.3	55.9	6.71	1,111.8	1.52	61.84	-59.2
AW-2	2/21/2024	10:51	3.87	13.3	55.9	6.71	1,106.3	1.45	36.78	-66.4

Second Quarter 2024

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

July 15, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 24050003

Dear Eric Staley:

TEKLAB, INC received 20 samples on 5/14/2024 2:39:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24050003
Report Date: 15-Jul-24

This reporting package includes the following:

Cover Letter	1
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Accreditations	6
Laboratory Results	7
Receiving Check List	27
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050003

Client Project: Ash Pond Monitoring Wells **Report Date:** 15-Jul-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050003
Client Project: Ash Pond Monitoring Wells
Report Date: 15-Jul-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24050003
Report Date: 15-Jul-24

Cooler Receipt Temp: 12.1 °C

This report was revised on July 15, 2024 per Eric Staley's request to report the reanalysis of Cobalt for AP-11. Please replace report dated June 18, 2024 with this report. SAH 7/15/24

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24050003
Report Date: 15-Jul-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050003
Client Project: Ash Pond Monitoring Wells
Report Date: 15-Jul-24
Lab ID: 24050003-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 05/09/2024 12:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	05/09/2024 12:12	R347528
Depth to water	*	-5.00		**5.17**	ft	1	05/09/2024 12:12	R347528
Depth to water from measuring point	*	0		**7.87**	ft	1	05/09/2024 12:12	R347528
Elevation of groundwater surface	*	0		**531.63**	ft	1	05/09/2024 12:12	R347528
Measuring Point Elevation	*	0		**539.50**	ft	1	05/09/2024 12:12	R347528
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	05/09/2024 12:12	R347528
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**23**	NTU	1	05/09/2024 12:12	R347528
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.1**	°F	1	05/09/2024 12:12	R347528
SW-846 9040B								
pH, Field	*	1.00		**6.70**		1	05/09/2024 12:12	R347528
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**644**	µmhos/cm @25C	1	05/09/2024 12:12	R347528
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**345**	mg/L	2.5	05/15/2024 12:24	R347402
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**< 10**	mg/L	1	05/21/2024 0:32	R347580
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.40**	mg/L	1	05/20/2024 13:43	R347555
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**28**	mg/L	1	05/21/2024 0:32	R347642
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.143**	mg/L	1	05/15/2024 13:36	222813
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/15/2024 13:36	222813
Boron	NELAP	0.0200		**0.154**	mg/L	1	05/15/2024 13:36	222813
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/15/2024 13:36	222813
Calcium	NELAP	0.100		**65.6**	mg/L	1	05/15/2024 13:36	222813
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/15/2024 13:36	222813
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/15/2024 13:36	222813
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	05/15/2024 13:36	222813
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	05/20/2024 11:21	222813
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/15/2024 13:36	222813
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/14/2024 16:35	222813
Arsenic	NELAP	0.0010		**0.188**	mg/L	5	05/14/2024 16:35	222813
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/14/2024 16:35	222813
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/15/2024 17:05	222813
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/24/2024 9:40	223373
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779
Radium-228	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050003
Client Project: Ash Pond Monitoring Wells
Report Date: 15-Jul-24
Lab ID: 24050003-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 05/13/2024 11:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	05/13/2024 11:53	R347528
Depth to water	*	-5.00		**4.55**	ft	1	05/13/2024 11:53	R347528
Depth to water from measuring point	*	0		**7.05**	ft	1	05/13/2024 11:53	R347528
Elevation of groundwater surface	*	0		**529.05**	ft	1	05/13/2024 11:53	R347528
Measuring Point Elevation	*	0		**536.10**	ft	1	05/13/2024 11:53	R347528
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	05/13/2024 11:53	R347528
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.9**	NTU	1	05/13/2024 11:53	R347528
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.2**	°F	1	05/13/2024 11:53	R347528
SW-846 9040B								
pH, Field	*	1.00		**6.21**		1	05/13/2024 11:53	R347528
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1290**	µmhos/cm @25C	1	05/13/2024 11:53	R347528
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1040**	mg/L	2.5	05/17/2024 10:40	R347497
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**411**	mg/L	20	05/21/2024 0:48	R347580
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.23**	mg/L	1	05/20/2024 13:46	R347555
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**36**	mg/L	2	05/21/2024 0:43	R347642
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0607**	mg/L	1	05/22/2024 13:30	223266
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/22/2024 13:30	223266
Boron	NELAP	0.0200		**3.43**	mg/L	1	05/29/2024 12:39	223266
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/22/2024 13:30	223266
Calcium	NELAP	0.100		**194**	mg/L	1	05/22/2024 13:30	223266
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/22/2024 13:30	223266
Cobalt	NELAP	0.0050		**0.0102**	mg/L	1	05/22/2024 13:30	223266
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	05/22/2024 13:30	223266
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	05/30/2024 10:36	223266
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/22/2024 13:30	223266
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0021**	mg/L	5	05/22/2024 19:34	223266
Arsenic	NELAP	0.0010		**0.0020**	mg/L	5	05/22/2024 19:34	223266
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/22/2024 19:34	223266
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/22/2024 19:34	223266
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2024 16:22	223231
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779
Radium-228	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050003
Client Project: Ash Pond Monitoring Wells
Report Date: 15-Jul-24
Lab ID: 24050003-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 05/13/2024 12:43

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.75**	ft	1	05/13/2024 12:43	R347528
Depth to water	*	-5.00		**6.46**	ft	1	05/13/2024 12:43	R347528
Depth to water from measuring point	*	0		**9.11**	ft	1	05/13/2024 12:43	R347528
Elevation of groundwater surface	*	0		**526.44**	ft	1	05/13/2024 12:43	R347528
Measuring Point Elevation	*	0		**535.55**	ft	1	05/13/2024 12:43	R347528
Measuring Point Height Above Land Surface	*	0		**2.65**	ft	1	05/13/2024 12:43	R347528
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.7**	NTU	1	05/13/2024 12:43	R347528
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.9**	°F	1	05/13/2024 12:43	R347528
SW-846 9040B								
pH, Field	*	1.00		**6.36**		1	05/13/2024 12:43	R347528
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1220**	µmhos/cm @25C	1	05/13/2024 12:43	R347528
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1040**	mg/L	2.5	05/17/2024 10:40	R347497
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**493**	mg/L	20	05/21/2024 0:56	R347580
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.19**	mg/L	1	05/20/2024 13:48	R347555
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**53**	mg/L	2	05/21/2024 0:51	R347642
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0767**	mg/L	1	05/23/2024 13:19	223235
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/23/2024 13:19	223235
Boron	NELAP	0.0200		**14.5**	mg/L	1	05/29/2024 13:26	223235
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/23/2024 13:19	223235
Calcium	NELAP	0.100		**176**	mg/L	1	05/23/2024 13:19	223235
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/23/2024 13:19	223235
Cobalt	NELAP	0.0050		**0.0065**	mg/L	1	05/23/2024 13:19	223235
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	05/23/2024 13:19	223235
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	05/30/2024 10:43	223235
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/23/2024 13:19	223235
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/23/2024 22:39	223235
Arsenic	NELAP	0.0010		**0.0021**	mg/L	5	05/23/2024 22:39	223235
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/23/2024 22:39	223235
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/23/2024 22:39	223235
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2024 16:24	223231
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779
Radium-228	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050003
Client Project: Ash Pond Monitoring Wells
Report Date: 15-Jul-24
Lab ID: 24050003-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 05/14/2024 11:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	05/14/2024 11:21	R347528
Depth to water	*	-5.00		**7.21**	ft	1	05/14/2024 11:21	R347528
Depth to water from measuring point	*	0		**9.87**	ft	1	05/14/2024 11:21	R347528
Elevation of groundwater surface	*	0		**529.15**	ft	1	05/14/2024 11:21	R347528
Measuring Point Elevation	*	0		**539.02**	ft	1	05/14/2024 11:21	R347528
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	05/14/2024 11:21	R347528
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**18**	NTU	1	05/14/2024 11:21	R347528
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.5**	°F	1	05/14/2024 11:21	R347528
SW-846 9040B								
pH, Field	*	1.00		**7.15**		1	05/14/2024 11:21	R347528
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**441**	µmhos/cm @25C	1	05/14/2024 11:21	R347528
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**340**	mg/L	2.5	05/17/2024 10:41	R347497
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**11**	mg/L	1	05/21/2024 1:49	R347580
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.38**	mg/L	1	05/20/2024 14:04	R347555
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**43**	mg/L	1	05/21/2024 1:50	R347642
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0915**	mg/L	1	05/23/2024 13:36	223235
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/23/2024 13:36	223235
Boron	NELAP	0.0200		**0.0978**	mg/L	1	05/24/2024 14:23	223235
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/23/2024 13:36	223235
Calcium	NELAP	0.100		**52.3**	mg/L	1	05/23/2024 13:36	223235
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/23/2024 13:36	223235
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/23/2024 13:36	223235
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	05/23/2024 13:36	223235
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	05/30/2024 10:48	223235
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/23/2024 13:36	223235
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/23/2024 22:58	223235
Arsenic	NELAP	0.0010		**0.0395**	mg/L	5	05/23/2024 22:58	223235
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/23/2024 22:58	223235
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/23/2024 22:58	223235
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2024 19:09	223259
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779
Radium-228	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050003
Client Project: Ash Pond Monitoring Wells
Report Date: 15-Jul-24
Lab ID: 24050003-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 05/10/2024 10:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	05/10/2024 10:35	R347528
Depth to water	*	-5.00		**0.84**	ft	1	05/10/2024 10:35	R347528
Depth to water from measuring point	*	0		**3.74**	ft	1	05/10/2024 10:35	R347528
Elevation of groundwater surface	*	0		**533.46**	ft	1	05/10/2024 10:35	R347528
Measuring Point Elevation	*	0		**537.20**	ft	1	05/10/2024 10:35	R347528
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	05/10/2024 10:35	R347528
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**34**	NTU	1	05/10/2024 10:35	R347528
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.3**	°F	1	05/10/2024 10:35	R347528
SW-846 9040B								
pH, Field	*	1.00		**7.03**		1	05/10/2024 10:35	R347528
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**917**	µmhos/cm @25C	1	05/10/2024 10:35	R347528
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**590**	mg/L	2.5	05/15/2024 15:57	R347402
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10	SR	**< 10**	mg/L	1	05/21/2024 1:59	R347580
Matrix spike and RPD did not recover within control limits due to matrix interference.								
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.28**	mg/L	1	05/20/2024 14:14	R347555
SW-846 9251 (TOTAL)								
Chloride	NELAP	8		**26**	mg/L	2	05/21/2024 2:27	R347642
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.373**	mg/L	1	05/15/2024 13:37	222813
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/15/2024 13:37	222813
Boron	NELAP	0.0200		**0.0877**	mg/L	1	05/15/2024 13:37	222813
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/15/2024 13:37	222813
Calcium	NELAP	0.100		**99.4**	mg/L	1	05/15/2024 13:37	222813
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/15/2024 13:37	222813
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/15/2024 13:37	222813
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	05/15/2024 13:37	222813
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	05/20/2024 11:24	222813
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/15/2024 13:37	222813
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/14/2024 16:46	222813
Arsenic	NELAP	0.0010		**0.0461**	mg/L	5	05/14/2024 16:46	222813
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/14/2024 16:46	222813
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/15/2024 17:15	222813
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/24/2024 19:41	223389
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779
Radium-228	*	0		**See Attached**	pci/L	1	06/03/2024 0:00	R348779

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24050003
Report Date: 15-Jul-24

Carrier: Daniel Crump

Received By: NR

Completed by: Paul Schultz
On: 10-May-24

Reviewed by: Ellie Hopkins
On: 14-May-24

Pages to follow: Chain of custody 6 Extra pages included 74

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C **12.1**
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #96651. - pschultz - 5/10/2024 9:15:35 AM
Additional Nitric Acid (97737) was needed for sample T-2 upon arrival at the laboratory. - pschultz - 5/10/2024 9:15:38 AM

Samples were received on 5/10/2024 at 13:30 on ice [8.3C - LTG#7]. pH strip #96651. WO - pschultz - 5/10/2024 2:41:25 PM

Samples were received on 5/13/2024 at 16:10 on ice [19.3C - LTG#7]. pH strip #96651. NR - pschultz - 5/13/2024 4:45:02 PM
Additional Nitric Acid (97737) was needed for AR-10 upon arrival at the laboratory. NR - pschultz - 5/13/2024 4:45:05 PM

Samples were received on 5/14/2024 at 14:39 on ice [8.1C - LTG#7]. pH strip #96651. NR - pschultz - 5/14/2024 3:02:50 PM

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24050003

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 12.1 °C LT6#5
Preserved in: [ ] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: 8hr/2wks S1
Added HNO_3 (9277) to T-2 9S5/10

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
TCarnell

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050003-001	RW-3	5/9/24 1212	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-9 1635	Chris Reed	5/9/24 1635

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24050003

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 12.1 °C LTG#5
Preserved in: [ ] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
TCarroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050003-012	AP-11 14:28	5/9/24 TE SAM 5/22/24 ~~11:10~~	Groundwater	1	2								✓	✓	✓	✓	✓	✓
013	AP-12	5/9/24 13:14	Groundwater	1	2								✓	✓	✓	✓	✓	✓
014	AP-13	5/9/24 1350	Groundwater	1	2								✓	✓	✓	✓	✓	✓
015	AP-14		Groundwater	1	2								✓	✓	✓	✓	✓	✓
016	T-1 11:10	5/9/24 TE SAM 5/22/24 ~~1428~~	Groundwater	1	2								✓	✓	✓	✓	✓	✓
017	T-2	5/9/24 1145	Groundwater	1	2								✓	✓	✓	✓	✓	✓
018	T-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
019	T-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
020	T-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-9/1635	Nick Reed	5/9/24 1635

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24050003

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

LT6-7

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 8.3 °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: pH ✓ 96652 5/10 WD

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050003-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6	5-10-24 / 1013	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8	5-10-24 / 1035	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	5-10-24 / 1330	[signature]	5/10/24 1330

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24050003

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 19.3 °C LTG-7

Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES: Added HNO_3 (97737) to AR-10 96651 MS 5/13

Client Comments:

*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER

Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

Justin Colp

RESULTS REQUESTED

☑ Standard ☐ 1-2 Day (100% Surcharge)

☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050003-001	RW-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	AP-1	5-13-24 / 1101	Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	AP-2	5-13-24 / 1153	Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	AP-3	5-13-24 / 1243	Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	AP-4	5-13-24 / 1325	Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	AP-5	~~5-13-24~~	Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	AP-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	AP-7		Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AP-8		Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AP-9		Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	AP-10	5-13-24 / 1408	Groundwater	1	2								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-13-24 / 1610	Whitney Owens	5/13/24 1610

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24050003

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 6.0 °C
Preserved in: [ ] LAB [X] FIELD
FOR LAB USE ONLY LL6#1
LAB NOTES: 9651 ma 5/14

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells
SAMPLE COLLECTOR'S NAME: Justin Gp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050003-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5	5-14-24 / 0954	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7	5-14-24 / 1121	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9	5-14-24 / 1145	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-14-24 / 1439	[signature]	5/14/24 1439

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24050003

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C

Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES:

Client Comments:

*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050003-012	AP-11		Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14	5-14-24 / 1038	Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4	5-14-24 / 1236	Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5	5-14-24 / 1103	Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6	5-14-24 / 1155	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-14-24 / 1439	[signature]	5/14/24 1439

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Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- Ash Ponds- 2Q 2024

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
001	RW-3	Groundwater Sample	73.0	None	S	Partly cloudy	Good	Good	Good	Yes	No
002	AP-1	Groundwater Sample	68.0	None	N	Cloudy	Good	Good	Good	Yes	No
003	AP-2	Groundwater Sample	70.0	None	N	Cloudy	Good	Good	Good	Yes	No
004	AP-3	Groundwater Sample	69.0	Light	N	Cloudy	Good	Good	Good	Yes	No
005	AP-4	Groundwater Sample	73.0	None	S	Cloudy	Good	Good	Good	Yes	No
006	AP-5	Groundwater Sample	64.0	Light	E	Cloudy	Good	Good	Good	Yes	No
007	AP-6	Groundwater Sample	68.0	None	W	Partly cloudy	Good	Good	Good	Yes	No
008	AP-7	Groundwater Sample	65.0	None	E	Cloudy	Good	Good	Good	Yes	No
009	AP-8	Groundwater Sample	59.0	None	E	Clear	Good	Good	Good	Yes	No
010	AP-9	Groundwater Sample	65.0	None	E	Cloudy	Good	Good	Good	Yes	No
011	AP-10	Groundwater Sample	71.0	Light	N	Partly cloudy	Good	Good	Good	Yes	No
012	AP-11	Groundwater Sample	72.0	None	E	Partly cloudy	Good	Good	Good	Yes	No
013	AP-12	Groundwater Sample	72.0	None	E	Cloudy	Good	Good	Good	Yes	No
014	AP-13	Groundwater Sample	72.0	None	E	Partly cloudy	Good	Good	Good	Yes	No
015	AP-14	Groundwater Sample	64.0	Heavy	E	Cloudy	Good	Good	Good	Yes	No
016	T-1	Groundwater Sample	70.0	None	E	Cloudy	Good	Good	Good	Yes	No
017	T-2	Groundwater Sample	71.0	None	E	Cloudy	Good	Good	Good	Yes	No
018	T-4	Groundwater Sample	70.0	None	W	Cloudy	Good	Good	Good	Yes	No
019	T-5	Groundwater Sample	65.0	Light	W	Cloudy	Good	Good	Good	Yes	No
020	T-6	Groundwater Sample	68.0	None	W	Cloudy	Good	Good	Good	Yes	No

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- Ash Ponds- 2Q 2024

		GW Level Measurement				Purge Activities							
WO Sample	Well ID	Sampler Initials	Date/Time	DTW (ft)	DTB (ft)	Sampler Initials	Purge Date	Purge Start Time	Purge End Time	Purging/Sampling Device	Well Diameter (in)	Actual Volume Purged (L)	Purge Rate (mL/min)
001	RW-3	TAC	5/9/24 11:19	7.87	44.01	TAC	5/9/2024	11:23	12:12	Bladder Pump	2"	9.0	183.7
002	AP-1	PY	5/13/24 10:25	8.88	31.08	PY	5/13/2024	10:29	11:01	Bladder Pump	2"	11.0	343.7
003	AP-2	PY	5/13/24 11:24	7.05	21.33	PY	5/13/2024	11:25	11:53	Bladder Pump	2"	11.0	392.9
004	AP-3	PY	5/13/24 12:10	9.11	20.80	PY	5/13/2024	12:12	12:43	Bladder Pump	2"	13.0	419.4
005	AP-4	JC	5/13/24 13:08	8.68	60.41	JC	5/13/2024	13:08	13:25	Bladder Pump	2"	5.0	294.1
006	AP-5	JC	5/14/24 9:43	13.60	31.27	JC	5/14/2024	09:43	09:54	Bladder Pump	2"	3.0	272.7
007	AP-6	TAC	5/10/24 9:25	6.57	39.62	TAC	5/10/2024	09:26	10:13	Bladder Pump	2"	8.0	170.2
008	AP-7	JC	5/14/24 11:00	9.87	42.52	JC	5/14/2024	11:01	11:21	Bladder Pump	2"	4.0	200.0
009	AP-8	BG	5/10/24 9:54	3.74	39.60	BG	5/10/2024	09:54	10:35	Peristaltic Pump	2"	5.0	122.0
010	AP-9	JC	5/14/24 11:31	11.87	39.60	JC	5/28/1901	11:31	11:45	Bladder Pump	2"	4.0	285.7
011	AP-10	PY	5/13/24 13:16	2.54	38.07	PY	5/13/2024	13:23	14:08	Peristaltic Pump	2"	13.5	300.0
012	AP-11	BG	5/9/24 13:59	9.75	22.95	BG	5/9/2024	13:59	14:28	Peristaltic Pump	2"	8.5	293.1
013	AP-12	BG	5/9/24 12:26	12.24	30.40	BG	5/9/2024	12:26	13:14	Peristaltic Pump	2"	5.0	104.2
014	AP-13	BG	5/9/24 13:26	10.82	31.00	BG	5/9/2024	13:26	13:50	Peristaltic Pump	2"	2.0	83.3
015	AP-14	JC	5/14/24 10:12	1.55	31.20	JC	5/14/2024	10:12	10:38	Submersible Pump	2"	10.0	384.6
016	T-1	BG	5/9/24 12:15	9.78	22.95	BG	5/9/2024	10:44	11:10	Peristaltic Pump	2"	3.0	115.4
017	T-2	BG	5/9/24 11:22	19.25	34.44	BG	5/9/2024	11:22	11:45	Peristaltic Pump	2"	3.0	130.4
018	T-4	PY	5/14/24 12:09	12.72	27.42	PY	5/14/2024	12:10	12:36	Peristaltic Pump	2"	8.0	307.7
019	T-5	PY	5/14/24 10:26	5.30	22.34	Py	5/14/2024	10:31	11:03	Peristaltic Pump	2"	8.0	250.0
020	T-6	py	5/14/24 11:15	8.45	43.62	PY	5/14/2024	11:20	11:55	Peristaltic Pump	2"	8.0	228.6

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- Ash Ponds- 2Q 2024

WO Sample	Well ID	Sampling Activities and Observations									
		Sampler Initials	Date	Time	Sampling Method	Field Filtered	Appearance	Odor	Color	Post-Sample DTW (ft)	Drawdown (ft)
001	RW-3	TAC	05/09/24	12:12	Low Flow	Yes	Clear	None	None	14.87	**7.00**
002	AP-1	TAC	05/13/24	11:01	Low Flow	No	Clear	None	None	9.26	0.38
003	AP-2	TAC	05/13/24	11:53	Low Flow	No	Clear	None	None	7.17	0.12
004	AP-3	TAC	05/13/24	12:43	Low Flow	No	Clear	None	None	9.30	0.19
005	AP-4	JC	05/13/24	13:25	Low Flow	No	Clear	None	none	9.05	0.37
006	AP-5	JC	05/14/24	09:54	Low Flow	No	Clear	None	none	14.51	**0.91**
007	AP-6	TAC	05/10/24	10:13	Low Flow	No	Clear	None	None	15.10	**8.53**
008	AP-7	JC	05/14/24	11:21	Low Flow	No	Clear	None	none	12.47	**2.60**
009	AP-8	BG	05/10/24	`1035	Low Flow	No	Clear	None	CLEAR	4.04	0.30
010	AP-9	JC	05/14/24	11:45	Low Flow	No	Slightly cloudy	None	lt brown	12.46	**0.59**
011	AP-10	TAC	05/13/24	14:08	Low Flow	No	Clear	None	None	2.81	0.27
012	AP-11	BG	05/09/24	14:28	Low Flow	No	Slightly cloudy	Slight	LT BROWN	9.86	0.11
013	AP-12	BG	05/09/24	13:14	Low Flow	No	Cloudy	Moderate	GRAY	13.25	**1.01**
014	AP-13	BG	05/09/24	13:50	Low Flow	No	Clear	Slight	Lt GRAY	11.02	0.20
015	AP-14	JC	05/14/24	10:38	Low Flow	No	Clear	None	none	1.89	0.34
016	T-1	BG	05/09/24	11:10	Low Flow	No	Clear	None	Clear	10.42	**0.64**
017	T-2	BG	05/09/24	11:45	Low Flow	No	Clear	None	CLEAR	20.12	**0.87**
018	T-4	TAC	05/14/24	12:36	Low Flow	No	Clear	None	None	14.26	**1.54**
019	T-5	TAC	05/14/24	11:03	Low Flow	No	Clear	None	None	6.36	**1.06**
020	T-6	TAC	05/14/24	11:55	Low Flow	No	Clear	None	None	8.89	0.44

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- Ash Ponds- 2Q 2024

WO Sample	Well ID	COMMENTS
001	RW-3	
002	AP-1	
003	AP-2	
004	AP-3	
005	AP-4	
006	AP-5	
007	AP-6	
008	AP-7	
009	AP-8	
010	AP-9	
011	AP-10	
012	AP-11	
013	AP-12	
014	AP-13	
015	AP-14	
016	T-1	
017	T-2	
018	T-4	
019	T-5	
020	T-6	

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Stabilized Field Parameters Summary
CWLP- Ash Ponds- 2Q 2024

Well ID	Date	Time	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW (ft)	LIMS ID
RW-3	5/9/2024	12:12	15.1	59.14	6.70	644.4	0.82	23.40	-105.9	7.87	24050003-001A
AP-1	5/13/2024	11:01	14.7	58.50	6.31	1,758.0	0.69	5.74	-86.5	8.88	24050003-002A
AP-2	5/13/2024	11:53	15.1	59.18	6.21	1,286.5	0.68	4.90	-5.8	7.05	24050003-003A
AP-3	5/13/2024	12:43	16.0	60.86	6.36	1,218.9	0.68	2.72	-53.2	9.11	24050003-004A
AP-4	5/13/2024	13:25	17.2	62.96	6.83	588.1	0.40	23.97	-122.8	8.68	24050003-005A
AP-5	5/14/2024	9:54	13.6	56.49	6.99	468.0	0.71	5.17	-67.9	13.60	24050003-006A
AP-6	5/10/2024	10:13	13.5	56.26	7.27	661.5	3.05	18.97	-20.0	6.57	24050003-007A
AP-7	5/14/2024	11:21	14.2	57.47	7.15	440.8	0.92	17.95	-122.2	9.87	24050003-008A
AP-8	5/10/2024	10:35	15.2	59.32	7.03	916.7	1.05	33.67	-116.8	3.74	24050003-009A
AP-9	5/14/2024	11:45	14.6	58.19	6.75	658.9	0.41	39.76	-40.2	11.87	24050003-010A
AP-10	5/13/2024	14:08	15.8	60.36	6.54	1,142.7	1.49	6.02	-81.1	2.54	24050003-011A
AP-11	5/9/2024	14:28	17.7	63.82	6.75	1,351.2	2.84	60.05	-61.7	9.75	24050003-012A
AP-12	5/9/2024	13:14	15.8	60.52	6.52	1,675.9	1.31	88.76	-60.3	12.24	24050003-013A
AP-13	5/9/2024	13:50	16.3	61.41	6.70	804.3	2.21	5.64	-73.7	10.82	24050003-014A
AP-14	5/14/2024	10:38	13.6	56.43	6.95	1,124.6	0.14	2.92	-48.8	1.55	24050003-015A
T-1	5/9/2024	11:10	14.1	57.40	6.57	780.0	1.98	2.28	30.9	9.78	24050003-016A
T-2	5/9/2024	11:45	14.9	58.79	6.51	1,979.6	2.28	3.93	14.9	19.25	24050003-017A
T-4	5/14/2024	12:36	12.8	55.03	6.31	463.7	1.11	8.09	-2.7	12.72	24050003-018A
T-5	5/14/2024	11:03	12.3	54.09	6.62	489.5	1.35	5.40	-1.5	5.30	24050003-019A
T-6	5/14/2024	11:55	14.6	58.34	6.56	852.5	1.03	32.75	-93.5	8.45	24050003-020A

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- GW Quality Parameters
CWLP- Ash Ponds- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
RW-3	5/9/2024	11:42	7.87	14.5	58.2	6.69	602.3	1.26	10.26	-78.5
RW-3	5/9/2024	11:45	7.87	14.5	58.2	6.69	608.1	1.20	11.81	-82.6
RW-3	5/9/2024	11:48	7.87	14.8	58.6	6.69	611.2	1.15	14.38	-85.6
RW-3	5/9/2024	11:51	7.87	15.0	59.0	6.68	619.0	1.10	17.50	-88.8
RW-3	5/9/2024	11:54	7.87	14.9	58.9	6.68	629.8	1.02	23.27	-93.1
RW-3	5/9/2024	11:57	7.87	14.9	58.9	6.68	634.7	0.97	23.78	-96.7
RW-3	5/9/2024	12:00	7.87	15.0	58.9	6.68	637.4	0.93	27.74	-99.1
RW-3	5/9/2024	12:03	7.87	15.0	58.9	6.69	640.9	0.89	18.67	-101.4
RW-3	5/9/2024	12:06	7.87	14.9	58.7	6.69	642.7	0.87	18.32	-103.1
RW-3	5/9/2024	12:09	7.87	15.0	59.0	6.69	642.8	0.84	18.38	-104.6
RW-3	5/9/2024	12:12	7.87	15.1	59.1	6.70	644.4	0.82	23.40	-105.9

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- GW Quality Parameters
CWLP- Ash Ponds- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-2	5/13/2024	11:35	7.05	13.5	56.3	6.26	1,257.7	1.06	15.63	-9.9
AP-2	5/13/2024	11:38	7.05	13.6	56.4	6.23	1,261.1	0.90	10.12	-7.8
AP-2	5/13/2024	11:41	7.05	13.6	56.5	6.22	1,267.6	0.81	8.13	-6.6
AP-2	5/13/2024	11:44	7.05	13.6	56.5	6.21	1,274.1	0.75	7.60	-5.7
AP-2	5/13/2024	11:47	7.05	13.6	56.5	6.20	1,282.5	0.70	6.27	-5.1
AP-2	5/13/2024	11:50	7.05	14.9	58.8	6.20	1,279.4	0.68	5.98	-5.6
AP-2	5/13/2024	11:53	7.05	15.1	59.2	6.21	1,286.5	0.68	4.90	-5.8

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- GW Quality Parameters
CWLP- Ash Ponds- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-3	5/13/2024	12:25	9.11	13.8	56.8	6.38	1,211.7	0.90	4.95	-52.3
AP-3	5/13/2024	12:28	9.11	13.8	56.8	6.37	1,212.2	0.80	4.33	-53.6
AP-3	5/13/2024	12:31	9.11	13.8	56.8	6.36	1,213.0	0.74	3.58	-54.0
AP-3	5/13/2024	12:34	9.11	13.8	56.8	6.35	1,212.9	0.69	3.39	-54.4
AP-3	5/13/2024	12:37	9.11	14.9	58.8	6.35	1,198.9	0.67	3.08	-54.7
AP-3	5/13/2024	12:40	9.11	15.7	60.3	6.35	1,213.7	0.68	2.95	-54.6
AP-3	5/13/2024	12:43	9.11	16.0	60.9	6.36	1,218.9	0.68	2.72	-53.2

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- GW Quality Parameters
CWLP- Ash Ponds- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-7	5/14/2024	11:03	9.87	13.9	57.0	7.27	422.2	1.76	10.35	-106.4
AP-7	5/14/2024	11:06	9.87	14.3	57.7	7.15	435.9	0.74	24.14	-136.6
AP-7	5/14/2024	11:09	9.87	14.0	57.2	7.13	457.1	0.82	56.85	-134.2
AP-7	5/14/2024	11:12	9.87	13.9	57.1	7.14	443.5	0.93	30.37	-126.5
AP-7	5/14/2024	11:15	9.87	14.0	57.2	7.15	438.8	0.96	18.73	-123.1
AP-7	5/14/2024	11:18	9.87	14.0	57.1	7.15	439.0	0.94	15.25	-122.2
AP-7	5/14/2024	11:21	9.87	14.2	57.5	7.15	440.8	0.92	17.95	-122.2

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- GW Quality Parameters
CWLP- Ash Ponds- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-8	5/10/2024	10:05	3.74	14.3	57.8	7.04	919.3	1.52	37.07	-118.2
AP-8	5/10/2024	10:08	3.74	14.4	57.9	7.04	913.6	1.47	39.30	-117.1
AP-8	5/10/2024	10:11	3.74	15.0	59.0	7.03	916.0	1.50	43.50	-116.5
AP-8	5/10/2024	10:14	3.74	14.3	57.8	7.03	918.1	1.38	30.38	-116.8
AP-8	5/10/2024	10:17	3.74	14.2	57.5	7.03	914.2	1.28	27.88	-117.5
AP-8	5/10/2024	10:20	3.74	14.5	58.2	7.03	915.8	1.18	30.64	-118.3
AP-8	5/10/2024	10:23	3.74	14.3	57.7	7.03	916.7	1.17	23.09	-118.3
AP-8	5/10/2024	10:26	3.74	14.5	58.0	7.03	915.1	1.12	25.30	-118.0
AP-8	5/10/2024	10:29	3.74	14.5	58.2	7.02	915.9	1.11	30.18	-117.8
AP-8	5/10/2024	10:32	3.74	14.8	58.7	7.03	916.3	1.07	32.46	-117.5
AP-8	5/10/2024	10:35	3.74	15.2	59.3	7.03	916.7	1.05	33.67	-116.8

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- Ash Ponds- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/9/24 9:25
7.0 Buffer	WC240307F	7.00	5/9/24 9:37
10.0 Buffer	WC231027D	10.01	5/9/24 9:40
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/9/24 9:42

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.5	5/9/24 9:51
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/9/24 18:30	18.96	7.00	1,412	1.5		
CCV-1	CCV	5/9/24 18:29	20.62	7.02	1,413	1.5		

Comments:

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.01	5/10/24 8:54
7.0 Buffer	WC240307F	7.02	5/10/24 16:36
10.0 Buffer	WC231027D	10.00	5/10/24 16:36
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1413	5/10/24 16:38

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.5	5/10/24 16:38
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/10/24 16:38	18.65	7.01	1,413	1.5		
CCV-2	CCV	5/10/24 16:39	20.64	7.02	1,415	1.4		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- Ash Ponds- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/13/24 9:29
7.0 Buffer	WC240307F	7.03	5/13/24 9:36
10.0 Buffer	WC231027D	10.01	5/13/24 9:42
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1415	5/13/24 9:51

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.6	5/13/24 9:58
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/13/24 10:05	19.72	7.02	1,415	1.6		
CCV-3	CCV	5/13/24 11:05	20.01	7.01	1,415	1.5		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- Ash Ponds- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Daniel Crump/Tracy Carroll Date: 5/8/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/8/24 10:09
7.0 Buffer	WC240307F	7.01	5/8/24 10:07
10.0 Buffer	WC230619B	10.00	5/8/24 10:11
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/8/24 10:14

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/8/24 10:16	22.9	7.09	1,413			
CCV-1	CCV	5/8/24 13:21	21	7.02	1,439			

Comments:

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/9/24 11:02
7.0 Buffer	WC240307F	7.02	5/9/24 11:01
10.0 Buffer	WC230619B	10.00	5/9/24 11:03
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/9/24 11:11

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/9/24 11:16	24.2	7.06	1,413			
CCV-2	CCV	5/9/24 15:03	25.2	7.08	1,488			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- Ash Ponds- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/10/24 9:28
7.0 Buffer	WC240307F	7.04	5/10/24 9:25
10.0 Buffer	WC230619B	10.00	5/10/24 9:31
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/10/24 9:32

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/10/24 9:36	14.5	7.05	1,414	1.95		
CCV-3	CCV	5/10/24 10:55	15.2	7.04	1,488			

Comments:

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll/Payton Yoch Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/13/24 10:00
7.0 Buffer	WC240307F	7.01	5/13/24 9:57
10.0 Buffer	WC230619B	10.00	5/13/24 10:04
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/13/24 10:09

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4	LCS	5/13/24 10:14	23.7	6.99	1,411			
CCV-4	CCV	5/13/24 14:33	28	6.90	1,435			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- Ash Ponds- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll/Payton Yoch Date: 5/14/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/14/24 10:22
7.0 Buffer	WC240307F	7.01	5/14/24 10:22
10.0 Buffer	WC230619B	10.00	5/14/24 10:23
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/14/24 10:23

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-5	LCS	5/14/24 10:25	23.7	6.99	1,412			
CCV-5	CCV	5/14/24 13:30	22.9	7.02	1,455			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- Ash Ponds- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	3.99	5/9/24 9:29
7.0 Buffer	wc240307f	7.01	5/9/24 9:23
10.0 Buffer	wc231027d	10.00	5/9/24 9:37
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1409	5/9/24 9:41

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.93	5/9/24 9:42
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/9/24 9:44	20.5	7.01	1,409	0.93		
CCV-M-1	CCV	5/9/24 12:11	21.7	7.03	1,421	0.96		
CCV-1	CCV	5/9/24 14:35	22.8	7.03	1,424	1.04		

Comments:

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	4.00	5/10/24 9:32
7.0 Buffer	wc240307f	7.02	5/10/24 9:30
10.0 Buffer	wc231027d	9.98	5/10/24 9:35
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1410	5/10/24 9:40

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.87	5/10/24 9:40
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/10/24 9:43	18.8	7.02	1,410	0.87		
CCV-2	CCV	5/10/24 10:58	19.7	7.02	1,416	0.89		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050003
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- Ash Ponds- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	4.01	5/13/24 9:49
7.0 Buffer	wc240307f	7.01	5/13/24 9:43
10.0 Buffer	wc231027d	9.98	5/13/24 9:58
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/13/24 9:58

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.86	5/13/24 9:58
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/13/24 10:00	21.7	7.01	1,412	0.86		
CCV-3	CCV	5/13/24 14:28	22.1	7.03	1,420	0.92		

Comments:

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/14/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	3.98	5/14/24 9:25
7.0 Buffer	wc240307f	7.00	5/14/24 9:21
10.0 Buffer	wc231027d	9.99	5/14/24 9:28
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1410	5/14/24 9:35

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.96	5/14/24 9:35
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4	LCS	5/14/24 9:37	20.2	7.00	1,410	0.96		
CCV-4	CCV	5/14/24 12:17	21	7.01	1,418	0.99		

Comments:

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

June 12, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24050003

Order No.: 24051620

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 20 sample(s) on 5/17/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24051620**
Date: **6/12/2024**

CLIENT: TEKLAB Inc,
Project: 24050003

WorkOrder Narrative:
24051620: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence QC Notes:
LCS/LCSD-75651 Radium-228_NPW(904.0): LCS/LCSD exhibited a high RPD, individually each LCS/LCSD meets required criteria.
LCS/LCSD-75699 Radium-228_DW(904.0): LCS/LCSD exhibited a high RPD, individually each LCS/LCSD meets the required criteria.
LCS/LCSD-75740 Radium-226_DW(903.0): LCS/LCSD exhibit a high RPD, individually each LCS/LCSD meet required criteria.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
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Qualifiers and Acronyms

WO#: **24051620**
Date: **6/12/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **24051620**

12-Jun-24

CLIENT: TEKLAB Inc,
Project: 24050003

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24051620-001	24050003-001		5/9/2024 12:12:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-002	24050003-002		5/13/2024 11:01:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-003	24050003-003		5/13/2024 11:53:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-004	24050003-004		5/13/2024 12:43:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-005	24050003-005		5/13/2024 1:25:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-006	24050003-006		5/14/2024 9:54:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-007	24050003-007		5/10/2024 10:13:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-008	24050003-008		5/14/2024 11:21:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-009	24050003-009		5/10/2024 10:35:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-010	24050003-010		5/14/2024 11:45:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-011	24050003-011		5/13/2024 2:08:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-012	24050003-012		5/9/2024 11:10:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-013	24050003-013		5/9/2024 1:14:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-014	24050003-014		5/9/2024 1:50:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-015	24050003-015		5/14/2024 10:38:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-016	24050003-016		5/9/2024 2:28:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-017	24050003-017		5/9/2024 11:45:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-018	24050003-018		5/14/2024 12:36:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-019	24050003-019		5/14/2024 11:03:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051620-020	24050003-020		5/14/2024 11:55:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water

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DATES REPORT

WO#: **24051620**

12-Jun-24

Client: TEKLAB Inc,
Project: 24050003

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24051620-001A	24050003-001	5/9/2024 12:12:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-002A	24050003-002	5/13/2024 11:01:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-003A	24050003-003	5/13/2024 11:53:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-004A	24050003-004	5/13/2024 12:43:00 PM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-005A	24050003-005	5/13/2024 1:25:00 PM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-006A	24050003-006	5/14/2024 9:54:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-007A	24050003-007	5/10/2024 10:13:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-008A	24050003-008	5/14/2024 11:21:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-009A	24050003-009	5/10/2024 10:35:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-010A	24050003-010	5/14/2024 11:45:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-011A	24050003-011	5/13/2024 2:08:00 PM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-012A	24050003-012	5/9/2024 11:10:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM

Original

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DATES REPORT

WO#: **24051620**

12-Jun-24

Client: TEKLAB Inc,
Project: 24050003

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24051620-012A	24050003-012	5/9/2024 11:10:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-013A	24050003-013	5/9/2024 1:14:00 PM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-014A	24050003-014	5/9/2024 1:50:00 PM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-015A	24050003-015	5/14/2024 10:38:00 AM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-016A	24050003-016	5/9/2024 2:28:00 PM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM
24051620-017A	24050003-017	5/9/2024 11:45:00 AM		Radium-226 (EPA 903.0)		5/29/2024 12:23:00 PM	6/5/2024 10:01:00 AM
				Radium-228 (EPA 904.0)		5/29/2024 12:23:00 PM	6/4/2024 2:54:00 PM
24051620-018A	24050003-018	5/14/2024 12:36:00 PM		Radium-226 (EPA 903.0)		5/29/2024 12:23:00 PM	6/5/2024 10:01:00 AM
				Radium-228 (EPA 904.0)		5/29/2024 12:23:00 PM	6/4/2024 2:54:00 PM
24051620-019A	24050003-019	5/14/2024 11:03:00 AM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051620-020A	24050003-020	5/14/2024 11:55:00 AM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM

Original

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Analytical Report

(consolidated)

WO#: **24051620**

Date Reported: **6/12/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/9/2024 12:12:00 PM
Project: 24050003
Lab ID: 24051620-001
Matrix: NON-POTABLE WATER
Client Sample ID: 24050003-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0800	1	6/4/2024 9:57:00 AM
Yield	1.00					1	6/4/2024 9:57:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.280	1	6/3/2024 2:37:00 PM
Yield	1.00					1	6/3/2024 2:37:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24051620**

Date Reported: **6/12/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/13/2024 11:53:00 AM
Project: 24050003
Lab ID: 24051620-003
Matrix: NON-POTABLE WATER
Client Sample ID: 24050003-003

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0600	1	6/4/2024 9:57:00 AM
Yield	1.00					1	6/4/2024 9:57:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.260	1	6/3/2024 2:37:00 PM
Yield	1.00					1	6/3/2024 2:37:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24051620**

Date Reported: **6/12/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/13/2024 12:43:00 PM
Project: 24050003
Lab ID: 24051620-004
Matrix: NON-POTABLE WATER
Client Sample ID: 24050003-004

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0700	1	6/4/2024 9:57:00 AM
Yield	1.00					1	6/4/2024 9:57:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.250	1	6/3/2024 2:37:00 PM
Yield	1.00					1	6/3/2024 2:37:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24051620**

Date Reported: **6/12/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/14/2024 11:21:00 AM
Project: 24050003
Lab ID: 24051620-008
Matrix: NON-POTABLE WATER
Client Sample ID: 24050003-008

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0800	1	6/4/2024 9:57:00 AM
Yield	1.00					1	6/4/2024 9:57:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.290	1	6/3/2024 2:37:00 PM
Yield	0.990					1	6/3/2024 2:37:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24051620**

Date Reported: **6/12/2024**

CLIENT: TEKLAB Inc,

Collection Date: 5/10/2024 10:35:00 AM

Project: 24050003

Lab ID: 24051620-009

Matrix: NON-POTABLE WATER

Client Sample ID: 24050003-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.150	1	6/4/2024 9:57:00 AM
Yield	1.00					1	6/4/2024 9:57:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.350	1	6/3/2024 2:37:00 PM
Yield	0.990					1	6/3/2024 2:37:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75651**

Sample ID: **MB-75651**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186770**
Client ID: **PBW**	Batch ID: **75651**	TestNo: **E904.0**	**E903-904**	Analysis Date: **6/3/2024**	SeqNo: **5060869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCSD-75651**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186770**
Client ID: **LCSS02**	Batch ID: **75651**	TestNo: **E904.0**	**E903-904**	Analysis Date: **6/3/2024**	SeqNo: **5060871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.50	1.00	5.000	0	90.0	50	130	3.520	24.4	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **24051612-001ADUP**	SampType: **DUP**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186770**
Client ID: **BatchQC**	Batch ID: **75651**	TestNo: **E904.0**	**E903-904**	Analysis Date: **6/3/2024**	SeqNo: **5060876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	0.970			0	0			1.000	3.05		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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TEL: (330) 253-8211 FAX: (330) 253-4489
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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75651**

Sample ID: **24051613-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186770**
Client ID: **BatchQC** Batch ID: **75651** TestNo: **E904.0** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5060878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	0.950			0	0			0.9500	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75651**

Sample ID: **24051612-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186773**
Client ID: **BatchQC** Batch ID: **75651** TestNo: **E903.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5061011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	0.960							1.000	4.08	0	

Sample ID: **24051613-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186773**
Client ID: **BatchQC** Batch ID: **75651** TestNo: **E903.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5061013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	0.940							0.9500	1.06	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75651**

Sample ID: **MB-75651**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186773**
Client ID: **PBW**	Batch ID: **75651**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/4/2024**	SeqNo: **5061004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	ND										

Sample ID: **LCS-75651**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186773**
Client ID: **LCSW**	Batch ID: **75651**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/4/2024**	SeqNo: **5061005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.94	1.00	5.000	0	98.8	70	130				

Sample ID: **LCSD-75651**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186773**
Client ID: **LCSS02**	Batch ID: **75651**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/4/2024**	SeqNo: **5061006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.48	1.00	5.000	0	89.6	70	130	4.940	9.77	20	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75699**

Sample ID: **MB-75699** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186905**
Client ID: **PBW** Batch ID: **75699** TestNo: **E904.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5063570**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-75699** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186905**
Client ID: **LCSW** Batch ID: **75699** TestNo: **E904.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5063571**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.24	1.00	5.000	0	64.8	50	130				QLR
Yield	1.00			0	0						

Sample ID: **LCSD-75699** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186905**
Client ID: **LCSS02** Batch ID: **75699** TestNo: **E904.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5063572**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.05	1.00	5.000	0	81.0	50	130	3.240	22.2	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75699**

Sample ID: **24051688-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186905**
Client ID: **BatchQC** Batch ID: **75699** TestNo: **E904.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5063582**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	0.890			0	0			1.000	11.6		

Sample ID: **24051688-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186905**
Client ID: **BatchQC** Batch ID: **75699** TestNo: **E904.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5063584**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			0.9300	7.25		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75699**

Sample ID: **MB-75699** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186909**
Client ID: **PBW** Batch ID: **75699** TestNo: **E903.0** **E903-904** Analysis Date: **6/5/2024** SeqNo: **5063797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-75699** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186909**
Client ID: **LCSW** Batch ID: **75699** TestNo: **E903.0** **E903-904** Analysis Date: **6/5/2024** SeqNo: **5063798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.93	1.00	5.000	0	98.6	70	130				

Sample ID: **LCSD-75699** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186909**
Client ID: **LCSS02** Batch ID: **75699** TestNo: **E903.0** **E903-904** Analysis Date: **6/5/2024** SeqNo: **5063799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.16	1.00	5.000	0	103	70	130	4.930	4.56	20	

Sample ID: **24051688-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186909**
Client ID: **BatchQC** Batch ID: **75699** TestNo: **E903.0** **E903-904** Analysis Date: **6/5/2024** SeqNo: **5063808**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75699**

Sample ID: **24051688-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186909**
Client ID: **BatchQC** Batch ID: **75699** TestNo: **E903.0** **E903-904** Analysis Date: **6/5/2024** SeqNo: **5063808**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **24051688-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/29/2024** RunNo: **186909**
Client ID: **BatchQC** Batch ID: **75699** TestNo: **E903.0** **E903-904** Analysis Date: **6/5/2024** SeqNo: **5063810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75740**

Sample ID: **MB-75740** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **PBW** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075299**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-75740** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **LCSW** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075300**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.94	1.00	5.000	0	78.8	50	130				
Yield	0.890			0	0						

Sample ID: **LCSD-75740** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **LCSS02** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075301**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.07	1.00	5.000	0	81.4	50	130	3.940	3.25	20	
Yield	0.860			0	0			0.8900	3.43		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75740**

Sample ID: **24050773-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075306**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	0.910			0	0			0.8900	2.22		

Sample ID: **24052198-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075324**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	0.930			0	0			0.9600	3.17		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75740**

Sample ID: **MB-75740** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **PBW** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075489**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-75740** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **LCSW** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075490**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.05	1.00	5.000	0	81.0	70	130				QLR

Sample ID: **LCSD-75740** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **LCSS02** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.95	1.00	5.000	0	99.0	70	130	4.050	20.0	20	R

Sample ID: **24050773-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075496**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24051620**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050003 **BatchID:** **75740**

Sample ID: **24050773-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075496**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							0.9400	6.19	0	

Sample ID: **24052198-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	0.960							1.000	4.08	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Pg 1 of 2

TEKLAB, INC. Chain of Custody

24051620

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: 20.0-21.9° Sampler: Client QC Level: 2

20.0 +0.0 = 21.0 +0.0 =
21.9 +0.0 = Fedex, Cooler

Project# 24050003

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 36305 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228		cpm				pH					
	24050003-001	5/9/2024 12:12	HNO3	Groundwater	✔		20				1					
	24050003-002	5/13/2024 11:01	HNO3	Groundwater	✔		38				1					
	24050003-003	5/13/2024 11:53	HNO3	Groundwater	✔		28				1					
	24050003-004	5/13/2024 12:43	HNO3	Groundwater	✔		30				1					
	24050003-005	5/13/2024 13:25	HNO3	Groundwater	✔		28				1					
	24050003-006	5/14/2024 09:54	HNO3	Groundwater	✔		34				1					
	24050003-007	5/10/2024 10:13	HNO3	Groundwater	✔		24				1					
	24050003-008	5/14/2024 11:21	HNO3	Groundwater	✔		14				1					
	24050003-009	5/10/2024 10:35	HNO3	Groundwater	✔		36				1					
	24050003-010	5/14/2024 11:45	HNO3	Groundwater	✔		20				1					
	24050003-011	5/13/2024 14:08	HNO3	Groundwater	✔		24				1					

*Relinquished By	Date/Time	Received By	Date/Time
Paul Eddy	5/14/24	[signature]	5/17/24, 1215

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Cooler Temp: Sampler: Client QC Level: 2

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 24050003

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 36305 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228		CPM				PH					
	24050003-012	5/9/2024 11:10	HNO3	Groundwater	✔		20				1					
	24050003-013	5/9/2024 13:14	HNO3	Groundwater	✔		34				1					
	24050003-014	5/9/2024 13:50	HNO3	Groundwater	✔		32				1					
	24050003-015	5/14/2024 10:38	HNO3	Groundwater	✔		34				1					
	24050003-016	5/9/2024 14:28	HNO3	Groundwater	✔		30				1					
	24050003-017	5/9/2024 11:45	HNO3	Groundwater	✔		30				1					
	24050003-018	5/14/2024 12:36	HNO3	Groundwater	✔		24				1					
	24050003-019	5/14/2024 11:03	HNO3	Groundwater	✔		16				1					
	24050003-020	5/14/2024 11:55	HNO3	Groundwater	✔		18				1					
			HNO3	Groundwater												
			HNO3	Groundwater												

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	5/14/24		

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Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24051620 RcptNo: 1

Logged by:	Tegan A. Richards	5/17/2024 12:15:00 PM	Tegan Richards
Completed By:	Tegan A. Richards	5/21/2024 1:52:00 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	5/21/2024 2:16:21 PM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date: Signed By:			
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	20.0	Good	Not Present			

Summit Environmental Technologies, Inc.
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Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24051620 RcptNo: 1

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	21.0	Good	Not Present			
3	21.9	Good	Not Present			

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

June 18, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 24050002

Dear Eric Staley:

TEKLAB, INC received 11 samples on 5/13/2024 4:10:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050002
Client Project: FGDS Landfill
Report Date: 18-Jun-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050002

Client Project: FGDS Landfill **Report Date:** 18-Jun-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050002
Client Project: FGDS Landfill
Report Date: 18-Jun-24

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit	E -	Value above quantitation range
H -	Holding times exceeded	I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits	M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit	R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits	T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level		

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050002
Client Project: FGDS Landfill
Report Date: 18-Jun-24

Cooler Receipt Temp: 13.5 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050002
Client Project: FGDS Landfill
Report Date: 18-Jun-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050002
Client Project: FGDS Landfill
Report Date: 18-Jun-24
Lab ID: 24050002-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 05/10/2024 10:37

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	05/10/2024 10:37	R347527
Depth to water	*	-5.00		**9.88**	ft	1	05/10/2024 10:37	R347527
Depth to water from measuring point	*	0		**12.63**	ft	1	05/10/2024 10:37	R347527
Elevation of groundwater surface	*	0		**542.97**	ft	1	05/10/2024 10:37	R347527
Measuring Point Elevation	*	0		**555.60**	ft	1	05/10/2024 10:37	R347527
Measuring Point Height Above Land Surface	*	0		**2.75**	ft	1	05/10/2024 10:37	R347527
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**26**	NTU	1	05/10/2024 10:37	R347527
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.1**	°F	1	05/10/2024 10:37	R347527
SW-846 9040B								
pH, Field	*	1.00		**6.58**		1	05/10/2024 10:37	R347527
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1060**	µmhos/cm @25C	1	05/10/2024 10:37	R347527
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1220**	mg/L	2.5	05/15/2024 11:58	R347402
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**416**	mg/L	10	05/15/2024 1:09	R347268
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	05/20/2024 10:53	R347555
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**41**	mg/L	1	05/15/2024 1:04	R347274
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**1.57**	mg/L	1	05/15/2024 13:35	222813
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/15/2024 13:35	222813
Boron	NELAP	0.0200		**9.56**	mg/L	1	05/15/2024 13:35	222813
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/15/2024 13:35	222813
Calcium	NELAP	0.100		**208**	mg/L	1	05/15/2024 13:35	222813
Chromium	NELAP	0.0050		**0.0119**	mg/L	1	05/15/2024 13:35	222813
Cobalt	NELAP	0.0050		**0.0059**	mg/L	1	05/17/2024 17:26	222813
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	05/15/2024 13:35	222813
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	05/20/2024 12:00	222813
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/15/2024 13:35	222813
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/14/2024 16:30	222813
Arsenic	NELAP	0.0010		**0.156**	mg/L	5	05/14/2024 16:30	222813
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/14/2024 16:30	222813
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/15/2024 17:00	222813
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/23/2024 13:07	222958
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/07/2024 0:00	R348779
Radium-228	*	0		**See Attached**	pci/L	1	06/07/2024 0:00	R348779

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 24050002
Report Date: 18-Jun-24

Carrier: Daniel Stupar

Received By: WAO

Completed by: Amber Dilallo
On: 08-May-24

Reviewed by: Ellie Hopkins
On: 14-May-24

Pages to follow: Chain of custody 4 Extra pages included 50

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	13.5
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice	☐
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐			
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.					
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑		
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑		
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐		
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑		

Any No responses must be detailed below or on the COC.

Samples were received on 5/8/24 at 1505 on ice [13.5C - LTG5]. pH strip #96651. - amberdilallo - 5/8/2024 4:32:04 PM

Samples were received on 5/9/2024 at 16:35 on ice [12.1C - LTG#5]. - pschultz - 5/10/2024 9:12:30 AM
pH strip #96651. Additional Nitric Acid (97737) was needed for samples G112 and G113 upon arrival at the laboratory. - pschultz - 5/10/2024 9:12:38 AM

Samples were received on 5/10/2024 at 13:30 on ice [10.7C - LTG#7]. - pschultz - 5/10/2024 2:35:09 PM
pH strip #96651. WO - pschultz - 5/10/2024 2:35:10 PM

Samples were received on 5/13/24 at 1610 on ice [19.3C - LTG7]. pH strip #[96651#]. - amberdilallo - 5/14/2024 8:15:38 AM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 24050002

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 13.5 °C 5
Preserved in: ☐ LAB ☒ FIELD
FOR LAB USE ONLY
LAB NOTES: PM 96651 DSS/8

TEKLAB

Courier

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event.

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Tracy Carrol / Danny Crump

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050002-001	R101		Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	G110	5/8/24 1114	Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	R111	5/8/24 1244	Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	G112		Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	G113		Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	G120		Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	G121		Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	G122		Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AW-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AW-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	RW-3		Groundwater	0	0								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-8-1505	Whitney Quinn	5/8/24 1505

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

DSS/8

Print PDF

CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 24050002

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 12.1 °C 2 TGTHS
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: pH/96651
Added HNO3 (97737) to G112+G113 PS 5/10

Client Comments: * per COC for 24050001
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event.

PROJECT NAME/NUMBER: FGDS Landfill
SAMPLE COLLECTOR'S NAME: TCarroll

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other ☐ 3 Day (50% Surcharge)
BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050002-001	R101		Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	G110		Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	R111		Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	G112	5/9/24 1232	Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	G113	1348	Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	G120	1028	Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	G121	1119	Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	G122	1153	Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AW-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AW-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	RW-3	5/9 1212*	Groundwater	0	0								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-9 / 1635	Mich Reed	5/9/24 1635

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 24050002

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

LTG-7

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 10.7 °C
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: pH 96651 5110 WO

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event.

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050002-001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1	5-10-24 / 1037	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	5-10-24 / 1330	Whitney Clemm	5/10/24 1330

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 24050002

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 19.3 °C LTG7
Preserved in: [ ] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: pH✓ 96651 85 5/14

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Li Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event.

PROJECT NAME/NUMBER: FGDS Landfill
SAMPLE COLLECTOR'S NAME: Justin Colp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24050002-001	R101	5-13-24 / 1220	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2	5-13-24 / 1052	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-8/ 1505	[illegible]	5/13/24 1610

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Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- FGDS LF- 2Q 2024

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
001	R101	Groundwater Sample	72.0	None	S	Cloudy	Good	Good	Good	Yes	No
002	G110	Groundwater Sample	75.0	Light	S	Cloudy	Good	Good	Good	Yes	No
003	R111	Groundwater Sample	75.0	Light	S	Cloudy	Good	Good	Good	Yes	No
004	G112	Groundwater Sample	71.0	None	W	Cloudy	Good	Good	Good	Yes	No
005	G113	Groundwater Sample	72.0	None	W	Cloudy	Good	Good	Good	Yes	No
006	G120	Groundwater Sample	68.0	None	W	Cloudy	Good	Good	Good	Yes	No
007	G121	Groundwater Sample	69.0	None	W	Partly cloudy	Good	Good	Good	Yes	No
008	G122	Groundwater Sample	71.0	None	W	Cloudy	Good	Good	Good	Yes	No
009	AW-1	Groundwater Sample	59.0	None	NW	Partly cloudy	Good	Good	Good	Yes	No
010	AW-2	Groundwater Sample	71.0	None	S	Cloudy	Good	Good	Good	Yes	No
011	RW-3	Groundwater Sample	73.0	None	S	Partly cloudy	Good	Good	Good	Yes	No

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- FGDS LF- 2Q 2024

		GW Level Measurement				Purge Activities							
WO Sample	**Well ID**	**Sampler Initials**	**Date/Time**	**DTW (ft)**	**DTB (ft)**	**Sampler Initials**	**Purge Date**	**Purge Start Time**	**Purge End Time**	**Purging/Sampling Device**	**Well Diameter (in)**	**Actual Volume Purged (L)**	**Purge Rate (mL/min)**
001	R101	JC	5/13/24 11:56	5.95	35.27	JC	5/13/2024	11:58	12:20	Submersible Pump	2"	7.0	318.2
002	G110	DC	5/8/24 10:22	23.19	57.15	DC	5/8/2024	10:27	11:14	Peristaltic Pump	2"	6.0	127.7
003	R111	DC	5/8/24 12:04	24.22	55.75	DC	5/8/2024	12:09	12:44	Peristaltic Pump	2"	7.0	200.0
004	G112	JC	5/9/24 12:06	26.99	58.81	JC	5/9/2024	12:19	12:32	Submersible Pump	2"	5.0	384.6
005	G113	JC	5/9/24 13:31	3.85	12.85	JC	5/9/2024	13:34	13:48	Submersible Pump	2"	3.0	214.3
006	G120	JC	5/9/24 9:58	14.79	50.37	JC	5/9/2024	10:00	10:28	Submersible Pump	2"	11.0	392.9
007	G121	JC	5/9/24 11:03	26.76	58.56	JC	5/9/2024	11:03	11:19	Submersible Pump	2"	6.0	375.0
008	G122	JC	5/9/24 11:29	27.67	49.29	JC	5/9/2024	11:39	11:53	Submersible Pump	2"	6.0	**428.6**
009	AW-1	JC	5/10/24 9:39	12.63	54.81	JC	5/10/2024	09:44	10:37	Submersible Pump	2"	17.0	320.8
010	AW-2	JC	5/13/24 10:11	3.29	32.64	JC	5/13/2024	10:12	10:52	Submersible Pump	2"	14.0	350.0
011	RW-3	TAC	5/9/24 11:19	7.87	44.01	TAC	5/9/2024	11:23	12:12	Bladder Pump	2"	9.0	183.7

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- FGDS LF- 2Q 2024

WO Sample	Well ID	Sampling Activities and Observations									
		Sampler Initials	Date	Time	Sampling Method	Field Filtered	Appearance	Odor	Color	Post-Sample DTW (ft)	Drawdown (ft)
001	R101	JC	05/13/24	12:20	Low Flow	Yes	Clear	None	none	6.23	0.28
002	G110	TAC	05/08/24	11:14	Low Flow	Yes	Clear	None	None	23.38	0.19
003	R111	TAC	05/08/24	12:44	Low Flow	Yes	Clear	None	None	24.33	0.11
004	G112	JC	05/09/24	12:32	Low Flow	Yes	Clear	None	none	27.09	0.10
005	G113	JC	05/09/24	13:48	Low Flow	Yes	Clear	Strong	none	3.97	0.12
006	G120	JC	05/09/24	10:28	Low Flow	Yes	Clear	Slight	none	15.36	**0.57**
007	G121	JC	05/09/24	11:19	Low Flow	Yes	Clear	None	none	27.15	0.39
008	G122	JC	05/09/24	11:53	Low Flow	Yes	Clear	None	none	27.97	0.30
009	AW-1	JC	05/10/24	10:37	Low Flow	Yes	Clear	None	none	12.98	0.35
010	AW-2	JC	05/13/24	10:52	Low Flow	Yes	Slightly cloudy	Slight	lt brown	4.67	**1.38**
011	RW-3	TAC	05/09/24	12:12	Low Flow	Yes	Clear	None	None	14.87	**7.00**

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- FGDS LF- 2Q 2024

WO Sample	Well ID	COMMENTS
001	R101	
002	G110	
003	R111	
004	G112	
005	G113	
006	G120	Flush Mount well
007	G121	
008	G122	
009	AW-1	
010	AW-2	
011	RW-3	

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Stabilized Field Parameters Summary
CWLP- FGDS LF- 2Q 2024

Well ID	Date	Time	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW (ft)	LIMS ID
R101	5/13/2024	12:20	13.8	56.9	6.92	804.8	2.63	16.14	77.6	5.95	24050001-001A
G110	5/8/2024	11:14	15.5	60.0	6.54	783.4	1.42	4.97	-62.3	23.19	24050001-002A
R111	5/8/2024	12:44	14.5	58.0	6.01	120.4	3.91	2.71	66.5	24.22	24050001-003A
G112	5/9/2024	12:32	14.6	58.3	6.97	1,066.2	0.17	4.06	-136.2	26.99	24050001-004A
G113	5/9/2024	13:48	15.5	59.8	6.27	1,357.4	0.17	5.05	-273.2	3.85	24050001-005A
G120	5/9/2024	10:28	17.5	63.4	6.65	1,294.2	0.11	7.19	-147.1	14.79	24050001-006A
G121	5/9/2024	11:19	15.0	59.0	6.76	1,041.5	0.15	8.16	-144.6	26.76	24050001-007A
G122	5/9/2024	11:53	14.6	58.2	6.64	1,225.7	0.28	2.93	-119.2	27.67	24050001-008A
AW-1	5/10/2024	10:37	14.5	58.1	6.58	1,063.8	0.14	25.85	-122.3	12.63	24050001-009A
AW-2	5/13/2024	10:52	15.0	59.0	6.83	783.6	0.07	8.08	-160.7	3.29	24050001-010A
RW-3	5/9/2024	12:12	15.1	59.1	6.70	644.4	0.82	23.4	-105.9	7.87	24050001-011A

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- GW Quality Parameters
CWLP- FGDS LF- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AW-1	5/10/2024	10:07	12.63	14.2	57.6	6.57	1,059.0	0.18	122.74	-124.4
AW-1	5/10/2024	10:10	12.63	14.3	57.8	6.57	1,057.1	0.20	80.73	-122.6
AW-1	5/10/2024	10:13	12.63	14.5	58.1	6.58	1,057.4	0.21	51.13	-121.0
AW-1	5/10/2024	10:16	12.63	14.3	57.7	6.58	1,058.8	0.21	51.28	-119.8
AW-1	5/10/2024	10:19	12.63	14.4	58.0	6.58	1,059.7	0.20	40.08	-119.8
AW-1	5/10/2024	10:22	12.63	14.4	58.0	6.58	1,061.2	0.18	28.44	-120.3
AW-1	5/10/2024	10:25	12.63	14.5	58.0	6.58	1,061.5	0.17	26.24	-121.0
AW-1	5/10/2024	10:28	12.63	14.4	57.9	6.58	1,062.1	0.16	38.55	-121.3
AW-1	5/10/2024	10:31	12.63	14.4	58.0	6.58	1,063.9	0.15	26.09	-121.7
AW-1	5/10/2024	10:34	12.63	14.5	58.1	6.58	1,063.4	0.14	25.72	-122.1
AW-1	5/10/2024	10:37	12.63	14.5	58.1	6.58	1,063.8	0.14	25.85	-122.3

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- FGDS LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/9/24 9:25
7.0 Buffer	WC240307F	7.00	5/9/24 9:37
10.0 Buffer	WC231027D	10.01	5/9/24 9:40
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/9/24 9:42

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.5	5/9/24 9:51
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/9/24 18:30	18.96	7.00	1,412	1.5		
CCV-1	CCV	5/9/24 18:29	20.62	7.02	1,413	1.5		

Comments:

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.01	5/10/24 8:54
7.0 Buffer	WC240307F	7.02	5/10/24 16:36
10.0 Buffer	WC231027D	10.00	5/10/24 16:36
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1413	5/10/24 16:38

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.5	5/10/24 16:38
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/10/24 16:38	18.65	7.01	1,413	1.5		
CCV-2	CCV	5/10/24 16:39	20.64	7.02	1,415	1.4		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- FGDS LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/13/24 9:29
7.0 Buffer	WC240307F	7.03	5/13/24 9:36
10.0 Buffer	WC231027D	10.01	5/13/24 9:42
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1415	5/13/24 9:51

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.6	5/13/24 9:58
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/13/24 10:05	19.72	7.02	1,415	1.6		
CCV-3	CCV	5/13/24 11:05	20.01	7.01	1,415	1.5		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- FGDS LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Daniel Crump/Tracy Carroll Date: 5/8/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/8/24 10:09
7.0 Buffer	WC240307F	7.01	5/8/24 10:07
10.0 Buffer	WC230619B	10.00	5/8/24 10:11
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/8/24 10:14

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/8/24 10:16	22.9	7.09	1,413			
CCV-1	CCV	5/8/24 13:21	21	7.02	1,439			

Comments:

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/9/24 11:02
7.0 Buffer	WC240307F	7.02	5/9/24 11:01
10.0 Buffer	WC230619B	10.00	5/9/24 11:03
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/9/24 11:11

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/9/24 11:16	24.2	7.06	1,413			
CCV-2	CCV	5/9/24 15:03	25.2	7.08	1,488			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- FGDS LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/10/24 9:28
7.0 Buffer	WC240307F	7.04	5/10/24 9:25
10.0 Buffer	WC230619B	10.00	5/10/24 9:31
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/10/24 9:32

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/10/24 9:36	14.5	7.05	1,414	1.95		
CCV-3	CCV	5/10/24 10:55	15.2	7.04	1,488			

Comments:

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll/Payton Yoch Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/13/24 10:00
7.0 Buffer	WC240307F	7.01	5/13/24 9:57
10.0 Buffer	WC230619B	10.00	5/13/24 10:04
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/13/24 10:09

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4	LCS	5/13/24 10:14	23.7	6.99	1,411			
CCV-4	CCV	5/13/24 14:33	28	6.90	1,435			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- FGDS LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll/Payton Yoch Date: 5/14/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/14/24 10:22
7.0 Buffer	WC240307F	7.01	5/14/24 10:22
10.0 Buffer	WC230619B	10.00	5/14/24 10:23
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/14/24 10:23

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-5	LCS	5/14/24 10:25	23.7	6.99	1,412			
CCV-5	CCV	5/14/24 13:30	22.9	7.02	1,455			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- FGDS LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	3.99	5/9/24 9:29
7.0 Buffer	wc240307f	7.01	5/9/24 9:23
10.0 Buffer	wc231027d	10.00	5/9/24 9:37
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1409	5/9/24 9:41

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.93	5/9/24 9:42
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/9/24 9:44	20.5	7.01	1,409	0.93		
CCV-M-1	CCV	5/9/24 12:11	21.7	7.03	1,421	0.96		
CCV-1	CCV	5/9/24 14:35	22.8	7.03	1,424	1.04		

Comments:

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	4.00	5/10/24 9:32
7.0 Buffer	wc240307f	7.02	5/10/24 9:30
10.0 Buffer	wc231027d	9.98	5/10/24 9:35
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1410	5/10/24 9:40

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.87	5/10/24 9:40
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/10/24 9:43	18.8	7.02	1,410	0.87		
CCV-2	CCV	5/10/24 10:58	19.7	7.02	1,416	0.89		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050002
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- FGDS LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	4.01	5/13/24 9:49
7.0 Buffer	wc240307f	7.01	5/13/24 9:43
10.0 Buffer	wc231027d	9.98	5/13/24 9:58
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/13/24 9:58

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.86	5/13/24 9:58
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/13/24 10:00	21.7	7.01	1,412	0.86		
CCV-3	CCV	5/13/24 14:28	22.1	7.03	1,420	0.92		

Comments:

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/14/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	3.98	5/14/24 9:25
7.0 Buffer	wc240307f	7.00	5/14/24 9:21
10.0 Buffer	wc231027d	9.99	5/14/24 9:28
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1410	5/14/24 9:35

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.96	5/14/24 9:35
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4	LCS	5/14/24 9:37	20.2	7.00	1,410	0.96		
CCV-4	CCV	5/14/24 12:17	21	7.01	1,418	0.99		

Comments:

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Website: http://www.settek.com

June 12, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24050002

Order No.: 24051621

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 11 sample(s) on 5/17/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **24051621**
Date: **6/12/2024**

CLIENT: TEKLAB Inc,
Project: 24050002

WorkOrder Narrative:
24051621: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence QC Notes:
LCS/LCSD-75740 Radium-226_DW(903.0): LCS/LCSD exhibit a high RPD, individually each LCS/LCSD meet required criteria.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Cuyahoga Falls, Ohio 4422
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Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24051621**
Date: **6/12/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Website: http://www.settek.com

Workorder Sample Summary

WO#: **24051621**

12-Jun-24

CLIENT: TEKLAB Inc,
Project: 24050002

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24051621-001	24050002-001		5/13/2024 12:20:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-002	24050002-002		5/8/2024 11:14:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-003	24050002-003		5/8/2024 12:44:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-004	24050002-004		5/9/2024 12:32:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-005	24050002-005		5/9/2024 1:48:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-006	24050002-006		5/9/2024 10:28:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-007	24050002-007		5/9/2024 11:19:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-008	24050002-008		5/9/2024 11:53:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-009	24050002-009		5/10/2024 10:37:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-010	24050002-010		5/13/2024 10:52:00 AM	5/17/2024 12:15:00 PM	Non-Potable Water
24051621-011	24050002-011		5/9/2024 12:12:00 PM	5/17/2024 12:15:00 PM	Non-Potable Water

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Website: http://www.settek.com

DATES REPORT

WO#: **24051621**

12-Jun-24

Client: TEKLAB Inc,
Project: 24050002

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24051621-001A	24050002-001	5/13/2024 12:20:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-002A	24050002-002	5/8/2024 11:14:00 AM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-003A	24050002-003	5/8/2024 12:44:00 PM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-004A	24050002-004	5/9/2024 12:32:00 PM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-005A	24050002-005	5/9/2024 1:48:00 PM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-006A	24050002-006	5/9/2024 10:28:00 AM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-007A	24050002-007	5/9/2024 11:19:00 AM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-008A	24050002-008	5/9/2024 11:53:00 AM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-009A	24050002-009	5/10/2024 10:37:00 AM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-010A	24050002-010	5/13/2024 10:52:00 AM		Radium-226 (EPA 903.0)		5/30/2024 1:15:00 PM	6/10/2024 12:05:07 PM
				Radium-228 (EPA 904.0)		5/30/2024 1:15:00 PM	6/7/2024 12:56:15 PM
24051621-011A	24050002-011	5/9/2024 12:12:00 PM		Radium-226 (EPA 903.0)		5/28/2024 10:05:00 AM	6/4/2024 9:57:00 AM
				Radium-228 (EPA 904.0)		5/28/2024 10:05:00 AM	6/3/2024 2:37:00 PM

Original

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Analytical Report

(consolidated)

WO#: **24051621**

Date Reported: **6/12/2024**

CLIENT: TEKLAB Inc,
Collection Date: 5/10/2024 10:37:00 AM
Project: 24050002
Lab ID: 24051621-009
Matrix: NON-POTABLE WATER
Client Sample ID: 24050002-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	1.25	1.00		pCi/L	± 0.200	1	6/10/2024 12:05:07 PM
Yield	0.960					1	6/10/2024 12:05:07 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.460	1	6/7/2024 12:56:15 PM
Yield	0.830					1	6/7/2024 12:56:15 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24051621**

12-Jun-24

Client: TEKLAB Inc,
Project: 24050002 **BatchID:** **75651**

Sample ID: **MB-75651** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186770**
Client ID: **PBW** Batch ID: **75651** TestNo: **E904.0** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5060869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCSD-75651** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186770**
Client ID: **LCSS02** Batch ID: **75651** TestNo: **E904.0** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5060871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.50	1.00	5.000	0	90.0	50	130	3.520	24.4	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **24051612-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186770**
Client ID: **BatchQC** Batch ID: **75651** TestNo: **E904.0** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5060876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	0.970			0	0			1.000	3.05		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24051621**

12-Jun-24

Client: TEKLAB Inc,
Project: 24050002 **BatchID:** **75651**

Sample ID: **24051613-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186770**
Client ID: **BatchQC** Batch ID: **75651** TestNo: **E904.0** **E903-904** Analysis Date: **6/3/2024** SeqNo: **5060878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	30	R
Yield	0.950			0	0			0.9500	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24051621**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050002 **BatchID:** **75651**

Sample ID: **24051612-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186773**
Client ID: **BatchQC** Batch ID: **75651** TestNo: **E903.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5061011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	0.960							1.000	4.08	0	

Sample ID: **24051613-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/28/2024** RunNo: **186773**
Client ID: **BatchQC** Batch ID: **75651** TestNo: **E903.0** **E903-904** Analysis Date: **6/4/2024** SeqNo: **5061013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	30	
Yield	0.940							0.9500	1.06	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24051621**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050002 **BatchID:** **75651**

Sample ID: **MB-75651**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186773**
Client ID: **PBW**	Batch ID: **75651**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/4/2024**	SeqNo: **5061004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	ND										

Sample ID: **LCS-75651**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186773**
Client ID: **LCSW**	Batch ID: **75651**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/4/2024**	SeqNo: **5061005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.94	1.00	5.000	0	98.8	70	130				

Sample ID: **LCSD-75651**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **5/28/2024**	RunNo: **186773**
Client ID: **LCSS02**	Batch ID: **75651**	TestNo: **E903.0**	**E903-904**	Analysis Date: **6/4/2024**	SeqNo: **5061006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.48	1.00	5.000	0	89.6	70	130	4.940	9.77	20	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24051621**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050002 **BatchID:** **75740**

Sample ID: **MB-75740** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **PBW** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075299**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-75740** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **LCSW** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075300**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.94	1.00	5.000	0	78.8	50	130				
Yield	0.890			0	0						

Sample ID: **LCSD-75740** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **LCSS02** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075301**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.07	1.00	5.000	0	81.4	50	130	3.940	3.25	20	
Yield	0.860			0	0			0.8900	3.43		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24051621**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050002 **BatchID:** **75740**

Sample ID: **24050773-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075306**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	0.910			0	0			0.8900	2.22		

Sample ID: **24052198-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187287**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E904.0** **E903-904** Analysis Date: **6/7/2024** SeqNo: **5075324**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	0.930			0	0			0.9600	3.17		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24051621**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050002 **BatchID:** **75740**

Sample ID: **MB-75740** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **PBW** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075489**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-75740** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **LCSW** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075490**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.05	1.00	5.000	0	81.0	70	130				QLR

Sample ID: **LCSD-75740** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **LCSS02** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.95	1.00	5.000	0	99.0	70	130	4.050	20.0	20	R

Sample ID: **24050773-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075496**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

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Cuyahoga Falls, Ohio 44223
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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24051621**
12-Jun-24

Client: TEKLAB Inc,
Project: 24050002 **BatchID:** **75740**

Sample ID: **24050773-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075496**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							0.9400	6.19	0	

Sample ID: **24052198-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **5/30/2024** RunNo: **187303**
Client ID: **BatchQC** Batch ID: **75740** TestNo: **E903.0** **E903-904** Analysis Date: **6/10/2024** SeqNo: **5075514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	0.960							1.000	4.08	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Pg 1 of 1

24051621

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Cooler Temp: 20.3-21.3 Sampler: Client QC Level: 2

20.3+0.0=
21.3+0.0= Fedex, Cooler

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Project# 24050002

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 36304 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228												
						COM				DH							
	24050002-001	5/13/2024 12:20	HNO3	Groundwater	✔	28				1							
	24050002-002	5/8/2024 11:14	HNO3	Groundwater	✔	18				1							
	24050002-003	5/8/2024 12:44	HNO3	Groundwater	✔	32				1							
	24050002-004	5/9/2024 12:32	HNO3	Groundwater	✔	18				1							
	24050002-005	5/9/2024 13:48	HNO3	Groundwater	✔	38				1							
	24050002-006	5/9/2024 10:28	HNO3	Groundwater	✔	28				1							
	24050002-007	5/9/2024 11:19	HNO3	Groundwater	✔	38				1							
	24050002-008	5/9/2024 11:53	HNO3	Groundwater	✔	12				1							
	24050002-009	5/10/2024 10:37	HNO3	Groundwater	✔	22				1							
	24050002-010	5/13/2024 10:52	HNO3	Groundwater	✔	34				1							
	24050002-011	5/9/2024 12:12	HNO3	Groundwater	✔					Did not receive -011							

*Relinquished By	Date/Time	Received By	Date/Time
Randi Reilly	5/14/24	Tanya Rabuka	5/17/24, 1215

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24051621 RcptNo: 1

Logged by:	Tegan A. Richards	5/17/2024 12:15:00 PM	Tegan Richards
Completed By:	Tegan A. Richards	5/21/2024 2:09:09 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	5/21/2024 2:33:59 PM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☐ No ☑ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

18. Additional remarks:

same as Summit ID 240516201-001 per email
Did not receive -011

Cooler Information

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24051621 RcptNo: 1

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	20.3	Good	Not Present			
2	21.3	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

June 07, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells G1-G2-G3 **WorkOrder:** 24050001

Dear Eric Staley:

TEKLAB, INC received 12 samples on 5/13/2024 4:10:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	67
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24050001

Client Project: Landfill Monitoring Wells G1-G2-G3 **Report Date:** 07-Jun-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

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Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

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Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24

Cooler Receipt Temp: 13.5 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

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Springfield, IL 62711-9415
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Email KKlostermann@teklabinc.com

Kansas City

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Collinsville Air

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Phone (618) 344-1004
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Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2024	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2024	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24
Lab ID: 24050001-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 05/13/2024 12:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**120**	µg/L	1	05/15/2024 19:00	222911
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/15/2024 19:00	222911
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	05/15/2024 19:00	222911
Magnesium	NELAP	0.050		**65.1**	mg/L	1	05/15/2024 19:00	222911
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/15/2024 19:00	222911
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**190**	µg/L	1	05/15/2024 19:38	222939
Barium	NELAP	2.5		**23.0**	µg/L	1	05/15/2024 19:38	222939
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/15/2024 19:38	222939
Boron	NELAP	20.0		**124**	µg/L	1	05/15/2024 19:38	222939
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/15/2024 19:38	222939
Calcium	NELAP	0.100		**163**	mg/L	1	05/15/2024 19:38	222939
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/15/2024 19:38	222939
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/15/2024 19:38	222939
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/15/2024 19:38	222939
Iron	NELAP	40.0		**225**	µg/L	1	05/15/2024 19:38	222939
Magnesium	NELAP	0.050		**67.2**	mg/L	1	05/15/2024 19:38	222939
Manganese	NELAP	7.0		**1090**	µg/L	1	05/15/2024 19:38	222939
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/15/2024 19:38	222939
Potassium	NELAP	0.100		**0.647**	mg/L	1	05/15/2024 19:38	222939
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/15/2024 19:38	222939
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/15/2024 19:38	222939
Sodium	NELAP	0.050		**28.2**	mg/L	1	05/15/2024 19:38	222939
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/15/2024 19:38	222939
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/15/2024 19:38	222939
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 16:26	222911
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 16:26	222911
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0	B	**< 1.0**	µg/L	5	05/16/2024 19:10	222939
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/16/2024 19:10	222939
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/16/2024 19:10	222939
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/16/2024 19:10	222939
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/21/2024 20:21	223077
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/21/2024 20:19	223077
EPA 600 548.1, ENDOTHALL BY GC/MS								
Endothall	*	10		**ND**	µg/L	1	05/15/2024 16:37	222914
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDT	NELAP	0.05		**ND**	µg/L	1	05/17/2024 15:27	223091
Alachlor	NELAP	0.05		**ND**	µg/L	1	05/17/2024 15:27	223091
Aldrin	NELAP	0.05		**ND**	µg/L	1	05/17/2024 15:27	223091
Dieldrin	NELAP	0.05		**ND**	µg/L	1	05/17/2024 15:27	223091
Endrin	NELAP	0.05		**ND**	µg/L	1	05/17/2024 15:27	223091

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24
Lab ID: 24050001-002
Client Sample ID: G110
Matrix: GROUNDWATER
Collection Date: 05/08/2024 11:14

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**89.0**	µg/L	1	05/14/2024 16:30	222458
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/14/2024 16:30	222458
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	05/14/2024 16:30	222458
Magnesium	NELAP	0.050		**41.2**	mg/L	1	05/14/2024 16:30	222458
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/14/2024 16:30	222458
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**35.0**	µg/L	1	05/13/2024 13:43	222764
Barium	NELAP	2.5		**184**	µg/L	1	05/13/2024 13:43	222764
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/13/2024 13:43	222764
Boron	NELAP	20.0		**94.1**	µg/L	1	05/13/2024 13:43	222764
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/13/2024 13:43	222764
Calcium	NELAP	0.100		**109**	mg/L	1	05/15/2024 19:39	222939
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 13:43	222764
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 13:43	222764
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 13:43	222764
Iron	NELAP	40.0		**5730**	µg/L	1	05/13/2024 13:43	222764
Magnesium	NELAP	0.050		**45.6**	mg/L	1	05/15/2024 19:39	222939
Manganese	NELAP	7.0		**80.5**	µg/L	1	05/15/2024 19:39	222939
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 13:43	222764
Potassium	NELAP	0.100		**1.55**	mg/L	1	05/15/2024 19:39	222939
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/13/2024 13:43	222764
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/13/2024 13:43	222764
Sodium	NELAP	0.050		**13.1**	mg/L	1	05/15/2024 19:39	222939
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 13:43	222764
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 13:43	222764
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**4.6**	µg/L	5	05/14/2024 22:09	222458
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 23:13	222458
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0	B	**< 1.0**	µg/L	5	05/15/2024 21:39	222764
Arsenic	NELAP	1.0		**5.8**	µg/L	5	05/15/2024 21:39	222764
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 21:39	222764
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/15/2024 21:39	222764
Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/21/2024 20:25	223077
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/21/2024 20:23	223077
EPA 600 548.1, ENDOTHALL BY GC/MS								
Endothall	*	10		**ND**	µg/L	1	05/15/2024 16:53	222844
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDT	NELAP	0.05		**ND**	µg/L	1	05/14/2024 12:13	222870
Alachlor	NELAP	0.05		**ND**	µg/L	1	05/14/2024 12:13	222870
Aldrin	NELAP	0.05		**ND**	µg/L	1	05/14/2024 12:13	222870
Dieldrin	NELAP	0.05		**ND**	µg/L	1	05/14/2024 12:13	222870
Endrin	NELAP	0.05		**ND**	µg/L	1	05/14/2024 12:13	222870

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Laboratory Results

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Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24
Lab ID: 24050001-004
Client Sample ID: G112
Matrix: GROUNDWATER
Collection Date: 05/09/2024 12:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**343**	µg/L	1	05/14/2024 16:32	222458
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/14/2024 16:32	222458
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	05/14/2024 16:32	222458
Magnesium	NELAP	0.050		**61.9**	mg/L	1	05/14/2024 16:32	222458
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/14/2024 16:32	222458
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**47.0**	µg/L	1	05/13/2024 19:17	222798
Barium	NELAP	2.5		**449**	µg/L	1	05/13/2024 19:17	222798
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/13/2024 19:17	222798
Boron	NELAP	20.0		**330**	µg/L	1	05/13/2024 19:17	222798
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/13/2024 19:17	222798
Calcium	NELAP	0.100		**194**	mg/L	1	05/13/2024 19:17	222798
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:17	222798
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:17	222798
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:17	222798
Iron	NELAP	40.0		**6040**	µg/L	1	05/13/2024 19:17	222798
Magnesium	NELAP	0.050		**68.7**	mg/L	1	05/13/2024 19:17	222798
Manganese	NELAP	7.0		**225**	µg/L	1	05/13/2024 19:17	222798
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:17	222798
Potassium	NELAP	0.100		**2.30**	mg/L	1	05/13/2024 19:17	222798
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/13/2024 19:17	222798
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/13/2024 19:17	222798
Sodium	NELAP	0.050		**32.0**	mg/L	1	05/13/2024 19:17	222798
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 19:17	222798
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 19:17	222798
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/14/2024 22:19	222458
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 23:23	222458
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/14/2024 22:40	222798
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/14/2024 22:40	222798
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 19:34	222798
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/15/2024 19:34	222798
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2024 13:01	223077
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/21/2024 20:37	223077
EPA 600 548.1, ENDOTHALL BY GC/MS								
Endothall	*	10		**ND**	µg/L	1	05/14/2024 19:43	222844
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDT	NELAP	0.05		**ND**	µg/L	1	05/15/2024 17:48	222988
Alachlor	NELAP	0.05		**ND**	µg/L	1	05/15/2024 17:48	222988
Aldrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 17:48	222988
Dieldrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 17:48	222988
Endrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 17:48	222988
gamma-BHC	NELAP	0.05		**ND**	µg/L	1	05/15/2024 17:48	222988

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24
Lab ID: 24050001-005
Client Sample ID: G113
Matrix: GROUNDWATER
Collection Date: 05/09/2024 13:48

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**1290**	µg/L	1	05/14/2024 16:36	222458
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/14/2024 16:36	222458
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	05/14/2024 16:36	222458
Magnesium	NELAP	0.050		**73.5**	mg/L	1	05/14/2024 16:36	222458
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/14/2024 16:36	222458
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**123**	µg/L	1	05/13/2024 19:18	222798
Barium	NELAP	2.5		**359**	µg/L	1	05/13/2024 19:18	222798
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/13/2024 19:18	222798
Boron	NELAP	20.0		**1480**	µg/L	1	05/13/2024 19:18	222798
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/13/2024 19:18	222798
Calcium	NELAP	0.100		**354**	mg/L	1	05/13/2024 19:18	222798
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:18	222798
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:18	222798
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:18	222798
Iron	NELAP	40.0		**703**	µg/L	1	05/15/2024 11:02	222798
Magnesium	NELAP	0.050		**82.8**	mg/L	1	05/13/2024 19:18	222798
Manganese	NELAP	7.0		**12800**	µg/L	1	05/13/2024 19:18	222798
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:18	222798
Potassium	NELAP	0.100		**3.52**	mg/L	1	05/13/2024 19:18	222798
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/13/2024 19:18	222798
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/13/2024 19:18	222798
Sodium	NELAP	0.050		**21.3**	mg/L	1	05/13/2024 19:18	222798
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 19:18	222798
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 19:18	222798
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/14/2024 22:24	222458
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 23:27	222458
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/14/2024 23:38	222798
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/14/2024 23:38	222798
Lead	NELAP	1.0		**4.6**	µg/L	5	05/15/2024 19:39	222798
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/15/2024 19:39	222798
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/21/2024 21:22	223077
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/21/2024 21:20	223077
EPA 600 548.1, ENDOTHALL BY GC/MS								
Endothall	*	10		**ND**	µg/L	1	05/14/2024 19:58	222844
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDT	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:02	222988
Alachlor	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:02	222988
Aldrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:02	222988
Dieldrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:02	222988
Endrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:02	222988
gamma-BHC	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:02	222988

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24
Lab ID: 24050001-007
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 05/09/2024 11:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**3220**	µg/L	1	05/14/2024 16:37	222458
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/14/2024 16:37	222458
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	05/14/2024 16:37	222458
Magnesium	NELAP	0.050		**74.5**	mg/L	1	05/14/2024 16:37	222458
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/14/2024 16:37	222458
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**295**	µg/L	1	05/13/2024 19:33	222798
Barium	NELAP	2.5		**606**	µg/L	1	05/13/2024 19:33	222798
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/13/2024 19:33	222798
Boron	NELAP	20.0		**3520**	µg/L	1	05/13/2024 19:33	222798
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/13/2024 19:33	222798
Calcium	NELAP	0.100		**191**	mg/L	1	05/13/2024 19:33	222798
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:33	222798
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:33	222798
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:33	222798
Iron	NELAP	40.0		**21000**	µg/L	1	05/13/2024 19:33	222798
Magnesium	NELAP	0.050		**83.1**	mg/L	1	05/13/2024 19:33	222798
Manganese	NELAP	7.0		**209**	µg/L	1	05/13/2024 19:33	222798
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:33	222798
Potassium	NELAP	0.100		**3.76**	mg/L	1	05/13/2024 19:33	222798
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/13/2024 19:33	222798
Silver	NELAP	7.0		**24.5**	µg/L	1	05/13/2024 19:33	222798
Sodium	NELAP	0.050		**40.9**	mg/L	1	05/13/2024 19:33	222798
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 19:33	222798
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 19:33	222798
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**13.5**	µg/L	5	05/14/2024 22:35	222458
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 23:37	222458
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/14/2024 23:44	222798
Arsenic	NELAP	1.0		**14.6**	µg/L	5	05/14/2024 23:44	222798
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 20:34	222798
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/15/2024 20:34	222798
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/24/2024 12:18	222922
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/24/2024 12:16	222922
EPA 600 548.1, ENDOTHALL BY GC/MS								
Endothall	*	10		**ND**	µg/L	1	05/15/2024 19:09	222844
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDT	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:29	222988
Alachlor	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:29	222988
Aldrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:29	222988
Dieldrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:29	222988
Endrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:29	222988
gamma-BHC	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:29	222988

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24
Lab ID: 24050001-008
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 05/09/2024 11:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0	S	**11500**	µg/L	1	05/14/2024 16:38	222458
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/14/2024 16:38	222458
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	05/14/2024 16:38	222458
Magnesium	NELAP	0.050	S	**88.5**	mg/L	1	05/14/2024 16:38	222458
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/14/2024 16:38	222458
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**< 25.0**	µg/L	1	05/13/2024 19:34	222798
Barium	NELAP	2.5		**520**	µg/L	1	05/13/2024 19:34	222798
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/13/2024 19:34	222798
Boron	NELAP	20.0		**12800**	µg/L	1	05/13/2024 19:34	222798
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/13/2024 19:34	222798
Calcium	NELAP	0.100		**266**	mg/L	1	05/13/2024 19:34	222798
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:34	222798
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:34	222798
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:34	222798
Iron	NELAP	40.0		**33200**	µg/L	1	05/13/2024 19:34	222798
Magnesium	NELAP	0.050		**101**	mg/L	1	05/13/2024 19:34	222798
Manganese	NELAP	7.0		**1300**	µg/L	1	05/13/2024 19:34	222798
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/13/2024 19:34	222798
Potassium	NELAP	0.100		**2.40**	mg/L	1	05/13/2024 19:34	222798
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/13/2024 19:34	222798
Silver	NELAP	7.0		**14.2**	µg/L	1	05/13/2024 19:34	222798
Sodium	NELAP	0.050		**38.4**	mg/L	1	05/13/2024 19:34	222798
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 19:34	222798
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/13/2024 19:34	222798
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**3.0**	µg/L	5	05/15/2024 23:42	222458
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 23:42	222458
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/14/2024 23:49	222798
Arsenic	NELAP	1.0		**3.5**	µg/L	5	05/14/2024 23:49	222798
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 20:39	222798
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/15/2024 20:39	222798
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/24/2024 12:23	222922
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/24/2024 12:20	222922
EPA 600 548.1, ENDOTHALL BY GC/MS								
Endothall	*	10		**ND**	µg/L	1	05/15/2024 17:23	222914
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDT	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:42	222988
Alachlor	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:42	222988
Aldrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:42	222988
Dieldrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:42	222988
Endrin	NELAP	0.05		**ND**	µg/L	1	05/15/2024 18:42	222988

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24
Lab ID: 24050001-010
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 05/13/2024 10:52

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Boron	NELAP	20.0		**2640**	µg/L	1	05/15/2024 19:01	222911
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/15/2024 19:01	222911
Chromium	NELAP	4.0		**< 4.0**	µg/L	1	05/15/2024 19:01	222911
Magnesium	NELAP	0.050	S	**57.7**	mg/L	1	05/15/2024 19:01	222911
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/15/2024 19:01	222911
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0	S	**921**	µg/L	1	05/21/2024 11:40	222998
Barium	NELAP	2.5		**607**	µg/L	1	05/21/2024 11:40	222998
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/21/2024 11:40	222998
Boron	NELAP	20.0		**2730**	µg/L	1	05/21/2024 11:40	222998
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/21/2024 11:40	222998
Calcium	NELAP	0.100		**141**	mg/L	1	05/22/2024 9:20	222998
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/21/2024 11:40	222998
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/21/2024 11:40	222998
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/21/2024 11:40	222998
Iron	NELAP	40.0	S	**18800**	µg/L	1	05/21/2024 11:40	222998
Magnesium	NELAP	0.050		**58.9**	mg/L	1	05/22/2024 9:20	222998
Manganese	NELAP	7.0		**234**	µg/L	1	05/21/2024 11:40	222998
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/21/2024 11:40	222998
Potassium	NELAP	0.100		**2.35**	mg/L	1	05/22/2024 9:20	222998
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/21/2024 11:40	222998
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/21/2024 11:40	222998
Sodium	NELAP	0.050	S	**42.0**	mg/L	1	05/22/2024 9:20	222998
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/21/2024 11:40	222998
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/21/2024 11:40	222998
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**23.1**	µg/L	5	05/15/2024 15:07	222911
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/15/2024 15:07	222911
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0	B	**< 1.0**	µg/L	5	05/21/2024 13:20	222998
Arsenic	NELAP	1.0		**17.5**	µg/L	5	05/21/2024 13:20	222998
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/21/2024 13:20	222998
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/21/2024 13:20	222998
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2024 15:04	223231
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2024 15:02	223231
EPA 600 548.1, ENDOTHALL BY GC/MS								
Endothall	*	10		**ND**	µg/L	1	05/15/2024 18:23	222914
SW-846 3510C, 8081B, CHLORINATED PESTICIDES BY GC/ECD								
4,4´-DDT	NELAP	0.05		**ND**	µg/L	1	05/17/2024 15:41	223091
Alachlor	NELAP	0.05		**ND**	µg/L	1	05/17/2024 15:41	223091
Aldrin	NELAP	0.05		**ND**	µg/L	1	05/17/2024 15:41	223091

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24050001
Client Project: Landfill Monitoring Wells G1-G2-G3
Report Date: 07-Jun-24

Carrier: Daniel Stupar
Received By: WAO

Completed by: Amber Dilallo
On: 08-May-24

Reviewed by: Ellie Hopkins
On: 13-May-24

Pages to follow: Chain of custody 6 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 13.5
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Samples were received on 5/8/24 at 1505 on ice [13.5C - LTG5]. Additional Sulfuric Acid (97586) was needed for R111 total container. pH strip #89660/96651.

Preservation checks for O&G analysis are to be completed by the laboratory technician prior to analysis. - amberdilallo - 5/8/2024 4:04:00 PM

Samples were received on 5/9/2024 at 16:35 on ice [12.1C - LTG#5]. pH strip #96651/89660 - pschultz - 5/10/202 9:08:23 AM

Samples were received on 5/10/2024 at 13:30 on ice [10.7C - LTG#3]. pH strip #96651/89660. - pschultz - 5/10/2024 2:31:44 PM

Samples were received on 5/13/2024 at 16:10 on ice [10.1C - LTG#7]. pH strip #96651/89660. - pschultz - 5/13/2024 4:35:48 PM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24050001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☐ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☐ No

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 13.5 °C 5
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: 2 pumps H2SO4 (97886) added to total R111 PW96651 DS 5/18 OH 19m 5/18/24

Client Comments: 89660

TEKLAB
Courier

Quarter 2 (even number years)
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2-G3

SAMPLE COLLECTOR'S NAME
T Camil Daramp

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide O&G OOH	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)	VOC Pest-PCB	SVOC-PSIMS	Herbicides	Endothall EDB-DBCP
24050001 001	R101		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
002	G110	5/8/24 1114	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
003	R111	6/8/24 1244	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
004	G112		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
005	G113		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
006	G120		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
007	G121		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
008	G122		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
009	AW-1		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
010	AW-2		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
011	RW-3		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5/8 1505	Whitney Deem	5/8/24 1505

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

DS 5/8

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24050001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☐ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☐ No

Client Comments:
Quarter 2 (even number years)
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2-G3

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED												
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide O&G OOH	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)	VOC Pest-PCB	SVOC-PSIMS	Herbicides	Endothall EDB-DBCP
24050001-002	DUPLICATE		Groundwater	9	2	1	5	3						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
			Groundwater																							
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			Groundwater																							

Relinquished By	Date/Time	Received By	Date/Time
Daniel Camp	5-8 / 1505	Whitney Quinn	5-8-24 1505

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24050001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 12.1 °C
Preserved in: [ ] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: pH/96651/89460 ØHS PS 5/10

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [ ] No
Are these samples known to be hazardous? [ ] Yes [ ] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [ ] Yes [ ] No

Client Comments:
Quarter 2 (even number years)
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2-G3

SAMPLE COLLECTOR'S NAME
JCarroll

RESULTS REQUESTED
[ ] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other ____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide O&G OOH	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)	VOC Pest-PCB	SVOC-PSIMS	Herbicides	Endothall EDB-DBCP
24050001-001	R101		Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
002	G110		Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
003	R111		Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
004	G112	5/9/24 1232	Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
005	G113	1348	Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
006	G120	1028	Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
007	G121	1119	Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
008	G122	1153	Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
011	RW-3	5-9-24 1212	Groundwater	9	2	1	5	3					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-9/1635	Mark Reed	5/9/24 1635

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24050001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☐ No

Are these samples known to be hazardous? ☐ Yes ☐ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☐ No

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 12.1 °C LTGTHS

Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES:

Client Comments:

Quarter 2 (even number years)
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER

Landfill Monitoring Wells G1-G2-G3

SAMPLE COLLECTOR'S NAME

T Carroll

RESULTS REQUESTED

☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED													
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide O&G OOH	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)	VOC Pest-PCB	SVOC-PSIMS	Herbicides	Endothall EDB-DBCP
24050001-012	DUPLICATE	5/9/24 1212	Groundwater	9	2	1	5	3						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
			Groundwater																							
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			Groundwater																							

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-9 1635	Nick Field	5/9/24 1635

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24050001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

LT63

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 10.7 °C
Preserved in: ☒ LAB ☒ FIELD FOR LAB USE ONLY
LAB NOTES: PHV 96651/89660 5110WO NO HS

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☐ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☐ No

Client Comments:
Quarter 2 (even number years)
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2-G3

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide O&G OOH	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)	VOC Pest-PCB	SVOC-PSIMS	Herbicides	Endothall EDB-DBCP
24050001 001	R101		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
002	G110		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
003	R111		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
004	G112		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
005	G113		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
006	G120		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
007	G121		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
008	G122		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
009	AW-1	5-10-24 / 1037	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
010	AW-2		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
011	RW-3		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	5-10-24 / 1330	[signature]	5/10/24 1330

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24050001

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☐ No
Are these samples known to be hazardous? ☐ Yes ☐ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☐ Yes ☐ No

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 10.1 °C LTG 7
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: TH/96651/882660 LH 5/13 ~~HS present~~ TE PS 5/13 HS OK PS 5/13

Client Comments:
Quarter 2 (even number years)
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2-G3

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide O&G OOH	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)	VOC Pest-PCB	SVOC-PSIMS	Herbicides	Endothall EDB-DBCP
24050001 001	R101	5-13-24 / 1220	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
002	G110		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
003	R111		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
004	G112		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
005	G113		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
006	G120		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
007	G121		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
008	G122		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
009	AW-1		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
010	AW-2	5-13-24 / 1052	Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
011	RW-3		Groundwater	9	2	1	5	3					✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
Daniel Crump	5-13-24 / 1610	Whitney Quinn	5/13/24 1610

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Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- LF- 2Q 2024

			Weather				Well Condition				
WO Sample	**Well ID**	**Program/ Sample Type**	**Temp (°F)**	**Precipitation**	**Wind Direction**	**Sky**	**Well Pad**	**Casing**	**Protective Cover**	**Reference Mark/ ID**	**Well Locked**
001	R101	Groundwater Sample	72.0	None	S	Cloudy	Good	Good	Good	Yes	No
002	G110	Groundwater Sample	75.0	Light	S	Cloudy	Good	Good	Good	Yes	No
003	R111	Groundwater Sample	75.0	Light	S	Cloudy	Good	Good	Good	Yes	No
004	G112	Groundwater Sample	71.0	None	W	Cloudy	Good	Good	Good	Yes	No
005	G113	Groundwater Sample	72.0	None	W	Cloudy	Good	Good	Good	Yes	No
006	G120	Groundwater Sample	68.0	None	W	Cloudy	Good	Good	Good	Yes	No
007	G121	Groundwater Sample	69.0	None	W	Partly cloudy	Good	Good	Good	Yes	No
008	G122	Groundwater Sample	71.0	None	W	Cloudy	Good	Good	Good	Yes	No
009	AW-1	Groundwater Sample	59.0	None	NW	Partly cloudy	Good	Good	Good	Yes	No
010	AW-2	Groundwater Sample	71.0	None	S	Cloudy	Good	Good	Good	Yes	No
011	RW-3	Groundwater Sample	73.0	None	S	Partly cloudy	Good	Good	Good	Yes	No
012	Duplicate	QA/QC Sample	73.0	None	S	Partly cloudy	Good	Good	Good	Yes	No

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- LF- 2Q 2024

		GW Level Measurement				Purge Activities							
WO Sample	**Well ID**	**Sampler Initials**	**Date/Time**	**DTW (ft)**	**DTB (ft)**	**Sampler Initials**	**Purge Date**	**Purge Start Time**	**Purge End Time**	**Purging/Sampling Device**	**Well Diameter (in)**	**Actual Volume Purged (L)**	**Purge Rate (mL/min)**
001	R101	JC	5/13/24 11:56	5.95	35.27	JC	5/13/2024	11:58	12:20	Submersible Pump	2"	7.0	318.2
002	G110	DC	5/8/24 10:22	23.19	57.15	DC	5/8/2024	10:27	11:14	Peristaltic Pump	2"	6.0	127.7
003	R111	DC	5/8/24 12:04	24.22	55.75	DC	5/8/2024	12:09	12:44	Peristaltic Pump	2"	7.0	200.0
004	G112	JC	5/9/24 12:06	26.99	58.81	JC	5/9/2024	12:19	12:32	Submersible Pump	2"	5.0	384.6
005	G113	JC	5/9/24 13:31	3.85	12.85	JC	5/9/2024	13:34	13:48	Submersible Pump	2"	3.0	214.3
006	G120	JC	5/9/24 9:58	14.79	50.37	JC	5/9/2024	10:00	10:28	Submersible Pump	2"	11.0	392.9
007	G121	JC	5/9/24 11:03	26.76	58.56	JC	5/9/2024	11:03	11:19	Submersible Pump	2"	6.0	375.0
008	G122	JC	5/9/24 11:29	27.67	49.29	JC	5/9/2024	11:39	11:53	Submersible Pump	2"	6.0	**428.6**
009	AW-1	JC	5/10/24 9:39	12.63	54.81	JC	5/10/2024	09:44	10:37	Submersible Pump	2"	17.0	320.8
010	AW-2	JC	5/13/24 10:11	3.29	32.64	JC	5/13/2024	10:12	10:52	Submersible Pump	2"	14.0	350.0
011	RW-3	TAC	5/9/24 11:19	7.87	44.01	TAC	5/9/2024	11:23	12:12	Bladder Pump	2"	9.0	183.7
012	Duplicate	TAC	5/9/24 11:19	7.87	44.01	TAC	5/9/2024	11:23	12:12	Bladder Pump	2"	9.0	183.7

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- LF- 2Q 2024

WO Sample	Well ID	Sampling Activities and Observations									
		Sampler Initials	Date	Time	Sampling Method	Field Filtered	Appearance	Odor	Color	Post-Sample DTW (ft)	Drawdown (ft)
001	R101	JC	05/13/24	12:20	Low Flow	Yes	Clear	None	none	6.23	0.28
002	G110	TAC	05/08/24	11:14	Low Flow	Yes	Clear	None	None	23.38	0.19
003	R111	TAC	05/08/24	12:44	Low Flow	Yes	Clear	None	None	24.33	0.11
004	G112	JC	05/09/24	12:32	Low Flow	Yes	Clear	None	none	27.09	0.10
005	G113	JC	05/09/24	13:48	Low Flow	Yes	Clear	Strong	none	3.97	0.12
006	G120	JC	05/09/24	10:28	Low Flow	Yes	Clear	Slight	none	15.36	**0.57**
007	G121	JC	05/09/24	11:19	Low Flow	Yes	Clear	None	none	27.15	0.39
008	G122	JC	05/09/24	11:53	Low Flow	Yes	Clear	None	none	27.97	0.30
009	AW-1	JC	05/10/24	10:37	Low Flow	Yes	Clear	None	none	12.98	0.35
010	AW-2	JC	05/13/24	10:52	Low Flow	Yes	Slightly cloudy	Slight	lt brown	4.67	**1.38**
011	RW-3	TAC	05/09/24	12:12	Low Flow	Yes	Clear	None	None	14.87	**7.00**
012	Duplicate	TAC	05/09/24	12:12	Low Flow	Yes	Clear	None	None	14.87	**7.00**

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Summary
CWLP- LF- 2Q 2024

WO Sample	Well ID	COMMENTS
001	R101	
002	G110	
003	R111	
004	G112	
005	G113	
006	G120	Flush Mount well
007	G121	
008	G122	
009	AW-1	
010	AW-2	
011	RW-3	
012	Duplicate	

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Stabilized Field Parameters Summary
CWLP- LF- 2Q 2024

Well ID	Date	Time	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)	DTW (ft)	LIMS ID
R101	5/13/2024	12:20	13.8	56.9	6.92	804.8	2.63	16.14	77.6	5.95	24050001-001A
G110	5/8/2024	11:14	15.5	60.0	6.54	783.4	1.42	4.97	-62.3	23.19	24050001-002A
R111	5/8/2024	12:44	14.5	58.0	6.01	120.4	3.91	2.71	66.5	24.22	24050001-003A
G112	5/9/2024	12:32	14.6	58.3	6.97	1,066.2	0.17	4.06	-136.2	26.99	24050001-004A
G113	5/9/2024	13:48	15.5	59.8	6.27	1,357.4	0.17	5.05	-273.2	3.85	24050001-005A
G120	5/9/2024	10:28	17.5	63.4	6.65	1,294.2	0.11	7.19	-147.1	14.79	24050001-006A
G121	5/9/2024	11:19	15.0	59.0	6.76	1,041.5	0.15	8.16	-144.6	26.76	24050001-007A
G122	5/9/2024	11:53	14.6	58.2	6.64	1,225.7	0.28	2.93	-119.2	27.67	24050001-008A
AW-1	5/10/2024	10:37	14.5	58.1	6.58	1,063.8	0.14	25.85	-122.3	12.63	24050001-009A
AW-2	5/13/2024	10:52	15.0	59.0	6.83	783.6	0.07	8.08	-160.7	3.29	24050001-010A
RW-3	5/9/2024	12:12	15.1	59.1	6.70	644.4	0.82	23.4	-105.9	7.87	24050001-011A
Duplicate	5/9/2024	12:12	15.1	59.1	6.70	644.4	0.82	23.4	-105.9	7.87	24050001-012A

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- Groundwater Quality Parameters
CWLP- LF- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
R101	5/13/2024	12:11	5.95	12.9	55.3	6.89	804.9	2.67	20.15	78.8
R101	5/13/2024	12:14	5.95	13.5	56.3	6.92	804.6	2.65	18.08	78.3
R101	5/13/2024	12:17	5.95	13.4	56.2	6.92	805.4	2.65	16.91	79.0
R101	5/13/2024	12:20	5.95	13.8	56.9	6.92	804.8	2.63	16.14	77.6

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- Groundwater Quality Parameters
CWLP- LF- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G110	5/8/2024	10:50	23.19	15.6	60.0	6.91	779.1	2.22	40.97	-30.7
G110	5/8/2024	10:53	23.19	15.5	59.8	6.86	778.3	2.09	34.58	-33.5
G110	5/8/2024	10:56	23.19	15.4	59.8	6.82	776.5	1.99	41.42	-36.6
G110	5/8/2024	10:59	23.19	15.4	59.8	6.78	776.9	1.93	14.75	-41.4
G110	5/8/2024	11:02	23.19	15.4	59.7	6.75	776.2	1.84	13.25	-45.4
G110	5/8/2024	11:05	23.19	15.4	59.7	6.70	778.3	1.70	31.78	-49.4
G110	5/8/2024	11:08	23.19	15.6	60.0	6.64	778.7	1.56	7.23	-54.2
G110	5/8/2024	11:11	23.19	15.6	60.0	6.58	781.5	1.51	5.37	-58.9
G110	5/8/2024	11:14	23.19	15.5	60.0	6.54	783.4	1.42	4.97	-62.3

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- Groundwater Quality Parameters
CWLP- LF- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G112	5/9/2024	12:23	26.99	14.5	58.0	6.96	1,077.3	0.62	7.45	-126.9
G112	5/9/2024	12:26	26.99	14.5	58.1	6.96	1,076.6	0.31	5.25	-131.2
G112	5/9/2024	12:29	26.99	14.6	58.3	6.97	1,075.7	0.23	4.54	-134.7
G112	5/9/2024	12:32	26.99	14.6	58.3	6.97	1,066.2	0.17	4.06	-136.2

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- Groundwater Quality Parameters
CWLP- LF- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G113	5/9/2024	13:36	3.85	15.0	58.9	6.28	1,363.3	1.10	18.25	-149.6
G113	5/9/2024	13:39	3.85	15.3	59.5	6.29	1,364.3	0.45	16.44	-208.0
G113	5/9/2024	13:42	3.85	15.3	59.5	6.29	1,356.4	0.27	12.41	-248.5
G113	5/9/2024	13:45	3.85	15.6	60.0	6.28	1,354.6	0.23	7.26	-259.5
G113	5/9/2024	13:48	3.85	15.5	59.8	6.27	1,357.4	0.17	5.05	-273.2

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- Groundwater Quality Parameters
CWLP- LF- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G121	5/9/2024	11:07	26.76	14.9	58.9	6.79	952.5	0.35	32.06	-91.7
G121	5/9/2024	11:10	26.76	14.8	58.7	6.78	1,009.7	0.23	19.47	-129.7
G121	5/9/2024	11:13	26.76	15.0	58.9	6.76	1,037.3	0.18	15.54	-139.8
G121	5/9/2024	11:16	26.76	15.1	59.1	6.76	1,040.6	0.16	10.83	-143.1
G121	5/9/2024	11:19	26.76	15.0	59.0	6.76	1,041.5	0.15	8.16	-144.6

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- Groundwater Quality Parameters
CWLP- LF- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
G122	5/9/2024	11:44	27.67	14.6	58.2	6.66	1,183.5	0.62	10.83	-101.8
G122	5/9/2024	11:47	27.67	14.1	57.4	6.66	1,190.2	0.38	6.05	-114.3
G122	5/9/2024	11:50	27.67	14.5	58.2	6.64	1,213.2	0.30	4.39	-117.9
G122	5/9/2024	11:53	27.67	14.6	58.2	6.64	1,225.7	0.28	2.93	-119.2

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Groundwater Sampling Field Forms- Groundwater Quality Parameters
CWLP- LF- 2Q 2024

Well ID	Date	Time	DTW	Temp (°C)	Temp (°F)	pH (SU)	Sp Cond (µmhos/cm @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AW-2	5/13/2024	10:25	3.29	15.0	59.0	6.83	679.4	0.22	49.10	-101.0
AW-2	5/13/2024	10:28	3.29	15.1	59.2	6.78	759.9	0.18	42.57	-136.3
AW-2	5/13/2024	10:31	3.29	15.2	59.4	6.83	778.0	0.15	24.94	-152.7
AW-2	5/13/2024	10:34	3.29	15.1	59.2	6.83	779.2	0.13	22.03	-156.3
AW-2	5/13/2024	10:37	3.29	15.2	59.4	6.83	781.1	0.12	27.98	-157.7
AW-2	5/13/2024	10:40	3.29	15.1	59.3	6.83	781.7	0.10	19.55	-158.7
AW-2	5/13/2024	10:43	3.29	15.0	59.1	6.83	782.5	0.09	15.90	-159.2
AW-2	5/13/2024	10:46	3.29	15.0	59.0	6.83	783.4	0.08	11.59	-160.0
AW-2	5/13/2024	10:49	3.29	15.0	59.0	6.83	784.4	0.07	10.85	-160.5
AW-2	5/13/2024	10:52	3.29	15.0	59.0	6.83	783.6	0.07	8.08	-160.7

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP-LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/9/24 9:25
7.0 Buffer	WC240307F	7.00	5/9/24 9:37
10.0 Buffer	WC231027D	10.01	5/9/24 9:40
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/9/24 9:42

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.5	5/9/24 9:51
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/9/24 18:30	18.96	7.00	1,412	1.5		
CCV-1	CCV	5/9/24 18:29	20.62	7.02	1,413	1.5		

Comments:

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.01	5/10/24 8:54
7.0 Buffer	WC240307F	7.02	5/10/24 16:36
10.0 Buffer	WC231027D	10.00	5/10/24 16:36
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1413	5/10/24 16:38

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.5	5/10/24 16:38
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/10/24 16:38	18.65	7.01	1,413	1.5		
CCV-2	CCV	5/10/24 16:39	20.64	7.02	1,415	1.4		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP-LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 26599 Technician(s): B. Gillihan Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/13/24 9:29
7.0 Buffer	WC240307F	7.03	5/13/24 9:36
10.0 Buffer	WC231027D	10.01	5/13/24 9:42
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1415	5/13/24 9:51

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.6	5/13/24 9:58
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/13/24 10:05	19.72	7.02	1,415	1.6		
CCV-3	CCV	5/13/24 11:05	20.01	7.01	1,415	1.5		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP-LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Daniel Crump/Tracy Carroll Date: 5/8/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/8/24 10:09
7.0 Buffer	WC240307F	7.01	5/8/24 10:07
10.0 Buffer	WC230619B	10.00	5/8/24 10:11
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/8/24 10:14

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/8/24 10:16	22.9	7.09	1,413			
CCV-1	CCV	5/8/24 13:21	21	7.02	1,439			

Comments:

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/9/24 11:02
7.0 Buffer	WC240307F	7.02	5/9/24 11:01
10.0 Buffer	WC230619B	10.00	5/9/24 11:03
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/9/24 11:11

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/9/24 11:16	24.2	7.06	1,413			
CCV-2	CCV	5/9/24 15:03	25.2	7.08	1,488			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP-LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/10/24 9:28
7.0 Buffer	WC240307F	7.04	5/10/24 9:25
10.0 Buffer	WC230619B	10.00	5/10/24 9:31
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/10/24 9:32

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/10/24 9:36	14.5	7.05	1,414	1.95		
CCV-3	CCV	5/10/24 10:55	15.2	7.04	1,488			

Comments:

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll/Payton Yoch Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/13/24 10:00
7.0 Buffer	WC240307F	7.01	5/13/24 9:57
10.0 Buffer	WC230619B	10.00	5/13/24 10:04
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/13/24 10:09

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4	LCS	5/13/24 10:14	23.7	6.99	1,411			
CCV-4	CCV	5/13/24 14:33	28	6.90	1,435			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP-LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45986 Technician(s): Tracy Carroll/Payton Yoch Date: 5/14/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230830B	4.00	5/14/24 10:22
7.0 Buffer	WC240307F	7.01	5/14/24 10:22
10.0 Buffer	WC230619B	10.00	5/14/24 10:23
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/14/24 10:23

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-5	LCS	5/14/24 10:25	23.7	6.99	1,412			
CCV-5	CCV	5/14/24 13:30	22.9	7.02	1,455			

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP-LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/9/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	3.99	5/9/24 9:29
7.0 Buffer	wc240307f	7.01	5/9/24 9:23
10.0 Buffer	wc231027d	10.00	5/9/24 9:37
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1409	5/9/24 9:41

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.93	5/9/24 9:42
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1	LCS	5/9/24 9:44	20.5	7.01	1,409	0.93		
CCV-M-1	CCV	5/9/24 12:11	21.7	7.03	1,421	0.96		
CCV-1	CCV	5/9/24 14:35	22.8	7.03	1,424	1.04		

Comments:

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/10/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	4.00	5/10/24 9:32
7.0 Buffer	wc240307f	7.02	5/10/24 9:30
10.0 Buffer	wc231027d	9.98	5/10/24 9:35
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1410	5/10/24 9:40

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.87	5/10/24 9:40
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2	LCS	5/10/24 9:43	18.8	7.02	1,410	0.87		
CCV-2	CCV	5/10/24 10:58	19.7	7.02	1,416	0.89		

Comments:

Site Samping Event: CWLP- 2Q24
LIMS Workorder: 24050001
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP-LF- 2Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	4.01	5/13/24 9:49
7.0 Buffer	wc240307f	7.01	5/13/24 9:43
10.0 Buffer	wc231027d	9.98	5/13/24 9:58
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1412	5/13/24 9:58

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.86	5/13/24 9:58
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3	LCS	5/13/24 10:00	21.7	7.01	1,412	0.86		
CCV-3	CCV	5/13/24 14:28	22.1	7.03	1,420	0.92		

Comments:

Field Meter ID: Pine 218083 Technician(s): justin colp Date: 5/14/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230830b	3.98	5/14/24 9:25
7.0 Buffer	wc240307f	7.00	5/14/24 9:21
10.0 Buffer	wc231027d	9.99	5/14/24 9:28
LCS/CCV (7.0 Buffer)			

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	95009	1410	5/14/24 9:35

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.96	5/14/24 9:35
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4	LCS	5/14/24 9:37	20.2	7.00	1,410	0.96		
CCV-4	CCV	5/14/24 12:17	21	7.01	1,418	0.99		

Comments:

Third Quarter 2024

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

September 18, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 24080242

Dear Eric Staley:

TEKLAB, INC received 20 samples on 8/13/2024 2:27:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24080242
Report Date: 18-Sep-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	36
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24080242

Client Project: Ash Pond Monitoring Wells **Report Date:** 18-Sep-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080242
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Sep-24

Qualifiers

- Unknown hydrocarbon
B - Analyte detected in associated Method Blank
C - RL shown is a Client Requested Quantitation Limit
E - Value above quantitation range
H - Holding times exceeded
I - Associated internal standard was outside method criteria
J - Analyte detected below quantitation limits
M - Manual Integration used to determine area response
ND - Not Detected at the Reporting Limit
R - RPD outside accepted recovery limits
S - Spike Recovery outside recovery limits
T - TIC(Tentatively identified compound)
X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24080242
Report Date: 18-Sep-24

Cooler Receipt Temp: 12.1 °C

An employee of Teklab, Inc. collected the sample(s).

AP-3 well is damaged, will be collected at a later date.

Radium-226 & -228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24080242
Report Date: 18-Sep-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	12/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080242
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Sep-24
Lab ID: 24080242-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 08/12/2024 10:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	08/12/2024 10:18	R352005
Depth to water	*	-5.00		**8.61**	ft	1	08/12/2024 10:18	R352005
Depth to water from measuring point	*	0		**11.31**	ft	1	08/12/2024 10:18	R352005
Elevation of groundwater surface	*	0		**528.19**	ft	1	08/12/2024 10:18	R352005
Measuring Point Elevation	*	0		**539.50**	ft	1	08/12/2024 10:18	R352005
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	08/12/2024 10:18	R352005
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**39**	NTU	1	08/12/2024 10:18	R352005
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.3**	°F	1	08/12/2024 10:18	R352005
SW-846 9040B								
pH, Field	*	1.00		**7.23**		1	08/12/2024 10:18	R352005
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**698**	umhos/cm @25C	1	08/12/2024 10:18	R352005
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**344**	mg/L	1	08/16/2024 9:41	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10	S	**14**	mg/L	1	08/20/2024 11:28	R352032
Matrix spike did not recover within control limits. Results verify by dilution.								
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.43**	mg/L	1	08/19/2024 9:31	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**29**	mg/L	1	08/20/2024 11:27	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.146**	mg/L	1	08/14/2024 17:13	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 17:13	227065
Boron	NELAP	0.0200		**0.122**	mg/L	1	08/14/2024 17:13	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 17:13	227065
Calcium	NELAP	0.100		**63.2**	mg/L	1	08/14/2024 17:13	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:13	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:13	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 17:13	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 17:13	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 9:54	227065
Arsenic	NELAP	0.0010		**0.107**	mg/L	5	08/14/2024 22:56	227065
Lithium	*	0.0030		**0.0038**	mg/L	5	08/14/2024 22:56	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2024 22:56	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2024 22:56	227065
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 12:31	227054
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/10/2024 0:00	R353360

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080242
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Sep-24
Lab ID: 24080242-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 08/12/2024 10:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-228	*	0		**See Attached**	pci/L	1	09/10/2024 0:00	R353360

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080242
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Sep-24
Lab ID: 24080242-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 08/12/2024 13:04

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	08/12/2024 13:04	R352005
Depth to water	*	-5.00		**5.99**	ft	1	08/12/2024 13:04	R352005
Depth to water from measuring point	*	0		**8.49**	ft	1	08/12/2024 13:04	R352005
Elevation of groundwater surface	*	0		**527.61**	ft	1	08/12/2024 13:04	R352005
Measuring Point Elevation	*	0		**536.10**	ft	1	08/12/2024 13:04	R352005
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	08/12/2024 13:04	R352005
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**32**	NTU	1	08/12/2024 13:04	R352005
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**62.3**	°F	1	08/12/2024 13:04	R352005
SW-846 9040B								
pH, Field	*	1.00		**6.58**		1	08/12/2024 13:04	R352005
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1510**	umhos/cm @25C	1	08/12/2024 13:04	R352005
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1110**	mg/L	1	08/16/2024 9:44	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**417**	mg/L	20	08/20/2024 12:18	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.25**	mg/L	1	08/19/2024 9:35	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**39**	mg/L	1	08/20/2024 12:13	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0751**	mg/L	1	08/14/2024 17:16	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 17:16	227065
Boron	NELAP	0.0200		**3.10**	mg/L	1	08/14/2024 17:16	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 17:16	227065
Calcium	NELAP	0.100		**206**	mg/L	1	08/14/2024 17:16	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:16	227065
Cobalt	NELAP	0.0050		**0.0073**	mg/L	1	08/14/2024 17:16	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 17:16	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 17:16	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 10:05	227065
Arsenic	NELAP	0.0010		**0.0031**	mg/L	5	08/14/2024 23:06	227065
Lithium	*	0.0030		**0.0081**	mg/L	5	08/14/2024 23:06	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2024 23:06	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2024 23:06	227065
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 12:36	227054
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/10/2024 0:00	R353360
Radium-228	*	0		**See Attached**	pci/L	1	09/10/2024 0:00	R353360

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080242
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Sep-24
Lab ID: 24080242-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 08/12/2024 13:52

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	08/12/2024 13:52	R352005
Depth to water	*	-5.00		**9.36**	ft	1	08/12/2024 13:52	R352005
Depth to water from measuring point	*	0		**12.02**	ft	1	08/12/2024 13:52	R352005
Elevation of groundwater surface	*	0		**527.00**	ft	1	08/12/2024 13:52	R352005
Measuring Point Elevation	*	0		**539.02**	ft	1	08/12/2024 13:52	R352005
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	08/12/2024 13:52	R352005
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**19**	NTU	1	08/12/2024 13:52	R352005
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.0**	°F	1	08/12/2024 13:52	R352005
SW-846 9040B								
pH, Field	*	1.00		**7.20**		1	08/12/2024 13:52	R352005
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**733**	umhos/cm @25C	1	08/12/2024 13:52	R352005
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**386**	mg/L	1	08/16/2024 9:57	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**14**	mg/L	1	08/20/2024 13:17	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.46**	mg/L	1	08/19/2024 9:47	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**50**	mg/L	1	08/20/2024 13:17	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.108**	mg/L	1	08/14/2024 17:26	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 17:26	227065
Boron	NELAP	0.0200		**0.244**	mg/L	1	08/14/2024 17:26	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 17:26	227065
Calcium	NELAP	0.100		**59.5**	mg/L	1	08/14/2024 17:26	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:26	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:26	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 17:26	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 17:26	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0016**	mg/L	5	08/15/2024 11:01	227065
Arsenic	NELAP	0.0010		**0.0438**	mg/L	5	08/14/2024 23:59	227065
Lithium	*	0.0030		**0.0063**	mg/L	5	08/15/2024 11:01	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2024 23:59	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2024 23:59	227065
CCV recovered outside the upper control limits for Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 12:45	227054
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/16/2024 0:00	R353360

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080242
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Sep-24
Lab ID: 24080242-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 08/12/2024 13:52

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-228	*	0		**See Attached**	pci/L	1	09/16/2024 0:00	R353360

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080242
Client Project: Ash Pond Monitoring Wells
Report Date: 18-Sep-24
Lab ID: 24080242-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 08/13/2024 11:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	08/13/2024 11:06	R352005
Depth to water	*	-5.00		**4.07**	ft	1	08/13/2024 11:06	R352005
Depth to water from measuring point	*	0		**6.97**	ft	1	08/13/2024 11:06	R352005
Elevation of groundwater surface	*	0		**530.23**	ft	1	08/13/2024 11:06	R352005
Measuring Point Elevation	*	0		**537.20**	ft	1	08/13/2024 11:06	R352005
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	08/13/2024 11:06	R352005
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**34**	NTU	1	08/13/2024 11:06	R352005
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.7**	°F	1	08/13/2024 11:06	R352005
SW-846 9040B								
pH, Field	*	1.00		**7.03**		1	08/13/2024 11:06	R352005
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1000**	umhos/cm @25C	1	08/13/2024 11:06	R352005
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**526**	mg/L	1	08/16/2024 9:57	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**11**	mg/L	1	08/20/2024 13:25	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.33**	mg/L	1	08/19/2024 9:49	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**35**	mg/L	1	08/20/2024 13:25	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.407**	mg/L	1	08/15/2024 15:55	227124
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/15/2024 15:55	227124
Boron	NELAP	0.0200		**0.0855**	mg/L	1	08/15/2024 15:55	227124
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/15/2024 15:55	227124
Calcium	NELAP	0.100		**89.5**	mg/L	1	08/15/2024 15:55	227124
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 15:55	227124
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 15:55	227124
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/15/2024 15:55	227124
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/15/2024 15:55	227124
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 14:01	227124
Arsenic	NELAP	0.0010		**0.0414**	mg/L	5	08/15/2024 14:01	227124
Lithium	*	0.0030		**0.0075**	mg/L	5	08/15/2024 14:01	227124
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 14:01	227124
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 14:01	227124
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/15/2024 16:13	227118
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/16/2024 0:00	R353360
Radium-228	*	0		**See Attached**	pci/L	1	09/16/2024 0:00	R353360

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24080242
Report Date: 18-Sep-24

Carrier: Justin Colp

Received By: PRS

Completed by: Amber Dilallo
On: 13-Aug-24

Reviewed by: Shelly A. Hennessy
On: 27-Aug-24

Pages to follow: Chain of custody 4 Extra pages included 60

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 12.1
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Samples were received on 8/12/24 at 1635 on ice [12.1C - LTG#9]. pH strip #96651. - amberdilallo - 8/13/2024 8:19:55 AM

Samples were received on 8/13/24 at 1427 on ice [3.7C - LTG#5]. pH strip #96651. - amberdilallo - 8/13/2024 3:24:03 PM

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24080242

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 12.1 °C LTG-9
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: pH ✓ 94651
PS 8713

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring
*Damaged - to be collected @ later date SH 8/14/24

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24080242-001	RW-3	8.12.24 1018	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1	8.12.24 1119	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2	8.12.24 1304	Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3 *		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4	8.12.24 1235	Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5	8.12.24 1159	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6	8.12.24 1050	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7	8.12.24 1352	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9	8.12.24 1421	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	8.12.24 1635	[signature]	8/12/24 1635

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24080242

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24080245	AP-11	8-12-24 1207	Groundwater	1	2								✓	✓	✓	✓	✓	✓
013	AP-12	1302	Groundwater	1	2								✓	✓	✓	✓	✓	✓
014	AP-13	1328	Groundwater	1	2								✓	✓	✓	✓	✓	✓
015	AP-14		Groundwater	1	2								✓	✓	✓	✓	✓	✓
016	T-1	1418	Groundwater	1	2								✓	✓	✓	✓	✓	✓
017	T-2	1232	Groundwater	1	2								✓	✓	✓	✓	✓	✓
018	T-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
019	T-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
020	T-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
J Colp	8.12.24 1635	Paul Eaty	8/12/24 1635

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24080242

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 3.7 °C LTGS
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: pH/ 9665 PS 8/13

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24080242-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8	8.13.24 1106	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10	8-13-24 1043	Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
[signature]	8-13-24 1427	[signature]	8/13/24 1427

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24080242

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24080242 012	AP-11		Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14	8-13-24 1119	Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4	8.13.24 1220	Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5	8.13.24 1132	Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6	8.13.24 1044	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	8-13-24 1427	[signature]	8/13/24 1427

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Field Data Sheet

Project Name: CWLP- Ash Pond Monitoring Wells **Monitoring Point:** RW-3
Project Location: Springfield, IL
W.O. Number (s): 24080242 **Date (s):** 8/12/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 74 °F Wind Direction: (N) S E W (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 10:01
Static Water Level: 11.31 feet below TOC
Total Depth: 44.01 feet below TOC
Water Column: 32.70 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/12/2024
Purge Method: Bladder Pump Well Diameter: 2"
Purge Volume Calculation (L): 32.7 ft. x 44.01 = 0.97 L x 3 Vol. = 2.91 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 3.1
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:03	0.0	200	purge start time						
10:06	0.6	↓	7.20	764	60.2	2.13	-61.3	7.69	
10:09	1.3		7.22	745	60.0	1.17	-110.3	14.43	
10:12	1.9		7.23	707	59.0	0.99	-122.2	27.14	
10:15	2.5		7.22	699	59.8	0.96	-124.7	35.75	
10:18	3.1		7.23	698	60.3	0.95	-125.9	38.75	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/12/2024 10:18
Sample Method: Low-Flow Sample Equipment: Bladder Pump
Sample Parameters: 7.23 pH 698 Spec. Cond. 60.3 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 11.46 feet below TOC Drawdown: 0.15 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Justin Colp **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- Ash Pond Monitoring Wells **Monitoring Point:** AP-2
Project Location: Springfield, IL
W.O. Number (s): 24080242 **Date (s):** 8/12/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 77 °F Wind Direction: (N) S E W (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 12:50
Static Water Level: 8.49 feet below TOC
Total Depth: 21.33 feet below TOC
Water Column: 12.84 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/12/2024
Purge Method: Bladder Pump Well Diameter: 2"
Purge Volume Calculation (L): 12.84 ft. x 21.33 = 0.47 L x 3 Vol. = 1.41 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 2.5
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:51	0.0	188	purge start time						
12:55	0.8	↓	6.58	1,506	62.2	1.42	18.8	59.88	
12:58	1.4		6.58	1,509	62.4	1.19	19.5	42.69	
13:01	1.9		6.58	1,509	62.4	1.15	20.0	35.14	
13:04	2.5		6.58	1,510	62.3	1.08	20.0	31.61	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/12/2024 13:04
Sample Method: Low-Flow Sample Equipment: Bladder Pump
Sample Parameters: 6.58 pH 1,510 Spec. Cond. 62.3 Temp
Field Filtered: No Filter Type:
Water Level: 8.73 feet below TOC Drawdown: 0.24 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Justin Colp **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- Ash Pond Monitoring Wells **Monitoring Point:** AP-3

Project Location: Springfield, IL

W.O. Number (s): 24080242 **Date (s):** 8/12/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.

Name: Affiliation:

Weather Conditions

Temp: °F Wind Direction: N S E W (circle two if needed)

Precipitation: None Light Heavy Sky: Cloudy Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Damaged			
Casing	Damaged	Protective Casing		
Protective Casing	Damaged	Well		
Reference Mark/Identification	Damaged			

Groundwater Level Measurements

Date/Time Measured: Static Water Level: feet below TOC

Total Depth: feet below TOC

Water Column: feet

Purging Activities

Purged By: Purge Date:

Purge Method: Well Diameter: 2"

Purge Volume Calculation (L):

Actual Purge Volume (L):

Physical appearance of purge water: Odor: Color:

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
			purge start time						

Sampling Activities

Sampled By: Sample Date/Time:

Sample Method: Sample Equipment:

Sample Parameters: pH Spec. Cond. Temp

Field Filtered: Filter Type:

Water Level: feet below TOC Drawdown: feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Well damaged by vehicle, notified by onsite personell of planned repair/redrill

Form Completed By: Justin Colp **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- Ash Pond Monitoring Wells **Monitoring Point:** AP-7
Project Location: Springfield, IL
W.O. Number (s): 24080242 **Date (s):** 8/12/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 77 °F Wind Direction: (N) S E W (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 13:36
Static Water Level: 12.02 feet below TOC
Total Depth: 42.52 feet below TOC
Water Column: 30.50 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/12/2024
Purge Method: Bladder Pump Well Diameter: 2"
Purge Volume Calculation (L): 30.5 ft. x 42.52 = 0.94 L x 3 Vol. = 2.82 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 3.0
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:37	0.0	200	purge start time						
13:40	0.6	↓	7.29	742	59.3	1.59	-37.2	16.71	
13:43	1.2		7.25	750	58.4	1.11	-89.9	37.06	
13:46	1.8		7.23	738	58.2	0.98	-95.0	35.04	
13:49	2.4		7.21	732	58.1	0.92	-95.6	27.20	
13:52	3.0		7.20	733	58.0	0.88	-95.5	19.12	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/12/2024 13:52
Sample Method: Low-Flow Sample Equipment: Bladder Pump
Sample Parameters: 7.20 pH 733 Spec. Cond. 58.0 Temp
Field Filtered: No Filter Type:
Water Level: 12.23 feet below TOC Drawdown: 0.21 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Justin Colp **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- Ash Pond Monitoring Wells **Monitoring Point:** AP-8

Project Location: Springfield, IL

W.O. Number (s): 24080242 **Date (s):** 8/13/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.

Name: Affiliation:

Weather Conditions

Temp: 73 °F Wind Direction: N S E (W) (circle two if needed)

Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/13/2024 10:51

Static Water Level: 6.97 feet below TOC

Total Depth: 39.60 feet below TOC

Water Column: 32.63 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/13/2024

Purge Method: Peristaltic Pump Well Diameter: 2"

Purge Volume Calculation (L): 32.63 ft. x 39.6 = 0.87 L x 3 Vol. = 2.61 L **Based on 3 water volumes in 3/8" tubing.*

Actual Purge Volume (L): 3.2

Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:52	0.0	214	purge start time						
10:54	0.6	↓	7.07	1,008	60.8	1.60	-83.4	18.46	
10:57	1.3		7.06	1,005	60.7	1.06	-97.5	19.65	
11:00	1.9		7.05	1,003	59.0	0.86	-104.6	32.94	
11:03	2.6		7.04	1,002	58.9	0.79	-107.9	30.61	
11:06	3.2		7.03	1,003	60.7	0.76	-109.9	33.73	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/13/2024 11:06

Sample Method: Low-Flow Sample Equipment: Peristaltic Pump

Sample Parameters: 7.03 pH 1,003 Spec. Cond. 60.7 Temp

Field Filtered: No Filter Type:

Water Level: 8.19 feet below TOC Drawdown: 1.22 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Justin Colp **Date:** 8/13/2024

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 24080242
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 3Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45985 Technician(s): Brett Gillihan Date: 8/12/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC240612A	4.01	8/12/24 9:59
7.0 Buffer	WC240307F	6.99	8/12/24 9:54
10.0 Buffer	WC240625B	9.99	8/12/24 10:02
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1410	8/12/24 10:09

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.4	8/12/24 10:15
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-BG	LCS	8/12/24 10:19	22.4	7.01	1,410			
CCV-1-BG	CCV	8/12/24 15:30	23.6	7.04	1,416			

Comments:

Field Meter ID: Pine 45985 Technician(s): Brett Gillihan Date: 8/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC240612A	4.02	8/13/24 8:58
7.0 Buffer	WC240307F	7.00	8/13/24 8:54
10.0 Buffer	WC240625B	10.01	8/13/24 9:01
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1412	8/13/24 9:05

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.9	8/13/24 9:15
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-BG	LCS	8/13/24 9:20	23.5	7.01	1,411			
CCV-2-BG	CCV	8/13/24 12:19	24.5	7.02	1,420			

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 24080242
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 3Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 223344 Technician(s): Tracy Carroll Date: 8/12/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC240612A	4.01	8/12/24 10:31
7.0 Buffer	WC240307F	7.01	8/12/24 10:23
10.0 Buffer	WC240625B	10.00	8/12/24 10:39
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1412	8/12/24 10:39

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-TC	LCS	8/12/24 10:44	24.6	7.03	1,410			
CCV-1-TC	CCV	8/12/24 14:28	25.2	7.08	1,453			

Comments:

Field Meter ID: Pine 223344 Technician(s): Tracy Carroll Date: 8/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC240612A	4.00	8/13/24 9:38
7.0 Buffer	WC240307F	7.01	8/13/24 9:35
10.0 Buffer	WC240625B	10.00	8/13/24 9:41
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1412	8/13/24 9:37

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-TC	LCS	8/13/24 9:42	21	7.02	1,413			
CCV-2-TC	CCV	8/13/24 14:18	22.5	7.06	1,422			

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 24080242
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 3Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 218074 Technician(s): justin colp Date: 8/12/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc240612a	4.00	8/12/24 9:33
7.0 Buffer	wc240307f	6.99	8/12/24 9:30
10.0 Buffer	wc240625b	9.99	8/12/24 9:36
LCS/CCV (7.0 Buffer)	wc231207a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1413	8/12/24 9:39

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.41	8/12/24 9:42
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	8/12/24 9:45	23.2	6.99	1,413	0.41		
CCV-1-JC	CCV	8/12/24 14:44	24.49	7.01	1,427	0.47		

Comments:

Field Meter ID: Pine 218074 Technician(s): justin colp Date: 8/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc240612a	3.99	8/13/24 8:55
7.0 Buffer	wc240307f	7.00	8/13/24 8:57
10.0 Buffer	wc240625b	10.00	8/13/24 8:59
LCS/CCV (7.0 Buffer)	wc231207a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1410	8/13/24 9:04

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.43	8/13/24 9:07
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-JC	LCS	8/13/24 9:10	23.1	7.00	1,410	0.43		
CCV-2-JC	CCV	8/13/24 11:36	24.8	7.02	1,416	0.47		

Comments:

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

September 18, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24080242

Order No.: 24081370

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 19 sample(s) on 8/19/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24081370**
Date: **9/18/2024**

CLIENT: TEKLAB Inc,
Project: 24080242

WorkOrder Narrative:
24081370: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-44
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24081370**
Date: **9/18/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Website: http://www.settek.com

Workorder Sample Summary

WO#: **24081370**

18-Sep-24

CLIENT: TEKLAB Inc,
Project: 24080242

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24081370-001	24080242-001		8/12/2024 10:18:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-002	24080242-002		8/12/2024 11:19:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-003	24080242-003		8/12/2024 1:04:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-004	24080242-005		8/12/2024 12:35:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-005	24080242-006		8/12/2024 11:59:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-006	24080242-007		8/12/2024 10:50:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-007	24080242-008		8/12/2024 1:52:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-008	24080242-009		8/13/2024 11:06:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-009	24080242-010		8/12/2024 2:21:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-010	24080242-011		8/13/2024 10:43:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-011	24080242-012		8/12/2024 12:07:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-012	24080242-013		8/12/2024 1:02:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-013	24080242-014		8/12/2024 1:28:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-014	24080242-015		8/13/2024 11:19:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-015	24080242-016		8/12/2024 2:18:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-016	24080242-017		8/12/2024 12:32:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-017	24080242-018		8/13/2024 12:20:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-018	24080242-019		8/13/2024 11:32:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081370-019	24080242-020		8/13/2024 10:44:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water

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DATES REPORT

WO#: **24081370**

18-Sep-24

Client: TEKLAB Inc,
Project: 24080242

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24081370-001A	24080242-001	8/12/2024 10:18:00 AM	Non-Potable Water	Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/5/2024 10:37:44 AM	9/11/2024 1:22:47 PM
				Radium-228 (EPA 904.0)		9/5/2024 10:37:44 AM	9/10/2024 1:54:42 PM
24081370-002A	24080242-002	8/12/2024 11:19:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/5/2024 10:37:44 AM	9/11/2024 1:22:47 PM
				Radium-228 (EPA 904.0)		9/5/2024 10:37:44 AM	9/10/2024 1:54:42 PM
24081370-003A	24080242-003	8/12/2024 1:04:00 PM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/5/2024 10:37:44 AM	9/11/2024 1:22:47 PM
				Radium-228 (EPA 904.0)		9/5/2024 10:37:44 AM	9/10/2024 1:54:42 PM
24081370-004A	24080242-005	8/12/2024 12:35:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-005A	24080242-006	8/12/2024 11:59:00 AM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-006A	24080242-007	8/12/2024 10:50:00 AM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-007A	24080242-008	8/12/2024 1:52:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-008A	24080242-009	8/13/2024 11:06:00 AM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM

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DATES REPORT

WO#: **24081370**

18-Sep-24

Client: TEKLAB Inc,
Project: 24080242

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24081370-008A	24080242-009	8/13/2024 11:06:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-009A	24080242-010	8/12/2024 2:21:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-010A	24080242-011	8/13/2024 10:43:00 AM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-011A	24080242-012	8/12/2024 12:07:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-012A	24080242-013	8/12/2024 1:02:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-013A	24080242-014	8/12/2024 1:28:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-014A	24080242-015	8/13/2024 11:19:00 AM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-015A	24080242-016	8/12/2024 2:18:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-016A	24080242-017	8/12/2024 12:32:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM

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DATES REPORT

WO#: **24081370**

18-Sep-24

Client: TEKLAB Inc,
Project: 24080242

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24081370-016A	24080242-017	8/12/2024 12:32:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-017A	24080242-018	8/13/2024 12:20:00 PM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-018A	24080242-019	8/13/2024 11:32:00 AM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM
24081370-019A	24080242-020	8/13/2024 10:44:00 AM		Combined Radium (EPA903+904)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-226 (EPA 903.0)		9/9/2024 11:10:00 AM	9/17/2024 10:44:46 PM
				Radium-228 (EPA 904.0)		9/9/2024 11:10:00 AM	9/16/2024 2:26:20 PM

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Analytical Report

(consolidated)

WO#: **24081370**

Date Reported: **9/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 8/12/2024 10:18:00 AM

Project: 24080242

Lab ID: 24081370-001

Matrix: NON-POTABLE WATER

Client Sample ID: 24080242-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228 COMBINED RADIUM (EPA903+904)				**CALCULATION**			Analyst: **HDJ**
Radium-226/Radium-228	ND	2.00		pCi/L	± 0.380	1	9/17/2024 12:00:15 PM
RAD226/228 RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.0700	1	9/11/2024 1:22:47 PM
Yield	1.00					1	9/11/2024 1:22:47 PM
RAD226/228 RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.310	1	9/10/2024 1:54:42 PM
Yield	1.00					1	9/10/2024 1:54:42 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24081370**

Date Reported: **9/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 8/12/2024 1:04:00 PM

Project: 24080242

Lab ID: 24081370-003

Matrix: NON-POTABLE WATER

Client Sample ID: 24080242-003

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228				**CALCULATION**			Analyst: **HDJ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	ND	2.00		pCi/L	± 0.320	1	9/17/2024 12:00:15 PM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	ND	1.00		pCi/L	± 0.0700	1	9/11/2024 1:22:47 PM
Yield	1.00					1	9/11/2024 1:22:47 PM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	ND	1.00		pCi/L	± 0.250	1	9/10/2024 1:54:42 PM
Yield	1.00					1	9/10/2024 1:54:42 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Report

(consolidated)

WO#: **24081370**

Date Reported: **9/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 8/12/2024 10:50:00 AM

Project: 24080242

Lab ID: 24081370-006

Matrix: NON-POTABLE WATER

Client Sample ID: 24080242-007

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	ND	4.00		pCi/L	± 0.840	1	9/17/2024 10:44:46 PM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	ND	2.00		pCi/L	± 0.0500	1	9/17/2024 10:44:46 PM
Yield	1.00					1	9/17/2024 10:44:46 PM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	ND	2.00		pCi/L	± 0.790	1	9/16/2024 2:26:20 PM
Yield	1.00					1	9/16/2024 2:26:20 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **24081370**

Date Reported: **9/18/2024**

CLIENT: TEKLAB Inc,

Collection Date: 8/12/2024 1:52:00 PM

Project: 24080242

Lab ID: 24081370-007

Matrix: NON-POTABLE WATER

Client Sample ID: 24080242-008

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**CALCULATION**	**E903-904**	Analyst: **SMZ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	ND	4.00		pCi/L	± 0.890	1	9/17/2024 10:44:46 PM
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	ND	2.00		pCi/L	± 0.120	1	9/17/2024 10:44:46 PM
Yield	1.00					1	9/17/2024 10:44:46 PM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	ND	2.00		pCi/L	± 0.770	1	9/16/2024 2:26:20 PM
Yield	1.00					1	9/16/2024 2:26:20 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24081370**
18-Sep-24

Client: TEKLAB Inc,
Project: 24080242 **BatchID:** **78364**

Sample ID: **MB-78364** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192975**
Client ID: **PBW** Batch ID: **78364** TestNo: **E904.0** **E903-904** Analysis Date: **9/10/2024** SeqNo: **5224910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-78364** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192975**
Client ID: **LCSW** Batch ID: **78364** TestNo: **E904.0** **E903-904** Analysis Date: **9/10/2024** SeqNo: **5224911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.73	1.00	5.000	0	74.6	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-78364** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192975**
Client ID: **LCSS02** Batch ID: **78364** TestNo: **E904.0** **E903-904** Analysis Date: **9/10/2024** SeqNo: **5224912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.48	1.00	5.000	0	69.6	50	130	3.730	6.93	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24081370**
18-Sep-24

Client: TEKLAB Inc,
Project: 24080242 **BatchID:** **78364**

Sample ID: **24081279-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192975**
Client ID: **BatchQC** Batch ID: **78364** TestNo: **E904.0** **E903-904** Analysis Date: **9/10/2024** SeqNo: **5224919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24081370**
18-Sep-24

Client: TEKLAB Inc,
Project: 24080242 **BatchID:** **78364**

Sample ID: **MB-78364** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192981**
Client ID: **PBW** Batch ID: **78364** TestNo: **E903.0** **E903-904** Analysis Date: **9/11/2024** SeqNo: **5224968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-78364** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192981**
Client ID: **LCSW** Batch ID: **78364** TestNo: **E903.0** **E903-904** Analysis Date: **9/11/2024** SeqNo: **5224969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.96	1.00	5.000	0	99.2	70	130				

Sample ID: **LCSD-78364** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192981**
Client ID: **LCSS02** Batch ID: **78364** TestNo: **E903.0** **E903-904** Analysis Date: **9/11/2024** SeqNo: **5224970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.78	1.00	5.000	0	95.6	70	130	4.960	3.70	20	

Sample ID: **24081277-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192981**
Client ID: **BatchQC** Batch ID: **78364** TestNo: **E903.0** **E903-904** Analysis Date: **9/11/2024** SeqNo: **5224975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24081370**
18-Sep-24

Client: TEKLAB Inc,
Project: 24080242 **BatchID:** **78364**

Sample ID: **24081277-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/5/2024** RunNo: **192981**
Client ID: **BatchQC** Batch ID: **78364** TestNo: **E903.0** **E903-904** Analysis Date: **9/11/2024** SeqNo: **5224975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24081370**
18-Sep-24

Client: TEKLAB Inc,
Project: 24080242 **BatchID:** **78453**

Sample ID: **MB-78453**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **9/9/2024**	RunNo: **193345**
Client ID: **PBW**	Batch ID: **78453**	TestNo: **E904.0**	**E903-904**	Analysis Date: **9/16/2024**	SeqNo: **5233515**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-78453**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **9/9/2024**	RunNo: **193345**
Client ID: **LCSW**	Batch ID: **78453**	TestNo: **E904.0**	**E903-904**	Analysis Date: **9/16/2024**	SeqNo: **5233516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.33	1.00	5.000	0	66.6	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-78453**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **9/9/2024**	RunNo: **193345**
Client ID: **LCSS02**	Batch ID: **78453**	TestNo: **E904.0**	**E903-904**	Analysis Date: **9/16/2024**	SeqNo: **5233517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.07	1.00	5.000	0	61.4	50	130	3.330	8.13	20	
Yield	0.960			0	0			1.000	4.08		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Analytical Laboratories

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24081370**
18-Sep-24

Client: TEKLAB Inc,
Project: 24080242 **BatchID:** **78453**

Sample ID: **24081834-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/9/2024** RunNo: **193345**
Client ID: **BatchQC** Batch ID: **78453** TestNo: **E904.0** **E903-904** Analysis Date: **9/16/2024** SeqNo: **5233540**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.09	1.00		0	0			0.7400	38.3	20	R
Yield	0.980			0	0			1.000	2.02		

Sample ID: **24081834-002ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/9/2024** RunNo: **193345**
Client ID: **BatchQC** Batch ID: **78453** TestNo: **E904.0** **E903-904** Analysis Date: **9/16/2024** SeqNo: **5233542**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24081370**
18-Sep-24

Client: TEKLAB Inc,
Project: 24080242 **BatchID:** **78453**

Sample ID: **MB-78453**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **9/9/2024**	RunNo: **193353**
Client ID: **PBW**	Batch ID: **78453**	TestNo: **E903.0**	**E903-904**	Analysis Date: **9/17/2024**	SeqNo: **5233739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-78453**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **9/9/2024**	RunNo: **193353**
Client ID: **LCSW**	Batch ID: **78453**	TestNo: **E903.0**	**E903-904**	Analysis Date: **9/17/2024**	SeqNo: **5233740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.33	1.00	5.000	0	86.6	70	130				QLR

Sample ID: **LCSD-78453**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **9/9/2024**	RunNo: **193353**
Client ID: **LCSS02**	Batch ID: **78453**	TestNo: **E903.0**	**E903-904**	Analysis Date: **9/17/2024**	SeqNo: **5233741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.36	1.00	5.000	0	107	70	130	4.330	21.3	20	R

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **24081370**
18-Sep-24

Client: TEKLAB Inc,
Project: 24080242 **BatchID:** **78453**

Sample ID: **24081834-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/9/2024** RunNo: **193353**
Client ID: **BatchQC** Batch ID: **78453** TestNo: **E903.0** **E903-904** Analysis Date: **9/17/2024** SeqNo: **5233764**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **24081834-002ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/9/2024** RunNo: **193353**
Client ID: **BatchQC** Batch ID: **78453** TestNo: **E903.0** **E903-904** Analysis Date: **9/17/2024** SeqNo: **5233766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005 24081370

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Cooler Temp: Sampler: Teklab, Inc. QC Level: 2

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Comments: **Please Issue reports and invoices via email only**
Please analyze for Ra226, Ra228 and Combinded Radium per your usual methods.
Changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 24080242

Contact: Shelly Hennessy
Requested Due Date: Standard TAT
Email: shennessy@teklabinc.com
Billing/PO: 36831
Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	Radium 226	Radium 228									
	24080242-001	8/12/24 1018	HNO3	Groundwater	✔	✔	✔	pH	1	Cpm=57						
	24080242-002	8/12/24 1119	HNO3	Groundwater	✔	✔	✔		1		10					
	24080242-003	8/12/24 1304	HNO3	Groundwater	✔	✔	✔		1		30					
	24080242-005	8/12/24 1235	HNO3	Groundwater	✔	✔	✔		1		18					
	24080242-006	8/12/24 1159	HNO3	Groundwater	✔	✔	✔		1		41					
	24080242-007	8/12/24 1050	HNO3	Groundwater	✔	✔	✔		1		37					
	24080242-008	8/12/24 1352	HNO3	Groundwater	✔	✔	✔		1		11					
	24080242-009	8/13/24 1106	HNO3	Groundwater	✔	✔	✔		1		41					
	24080242-010	8/12/24 1421	HNO3	Groundwater	✔	✔	✔		1		33					
	24080242-011	8/13/24 1043	HNO3	Groundwater	✔	✔	✔		1		17					
	24080242-012	8/12/24 1207	HNO3	Groundwater	✔	✔	✔	✓	1		33					

21.6 - 0.1 = 21.5, Fedex Cooler

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	8/14/24 1700	[signature] AUG 19 2024	1230

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Teklab, Inc. | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Ra226, Ra228 and Combinded Radium per your usual methods.
Changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 24080242

Contact: Shelly Hennessy | Email: shennessy@teklabinc.com
Requested Due Date: Standard TAT | Billing/PO: 36831 | Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	Radium 226	Radium 228										
	24080242-013	8/12/24 1302	HNO3	Groundwater	✓	✓	✓	pH	1		cpm 33						
	24080242-014	8/12/24 1328	HNO3	Groundwater	✓	✓	✓		1		45						
	24080242-015	8/13/24 1119	HNO3	Groundwater	✓	✓	✓		1		33						
	24080242-016	8/12/24 1418	HNO3	Groundwater	✓	✓	✓		1		17						
	24080242-017	8/12/24 1232	HNO3	Groundwater	✓	✓	✓		1		34						
	24080242-018	8/13/24 1220	HNO3	Groundwater	✓	✓	✓		1		56						
	24080242-019	8/13/24 1132	HNO3	Groundwater	✓	✓	✓		1		52						
	24080242-020	8/13/24 1044	HNO3	Groundwater	✓	✓	✓	✓	1		24						
			HNO3	Groundwater													
			HNO3	Groundwater													
			HNO3	Groundwater													

21.6 - 0.1 = 21.5, Fedex Cooler

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	8/14/24 1700	[signature] AUG 19 2024	12 30

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights.
Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

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Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24081370 RcptNo: 1

Logged by:	Anthony W. Britton	8/19/2024 12:30:00 PM	Anthony Britton
Completed By:	Christina N. Gemma	8/20/2024 9:28:43 AM	C. Gemma
Reviewed By:	Jennifer Woolf	8/20/2024 1:59:11 PM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☑
   No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	21.5	Good	Not Present			

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

September 24, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 24082414

Dear Eric Staley:

TEKLAB, INC received 1 sample on 8/29/2024 11:54:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24082414
Report Date: 24-Sep-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	8
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24082414

Client Project: Ash Pond Monitoring Wells **Report Date:** 24-Sep-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24082414
Client Project: Ash Pond Monitoring Wells
Report Date: 24-Sep-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24082414
Report Date: 24-Sep-24

Cooler Receipt Temp: 16.9 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 and Radium-228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24082414
Report Date: 24-Sep-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	12/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24082414
Client Project: Ash Pond Monitoring Wells
Report Date: 24-Sep-24
Lab ID: 24082414-001
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 08/29/2024 10:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.63**	ft	1	08/29/2024 10:01	R352520
Depth to water	*	-5.00		**7.40**	ft	1	08/29/2024 10:01	R352520
Depth to water from measuring point	*	0		**9.95**	ft	1	08/29/2024 10:01	R352520
Elevation of groundwater surface	*	0		**525.30**	ft	1	08/29/2024 10:01	R352520
Measuring Point Elevation	*	0		**535.25**	ft	1	08/29/2024 10:01	R352520
Measuring Point Height Above Land Surface	*	0		**2.55**	ft	1	08/29/2024 10:01	R352520
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**13**	NTU	1	08/29/2024 10:01	R352520
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**66.1**	°F	1	08/29/2024 10:01	R352520
SW-846 9040B								
pH, Field	*	1.00		**6.20**		1	08/29/2024 10:01	R352520
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1210**	umhos/cm @25C	1	08/29/2024 10:01	R352520
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1170**	mg/L	1	08/30/2024 9:24	R352631
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	*	0.50		**ND**	mg/L	10	08/29/2024 18:42	R352440
Chloride	*	5.00		**55.9**	mg/L	10	08/29/2024 18:42	R352440
Sulfate	*	10.0		**554**	mg/L	10	08/29/2024 18:42	R352440
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.102**	mg/L	1	09/03/2024 16:40	227844
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	09/03/2024 16:40	227844
Boron	NELAP	0.0200		**14.6**	mg/L	1	09/03/2024 16:40	227844
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	09/03/2024 16:40	227844
Calcium	NELAP	0.100		**175**	mg/L	1	09/03/2024 16:40	227844
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	09/03/2024 16:40	227844
Cobalt	NELAP	0.0050		**0.0071**	mg/L	1	09/05/2024 15:52	227844
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	09/03/2024 16:40	227844
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	09/03/2024 16:40	227844
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	09/04/2024 2:12	227844
Arsenic	NELAP	0.0010		**0.0080**	mg/L	5	09/04/2024 2:12	227844
Lithium	*	0.0030		**0.0064**	mg/L	5	09/04/2024 2:12	227844
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	09/04/2024 2:12	227844
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	09/04/2024 2:12	227844
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/30/2024 14:05	227834
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/20/2024 0:00	R353640
Radium-228	*	0		**See Attached**	pci/L	1	09/20/2024 0:00	R353640

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24082414
Report Date: 24-Sep-24

Carrier: Tracy Carroll

Received By: PRS

Completed by: Amber Dilallo
On: 29-Aug-24

Reviewed by: Ellie Hopkins
On: 29-Aug-24

Pages to follow: Chain of custody [1] Extra pages included [12]

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	16.9
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice	☐
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐			
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.					
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑		
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑		
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐		
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑		

Any No responses must be detailed below or on the COC.

pH strip #96651. - amberdilallo - 8/29/2024 1:06:16 PM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24082414

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 16.9 °C
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: 96651 on 8/29

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Tracy Carroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
24082414-001	AP-3	8/29/24 1001	Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carroll	8/29/24 1154		8/29/24 1154

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

September 24, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24082414

Order No.: 24090112

Dear Shelly Hennessy:

Summit Environmental Technologies, Inc. received 1 sample(s) on 9/3/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24090112**
Date: **9/24/2024**

CLIENT: TEKLAB Inc,
Project: 24082414

WorkOrder Narrative:
24090112: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence QC Notes:
LCS/LCSD-78638 Radium-228_DW(904.0): LCS/LCSD exhibited a high RPD, individually each LCS/LCSD meets the required criteria.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-44
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24090112**
Date: **9/24/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **24090112**

24-Sep-24

CLIENT: TEKLAB Inc,
Project: 24082414

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24090112-001	24082414-001		8/29/2024 10:01:00 AM	9/3/2024 5:00:00 PM	Non-Potable Water

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Website: http://www.settek.com

DATES REPORT

WO#: **24090112**

24-Sep-24

Client: TEKLAB Inc,

Project: 24082414

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24090112-001A	24082414-001	8/29/2024 10:01:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		9/17/2024 1:43:08 PM	9/23/2024 10:10:02 AM
				Radium-228 (EPA 904.0)		9/17/2024 1:43:08 PM	9/20/2024 2:09:34 PM

Original

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Analytical Report

(consolidated)

WO#: **24090112**

Date Reported: **9/24/2024**

CLIENT: TEKLAB Inc,

Collection Date: 8/29/2024 10:01:00 AM

Project: 24082414

Lab ID: 24090112-001

Matrix: NON-POTABLE WATER

Client Sample ID: 24082414-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228					**E903.0**	**E903-904**	Analyst: **SMZ**
RADIUM-226 (EPA 903.0)							
Radium-226	ND	1.00		pCi/L	± 0.0500	1	9/23/2024 10:10:02 AM
Yield	1.00					1	9/23/2024 10:10:02 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **SMZ**
RADIUM-228 (EPA 904.0)							
Radium-228	ND	1.00		pCi/L	± 0.430	1	9/20/2024 2:09:34 PM
Yield	0.960					1	9/20/2024 2:09:34 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24090112**
24-Sep-24

Client: TEKLAB Inc,
Project: 24082414 **BatchID:** **78638**

Sample ID: **MB-78638** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193694**
Client ID: **PBW** Batch ID: **78638** TestNo: **E904.0** **E903-904** Analysis Date: **9/20/2024** SeqNo: **5243171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	0.940			0	0						

Sample ID: **LCS-78638** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193694**
Client ID: **LCSW** Batch ID: **78638** TestNo: **E904.0** **E903-904** Analysis Date: **9/20/2024** SeqNo: **5243172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.52	1.00	5.000	0	50.4	50	130				QLR
Yield	0.910			0	0						

Sample ID: **LCSD-78638** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193694**
Client ID: **LCSS02** Batch ID: **78638** TestNo: **E904.0** **E903-904** Analysis Date: **9/20/2024** SeqNo: **5243173**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.45	1.00	5.000	0	69.0	50	130	2.520	31.2	20	R
Yield	1.00			0	0			0.9100	9.42		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24090112**
24-Sep-24

Client: TEKLAB Inc,
Project: 24082414 **BatchID:** **78638**

Sample ID: **24082205-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193694**
Client ID: **BatchQC** Batch ID: **78638** TestNo: **E904.0** **E903-904** Analysis Date: **9/20/2024** SeqNo: **5243178**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Sample ID: **24082207-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193694**
Client ID: **BatchQC** Batch ID: **78638** TestNo: **E904.0** **E903-904** Analysis Date: **9/20/2024** SeqNo: **5243180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24090112**
24-Sep-24

Client: TEKLAB Inc,
Project: 24082414 **BatchID:** **78638**

Sample ID: **MB-78638** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193700**
Client ID: **PBW** Batch ID: **78638** TestNo: **E903.0** **E903-904** Analysis Date: **9/23/2024** SeqNo: **5243274**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-78638** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193700**
Client ID: **LCSW** Batch ID: **78638** TestNo: **E903.0** **E903-904** Analysis Date: **9/23/2024** SeqNo: **5243275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.26	1.00	5.000	0	85.2	70	130				

Sample ID: **LCSD-78638** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193700**
Client ID: **LCSS02** Batch ID: **78638** TestNo: **E903.0** **E903-904** Analysis Date: **9/23/2024** SeqNo: **5243276**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.63	1.00	5.000	0	92.6	70	130	4.260	8.32	20	

Sample ID: **24082205-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193700**
Client ID: **BatchQC** Batch ID: **78638** TestNo: **E903.0** **E903-904** Analysis Date: **9/23/2024** SeqNo: **5243281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24090112**
24-Sep-24

Client: TEKLAB Inc,
Project: 24082414 **BatchID:** **78638**

Sample ID: **24082205-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193700**
Client ID: **BatchQC** Batch ID: **78638** TestNo: **E903.0** **E903-904** Analysis Date: **9/23/2024** SeqNo: **5243281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **24082207-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/17/2024** RunNo: **193700**
Client ID: **BatchQC** Batch ID: **78638** TestNo: **E903.0** **E903-904** Analysis Date: **9/23/2024** SeqNo: **5243283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

Pg ___ of ___

TEKLAB, INC. Chain of Custody

24090112

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Client | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 24082414

Contact: Shelly Hennessy | Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT | Billing/PO: 36929 | Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228
	24082414-001	8/29/24 1001	HNO3	Groundwater	✔ cpm=37 pH=1
			Other	Aqueous	
			Other	Aqueous	
			Other	Aqueous	
			Other	Aqueous	
			Other	Aqueous	
			Other	Aqueous	
			Other	Aqueous	
			Other	Aqueous	
			Other	Aqueous	
			Other	Aqueous	

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	8/29/24 1700	[signature]	9/3/24 1700

17.3-0.1=17.2
Fedex coder
4008
8/29/24

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

September 18, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 24080243

Dear Eric Staley:

TEKLAB, INC received 12 samples on 8/13/2024 2:27:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
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Accreditations	6
Laboratory Results	7
Receiving Check List	20
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24080243

Client Project: FGDS Landfill **Report Date:** 18-Sep-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24

Cooler Receipt Temp: 12.1 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Summit Environmental Technologies, Inc. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	12/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 08/12/2024 11:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.53**	ft	1	08/12/2024 11:32	R352006
Depth to water	*	-5.00		**4.76**	ft	1	08/12/2024 11:32	R352006
Depth to water from measuring point	*	0		**7.56**	ft	1	08/12/2024 11:32	R352006
Elevation of groundwater surface	*	0		**539.24**	ft	1	08/12/2024 11:32	R352006
Measuring Point Elevation	*	0		**546.80**	ft	1	08/12/2024 11:32	R352006
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	08/12/2024 11:32	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**13**	NTU	1	08/12/2024 11:32	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.9**	°F	1	08/12/2024 11:32	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.54**		1	08/12/2024 11:32	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1220**	umhos/cm @25C	1	08/12/2024 11:32	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**834**	mg/L	1	08/16/2024 11:59	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**268**	mg/L	10	08/20/2024 15:54	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.12**	mg/L	1	08/19/2024 10:27	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**109**	mg/L	5	08/20/2024 15:43	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0350**	mg/L	1	08/14/2024 17:45	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 17:45	227065
Boron	NELAP	0.0200		**0.121**	mg/L	1	08/14/2024 17:45	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 17:45	227065
Calcium	NELAP	0.100	S	**162**	mg/L	1	08/14/2024 17:45	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:45	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:45	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 17:45	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 17:45	227065
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 11:39	227065
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 0:35	227065
Lithium	*	0.0030		**0.0188**	mg/L	5	08/15/2024 11:39	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 0:35	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 0:35	227065
CCV recovered outside the upper control limits for Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 13:19	227055
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-002
Client Sample ID: G110
Matrix: GROUNDWATER
Collection Date: 08/13/2024 12:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.05**	ft	1	08/13/2024 12:15	R352006
Depth to water	*	-5.00		**23.11**	ft	1	08/13/2024 12:15	R352006
Depth to water from measuring point	*	0		**25.72**	ft	1	08/13/2024 12:15	R352006
Elevation of groundwater surface	*	0		**531.48**	ft	1	08/13/2024 12:15	R352006
Measuring Point Elevation	*	0		**557.20**	ft	1	08/13/2024 12:15	R352006
Measuring Point Height Above Land Surface	*	0		**2.61**	ft	1	08/13/2024 12:15	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.5**	NTU	1	08/13/2024 12:15	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**69.1**	°F	1	08/13/2024 12:15	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.68**		1	08/13/2024 12:15	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**814**	umhos/cm @25C	1	08/13/2024 12:15	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**436**	mg/L	1	08/16/2024 12:00	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**10**	mg/L	1	08/20/2024 16:04	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.14**	mg/L	1	08/19/2024 10:30	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**7**	mg/L	1	08/20/2024 16:05	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.183**	mg/L	1	08/15/2024 16:03	227124
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/15/2024 16:03	227124
Boron	NELAP	0.0200		**0.0996**	mg/L	1	08/15/2024 16:03	227124
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/15/2024 16:03	227124
Calcium	NELAP	0.100		**100**	mg/L	1	08/15/2024 16:03	227124
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:03	227124
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:03	227124
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/15/2024 16:03	227124
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/15/2024 16:03	227124
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 14:34	227124
Arsenic	NELAP	0.0010		**0.0046**	mg/L	5	08/15/2024 14:34	227124
Lithium	*	0.0030		**< 0.0030**	mg/L	5	08/15/2024 14:34	227124
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 14:34	227124
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 14:34	227124
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/15/2024 16:26	227118
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-003
Client Sample ID: R111
Matrix: GROUNDWATER
Collection Date: 08/12/2024 13:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**498.25**	ft	1	08/12/2024 13:15	R352006
Depth to water	*	-5.00		**26.29**	ft	1	08/12/2024 13:15	R352006
Depth to water from measuring point	*	0		**26.29**	ft	1	08/12/2024 13:15	R352006
Elevation of groundwater surface	*	0		**527.71**	ft	1	08/12/2024 13:15	R352006
Measuring Point Elevation	*	0		**554.00**	ft	1	08/12/2024 13:15	R352006
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	08/12/2024 13:15	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.0**	NTU	1	08/12/2024 13:15	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.3**	°F	1	08/12/2024 13:15	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.84**		1	08/12/2024 13:15	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**799**	umhos/cm @25C	1	08/12/2024 13:15	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**832**	mg/L	1	08/16/2024 12:00	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**32**	mg/L	1	08/20/2024 16:13	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.14**	mg/L	1	08/19/2024 10:31	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**185**	mg/L	5	08/22/2024 9:24	R352158
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.639**	mg/L	1	08/14/2024 17:57	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 17:57	227065
Boron	NELAP	0.0200		**3.50**	mg/L	1	08/14/2024 17:57	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 17:57	227065
Calcium	NELAP	0.100		**163**	mg/L	1	08/14/2024 17:57	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:57	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:57	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 17:57	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 17:57	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0014**	mg/L	5	08/15/2024 12:54	227065
Arsenic	NELAP	0.0010		**0.0166**	mg/L	5	08/15/2024 1:28	227065
Lithium	*	0.0030		**0.0070**	mg/L	5	08/15/2024 12:54	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 1:28	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 1:28	227065
CCV recovered outside the upper control limits for Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 13:21	227055
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-004
Client Sample ID: G112
Matrix: GROUNDWATER
Collection Date: 08/13/2024 9:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.99**	ft	1	08/13/2024 9:33	R352006
Depth to water	*	-5.00		**26.79**	ft	1	08/13/2024 9:33	R352006
Depth to water from measuring point	*	0		**28.97**	ft	1	08/13/2024 9:33	R352006
Elevation of groundwater surface	*	0		**525.83**	ft	1	08/13/2024 9:33	R352006
Measuring Point Elevation	*	0		**554.80**	ft	1	08/13/2024 9:33	R352006
Measuring Point Height Above Land Surface	*	0		**2.18**	ft	1	08/13/2024 9:33	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**47**	NTU	1	08/13/2024 9:33	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**62.2**	°F	1	08/13/2024 9:33	R352006
SW-846 9040B								
pH, Field	*	1.00		**7.19**		1	08/13/2024 9:33	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1620**	umhos/cm @25C	1	08/13/2024 9:33	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1040**	mg/L	1	08/16/2024 12:01	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**227**	mg/L	10	08/20/2024 16:47	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.16**	mg/L	1	08/19/2024 10:33	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	40		**176**	mg/L	10	08/20/2024 16:47	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.539**	mg/L	1	08/15/2024 16:03	227124
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/15/2024 16:03	227124
Boron	NELAP	0.0200		**0.445**	mg/L	1	08/15/2024 16:03	227124
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/15/2024 16:03	227124
Calcium	NELAP	0.100		**217**	mg/L	1	08/15/2024 16:03	227124
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:03	227124
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:03	227124
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/15/2024 16:03	227124
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/15/2024 16:03	227124
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 14:40	227124
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	08/16/2024 11:29	227124
Lithium	*	0.0030		**0.0264**	mg/L	5	08/15/2024 14:40	227124
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 14:40	227124
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 14:40	227124
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/15/2024 16:33	227118
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-005
Client Sample ID: G113
Matrix: GROUNDWATER
Collection Date: 08/12/2024 10:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**524.85**	ft	1	08/12/2024 10:35	R352006
Depth to water	*	-5.00		**4.39**	ft	1	08/12/2024 10:35	R352006
Depth to water from measuring point	*	0		**6.89**	ft	1	08/12/2024 10:35	R352006
Elevation of groundwater surface	*	0		**530.81**	ft	1	08/12/2024 10:35	R352006
Measuring Point Elevation	*	0		**537.70**	ft	1	08/12/2024 10:35	R352006
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	08/12/2024 10:35	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.3**	NTU	1	08/12/2024 10:35	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**62.6**	°F	1	08/12/2024 10:35	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.23**		1	08/12/2024 10:35	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1430**	umhos/cm @25C	1	08/12/2024 10:35	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1020**	mg/L	1	08/16/2024 12:03	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**131**	mg/L	5	08/20/2024 17:03	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.32**	mg/L	1	08/19/2024 10:35	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	20		**56**	mg/L	5	08/20/2024 17:03	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.263**	mg/L	1	08/14/2024 17:59	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 17:59	227065
Boron	NELAP	0.0200		**1.94**	mg/L	1	08/14/2024 17:59	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 17:59	227065
Calcium	NELAP	0.100		**251**	mg/L	1	08/14/2024 17:59	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:59	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:59	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 17:59	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 17:59	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 12:59	227065
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 1:33	227065
Lithium	*	0.0030		**0.0040**	mg/L	5	08/15/2024 12:59	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 1:33	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 1:33	227065
CCV recovered outside the upper control limits for Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 13:23	227055
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-006
Client Sample ID: G120
Matrix: GROUNDWATER
Collection Date: 08/13/2024 11:34

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**502.73**	ft	1	08/13/2024 11:34	R352006
Depth to water	*	-5.00		**17.65**	ft	1	08/13/2024 11:34	R352006
Depth to water from measuring point	*	0		**17.65**	ft	1	08/13/2024 11:34	R352006
Elevation of groundwater surface	*	0		**535.45**	ft	1	08/13/2024 11:34	R352006
Measuring Point Elevation	*	0		**553.10**	ft	1	08/13/2024 11:34	R352006
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	08/13/2024 11:34	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**7.6**	NTU	1	08/13/2024 11:34	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**65.3**	°F	1	08/13/2024 11:34	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.81**		1	08/13/2024 11:34	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1880**	umhos/cm @25C	1	08/13/2024 11:34	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1450**	mg/L	1	08/16/2024 12:18	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**534**	mg/L	20	08/20/2024 17:24	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.16**	mg/L	1	08/19/2024 10:36	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**41**	mg/L	1	08/20/2024 17:06	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.614**	mg/L	1	08/15/2024 16:04	227124
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/15/2024 16:04	227124
Boron	NELAP	0.0200		**7.71**	mg/L	1	08/15/2024 16:04	227124
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/15/2024 16:04	227124
Calcium	NELAP	0.100		**240**	mg/L	1	08/15/2024 16:04	227124
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:04	227124
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:04	227124
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/15/2024 16:04	227124
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/15/2024 16:04	227124
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 14:45	227124
Arsenic	NELAP	0.0010		**0.0104**	mg/L	5	08/15/2024 14:45	227124
Lithium	*	0.0030		**0.0081**	mg/L	5	08/15/2024 14:45	227124
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 14:45	227124
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 14:45	227124
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/15/2024 16:35	227118
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-007
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 08/13/2024 10:41

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	08/13/2024 10:41	R352006
Depth to water	*	-5.00		**27.47**	ft	1	08/13/2024 10:41	R352006
Depth to water from measuring point	*	0		**29.34**	ft	1	08/13/2024 10:41	R352006
Elevation of groundwater surface	*	0		**526.26**	ft	1	08/13/2024 10:41	R352006
Measuring Point Elevation	*	0		**555.60**	ft	1	08/13/2024 10:41	R352006
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	08/13/2024 10:41	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**22**	NTU	1	08/13/2024 10:41	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.0**	°F	1	08/13/2024 10:41	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.90**		1	08/13/2024 10:41	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1530**	umhos/cm @25C	1	08/13/2024 10:41	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**936**	mg/L	1	08/16/2024 12:18	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**260**	mg/L	10	08/20/2024 17:32	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.17**	mg/L	1	08/19/2024 10:38	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**30**	mg/L	1	08/20/2024 17:27	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.500**	mg/L	1	08/15/2024 16:05	227124
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/15/2024 16:05	227124
Boron	NELAP	0.0200		**3.04**	mg/L	1	08/15/2024 16:05	227124
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/15/2024 16:05	227124
Calcium	NELAP	0.100		**164**	mg/L	1	08/15/2024 16:05	227124
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:05	227124
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:05	227124
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/15/2024 16:05	227124
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/15/2024 16:05	227124
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0087**	mg/L	5	08/15/2024 15:36	227124
Arsenic	NELAP	0.0010		**0.0084**	mg/L	5	08/15/2024 15:36	227124
Lithium	*	0.0030		**0.0083**	mg/L	5	08/15/2024 15:36	227124
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 15:36	227124
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 15:36	227124
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/15/2024 16:37	227118
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-008
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 08/13/2024 10:14

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**505.11**	ft	1	08/13/2024 10:14	R352006
Depth to water	*	-5.00		**29.47**	ft	1	08/13/2024 10:14	R352006
Depth to water from measuring point	*	0		**31.21**	ft	1	08/13/2024 10:14	R352006
Elevation of groundwater surface	*	0		**523.19**	ft	1	08/13/2024 10:14	R352006
Measuring Point Elevation	*	0		**554.40**	ft	1	08/13/2024 10:14	R352006
Measuring Point Height Above Land Surface	*	0		**1.74**	ft	1	08/13/2024 10:14	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**17**	NTU	1	08/13/2024 10:14	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**62.5**	°F	1	08/13/2024 10:14	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.80**		1	08/13/2024 10:14	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1790**	umhos/cm @25C	1	08/13/2024 10:14	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1380**	mg/L	1	08/16/2024 12:18	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**523**	mg/L	20	08/20/2024 17:40	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.14**	mg/L	1	08/19/2024 10:41	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**39**	mg/L	1	08/20/2024 17:35	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.497**	mg/L	1	08/15/2024 16:06	227124
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/15/2024 16:06	227124
Boron	NELAP	0.0200		**10.8**	mg/L	1	08/15/2024 16:06	227124
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/15/2024 16:06	227124
Calcium	NELAP	0.100		**225**	mg/L	1	08/15/2024 16:06	227124
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:06	227124
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:06	227124
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/15/2024 16:06	227124
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/15/2024 16:06	227124
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0029**	mg/L	5	08/15/2024 15:42	227124
Arsenic	NELAP	0.0010		**0.0019**	mg/L	5	08/15/2024 15:42	227124
Lithium	*	0.0030		**0.0082**	mg/L	5	08/15/2024 15:42	227124
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 15:42	227124
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 15:42	227124
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/15/2024 16:40	227118
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 08/13/2024 9:51

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	08/13/2024 9:51	R352006
Depth to water	*	-5.00		**12.82**	ft	1	08/13/2024 9:51	R352006
Depth to water from measuring point	*	0		**15.57**	ft	1	08/13/2024 9:51	R352006
Elevation of groundwater surface	*	0		**540.03**	ft	1	08/13/2024 9:51	R352006
Measuring Point Elevation	*	0		**555.60**	ft	1	08/13/2024 9:51	R352006
Measuring Point Height Above Land Surface	*	0		**2.75**	ft	1	08/13/2024 9:51	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**51**	NTU	1	08/13/2024 9:51	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**62.5**	°F	1	08/13/2024 9:51	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.58**		1	08/13/2024 9:51	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1420**	umhos/cm @25C	1	08/13/2024 9:51	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1190**	mg/L	1	08/16/2024 12:19	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**406**	mg/L	20	08/20/2024 17:48	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**< 0.10**	mg/L	1	08/19/2024 10:51	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**41**	mg/L	1	08/20/2024 17:43	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.602**	mg/L	1	08/15/2024 16:06	227124
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/15/2024 16:06	227124
Boron	NELAP	0.0200		**9.19**	mg/L	1	08/15/2024 16:06	227124
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/15/2024 16:06	227124
Calcium	NELAP	0.100		**186**	mg/L	1	08/15/2024 16:06	227124
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:06	227124
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:06	227124
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/15/2024 16:06	227124
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/15/2024 16:06	227124
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0016**	mg/L	5	08/15/2024 15:47	227124
Arsenic	NELAP	0.0010		**0.129**	mg/L	5	08/15/2024 15:47	227124
Lithium	*	0.0030		**0.0145**	mg/L	5	08/15/2024 15:47	227124
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 15:47	227124
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 15:47	227124
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/15/2024 16:42	227118
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-010
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 08/12/2024 11:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	08/12/2024 11:23	R352006
Depth to water	*	-5.00		**2.99**	ft	1	08/12/2024 11:23	R352006
Depth to water from measuring point	*	0		**6.29**	ft	1	08/12/2024 11:23	R352006
Elevation of groundwater surface	*	0		**523.69**	ft	1	08/12/2024 11:23	R352006
Measuring Point Elevation	*	0		**529.98**	ft	1	08/12/2024 11:23	R352006
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	08/12/2024 11:23	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.8**	NTU	1	08/12/2024 11:23	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**64.2**	°F	1	08/12/2024 11:23	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.65**		1	08/12/2024 11:23	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**963**	umhos/cm @25C	1	08/12/2024 11:23	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**774**	mg/L	1	08/16/2024 12:19	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**153**	mg/L	5	08/20/2024 17:56	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.12**	mg/L	1	08/19/2024 10:53	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**34**	mg/L	1	08/20/2024 17:51	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.644**	mg/L	1	08/14/2024 18:00	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 18:00	227065
Boron	NELAP	0.0200		**2.99**	mg/L	1	08/14/2024 18:00	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 18:00	227065
Calcium	NELAP	0.100		**152**	mg/L	1	08/14/2024 18:00	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 18:00	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 18:00	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 18:00	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 18:00	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 13:05	227065
Arsenic	NELAP	0.0010		**0.0180**	mg/L	5	08/15/2024 1:39	227065
Lithium	*	0.0030		**0.0071**	mg/L	5	08/15/2024 13:05	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 1:39	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 1:39	227065
CCV recovered outside the upper control limits for Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 13:26	227055
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-011
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 08/12/2024 10:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	08/12/2024 10:18	R352006
Depth to water	*	-5.00		**8.61**	ft	1	08/12/2024 10:18	R352006
Depth to water from measuring point	*	0		**11.31**	ft	1	08/12/2024 10:18	R352006
Elevation of groundwater surface	*	0		**528.19**	ft	1	08/12/2024 10:18	R352006
Measuring Point Elevation	*	0		**539.50**	ft	1	08/12/2024 10:18	R352006
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	08/12/2024 10:18	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**39**	NTU	1	08/12/2024 10:18	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.3**	°F	1	08/12/2024 10:18	R352006
SW-846 9040B								
pH, Field	*	1.00		**7.23**		1	08/12/2024 10:18	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**698**	umhos/cm @25C	1	08/12/2024 10:18	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**344**	mg/L	1	08/16/2024 9:41	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	10		**14**	mg/L	1	08/20/2024 0:00	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.43**	mg/L	1	08/19/2024 9:31	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**29**	mg/L	1	08/20/2024 0:00	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.146**	mg/L	1	08/14/2024 17:13	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 17:13	227065
Boron	NELAP	0.0200		**0.122**	mg/L	1	08/14/2024 17:13	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 17:13	227065
Calcium	NELAP	0.100		**63.2**	mg/L	1	08/14/2024 17:13	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:13	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 17:13	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 17:13	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 17:13	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 9:54	227065
Arsenic	NELAP	0.0010		**0.107**	mg/L	5	08/14/2024 22:56	227065
Lithium	*	0.0030		**0.0038**	mg/L	5	08/14/2024 22:56	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2024 22:56	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2024 22:56	227065
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 0:00	227055
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24080243
Client Project: FGDS Landfill
Report Date: 18-Sep-24
Lab ID: 24080243-012
Client Sample ID: P07D
Matrix: GROUNDWATER
Collection Date: 08/12/2024 12:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**494.89**	ft	1	08/12/2024 12:21	R352006
Depth to water	*	-5.00		**3.42**	ft	1	08/12/2024 12:21	R352006
Depth to water from measuring point	*	0		**5.43**	ft	1	08/12/2024 12:21	R352006
Elevation of groundwater surface	*	0		**522.00**	ft	1	08/12/2024 12:21	R352006
Measuring Point Elevation	*	0		**527.43**	ft	1	08/12/2024 12:21	R352006
Measuring Point Height Above Land Surface	*	0		**2.01**	ft	1	08/12/2024 12:21	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**170**	NTU	1	08/12/2024 12:21	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.8**	°F	1	08/12/2024 12:21	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.70**		1	08/12/2024 12:21	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1170**	umhos/cm @25C	1	08/12/2024 12:21	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1090**	mg/L	1	08/16/2024 12:27	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**332**	mg/L	10	08/20/2024 18:18	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.10**	mg/L	1	08/19/2024 10:56	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**37**	mg/L	1	08/20/2024 17:59	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**1.00**	mg/L	1	08/14/2024 18:02	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 18:02	227065
Boron	NELAP	0.0200		**5.95**	mg/L	1	08/14/2024 18:02	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 18:02	227065
Calcium	NELAP	0.100		**205**	mg/L	1	08/14/2024 18:02	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 18:02	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 18:02	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 18:02	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 18:02	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 13:11	227065
Arsenic	NELAP	0.0010		**0.0394**	mg/L	5	08/15/2024 1:44	227065
Lithium	*	0.0030		**0.0085**	mg/L	5	08/15/2024 13:11	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 1:44	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 1:44	227065
CCV recovered outside the upper control limits for Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 13:33	227055
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 24080243
Report Date: 18-Sep-24

Carrier: Justin Colp

Received By: PRS

Completed by: Amber Dilallo
On: 13-Aug-24

Reviewed by: Ellie Hopkins
On: 13-Aug-24

Pages to follow: Chain of custody: 4 Extra pages included: 40

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	12.1
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice	☐
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐			
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.					
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑		
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑		
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐		
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑		

Any No responses must be detailed below or on the COC.

Samples were received on 8/12/24 at 1635 on ice [12.1C - LTG#9]. pH strip #96651. - amberdilallo - 8/13/2024 8:26:48 AM

Samples were received on 8/13/24 at 1427 on ice [3.7C - LTG#5]. pH strip #96651. - amberdilallo - 8/13/2024 3:27:12 PM

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24080243

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 12.1 °C LTG 9
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: pH ✓ 9665 1
PS 8/13

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24080242-001

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24080243-001	R101	8-12-24 1132	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111	8.12.24 1315	Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113	8-12-24 1035	Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2	8.12.24 1123	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3	8.12.24 1018	Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	8.12.24 1635	[signature]	8/12/24 1635

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24080243

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:
*new well 3Q2024 KH 8/5/24

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
J. Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24080243-12	P07D *	8.12.24 1221	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
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			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	8.12.24 1635	Paul Zettler	8/12/24 1635

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24080243

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [x] ICE [ ] BLUE ICE [ ] NO ICE 3.7 °C 4605
Preserved in: [ ] LAB [x] FIELD
LAB NOTES: PWS96057

FOR LAB USE ONLY
LK 8/13/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [x] No
Are these samples known to be hazardous? [ ] Yes [x] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [x] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24080242-001

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
[x] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24080243-001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110	8-13-24 1215	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112	8.13.24 0933	Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120	8.13.24 1134	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121	8.13.24 1041	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122	8.13.24 1014	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1	8-13-24 951	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	8-13-24 1427		8/13/24 1427

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24080243

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:
*new well 3Q2024 KH 8/5/24

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED												
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity								
24080243-12	P07D *		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
			Groundwater																						
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			Groundwater																						

Relinquished By	Date/Time	Received By	Date/Time
[signature]	8-13-24 14:27	[signature]	8/13/24 14:27

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Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** R101
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/12/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 76 °F Wind Direction: N S E (W) (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 11:04
Static Water Level: 7.56 feet below TOC
Total Depth: 35.27 feet below TOC
Water Column: 27.71 feet

Purging Activities

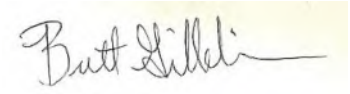
Purged By: Brett Gillihan Purge Date: 8/12/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 27.71 ft. x 35.27 = 0.78 L x 3 Vol. = 2.34 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 6.1
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:04	0.0	214	purge start time						
11:20	3.5	↓	6.60	1,226	58.8	1.55	-33.3	20.34	
11:23	4.2		6.57	1,227	59.0	1.46	-28.4	16.84	
11:26	4.8		6.56	1,226	58.9	1.38	-24.5	15.51	
11:29	5.5		6.55	1,227	58.8	1.31	-20.1	13.84	
11:32	6.1		6.54	1,223	58.9	1.27	-18	12.87	

Sampling Activities

Sampled By: Brett Gillihan Sample Date/Time: 8/12/2024 11:32
Sample Method: Low-Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.54 pH 1,223 Spec. Cond. 58.9 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 9.19 feet below TOC Drawdown: 1.63 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)



Form Completed By: **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** G110
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/13/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 75 °F Wind Direction: N S E (W) (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/13/2024 11:38
Static Water Level: 25.72 feet below TOC
Total Depth: 57.15 feet below TOC
Water Column: 31.43 feet

Purging Activities

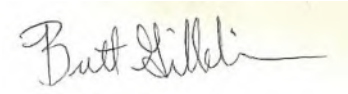
Purged By: Brett Gillihan Purge Date: 8/13/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 31.43 ft. x 57.15 = 1.26 L x 3 Vol. = 3.78 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 4.6
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:38	0.0	122	purge start time						
12:03	3.1	↓	6.92	808	72.7	4.40	-93.5	16.52	
12:06	3.5		6.80	813	71.0	4.31	-89.0	9.55	
12:09	3.9		6.73	817	69.3	4.13	-87.7	6.07	
12:12	4.2		6.69	813	69.3	4.13	-86.4	4.95	
12:15	4.6		6.68	814	69.1	4.06	-86.2	4.50	

Sampling Activities

Sampled By: Brett Gillihan Sample Date/Time: 8/13/2024 12:15
Sample Method: Low-Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.68 pH 814 Spec. Cond. 69.1 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 26.54 feet below TOC Drawdown: 0.82 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)



Form Completed By: **Date:** 8/13/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** R111
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/12/2024

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 73 °F Wind Direction: (N) S E W (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 12:48
Static Water Level: 26.29 feet below TOC
Total Depth: 55.75 feet below TOC
Water Column: 29.46 feet

Purging Activities

Purged By: Tracy Carroll Purge Date: 8/12/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 29.46 ft. x 55.75 = 1.23 L x 3 Vol. = 3.69 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 4.0
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:53	0.0	182	purge start time						
13:03	1.8	↓	6.84	796	63.9	1.52	-116.4	7.55	
13:06	2.4		6.84	798	63.6	1.40	-116.7	6.13	
13:09	2.9		6.84	799	63.3	1.31	-117.9	5.19	
13:12	3.5		6.84	798	63.3	1.27	-118.8	5.24	
13:15	4.0		6.84	799	63.3	1.24	-118.7	4.04	

Sampling Activities

Sampled By: Tracy Carroll Sample Date/Time: 8/12/2024 13:15
Sample Method: Low-Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.84 pH 799 Spec. Cond. 63.3 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 26.40 feet below TOC Drawdown: 0.11 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Tracy Carroll **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** G112
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/13/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 67 °F Wind Direction: (N) S E W (circle two if needed)
Precipitation: (None) Light Heavy Sky: Cloudy Sunny (Partly)

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/13/2024 9:13
Static Water Level: 28.97 feet below TOC
Total Depth: 58.81 feet below TOC
Water Column: 29.84 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/13/2024
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 29.84 ft. x 58.81 = 1.29 L x 3 Vol. = 3.87 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 4.0
Physical appearance of purge water: Slightly Cloudy Odor: None Color: Light yellow

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:14	0.0	211	purge start time						
9:21	1.5	↓	7.19	1,624	60.8	1.43	91.9	72.50	
9:24	2.1		7.19	1,623	61.6	1.32	33.5	60.17	
9:27	2.7		7.20	1,628	62.1	1.87	2.8	46.78	
9:30	3.4		7.19	1,626	61.6	1.18	-14	48.63	
9:33	4.0		7.19	1,625	62.2	1.06	-24.1	47.06	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/13/2024 9:33
Sample Method: Low-Flow Sample Equipment: Submersible Pump
Sample Parameters: 7.19 pH 1,625 Spec. Cond. 62.2 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 30.08 feet below TOC Drawdown: 1.11 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Justin Colp **Date:** 8/13/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** G113
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/12/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 75 °F Wind Direction: (N) S E W (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 10:20
Static Water Level: 6.89 feet below TOC
Total Depth: 12.85 feet below TOC
Water Column: 5.96 feet

Purging Activities

Purged By: Brett Gillihan Purge Date: 8/12/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 5.96 ft. x 12.85 = 0.28 L x 3 Vol. = 0.84 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 4.1
Physical appearance of purge water: Clear Odor: Strong Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:20	0.0	267 ↓	purge start time						
10:23	0.9		6.13	1,401	63.5	1.85	-160.7	6.45	
10:26	1.7		6.15	1,410	63.5	1.52	-181.4	4.60	
10:29	2.5		6.18	1,417	63.5	1.24	-198.6	3.97	
10:32	3.3		6.21	1,424	63.4	1.10	-212.5	3.98	
10:35	4.1		6.23	1,431	62.6	0.93	-222.6	6.26	

Sampling Activities

Sampled By: Brett Gillihan Sample Date/Time: 8/12/2024 10:35
Sample Method: Low-Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.23 pH 1,431 Spec. Cond. 62.6 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 7.42 feet below TOC Drawdown: 0.53 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Brett Gillihan **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** G120
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/13/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 74 °F Wind Direction: N S E (W) (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

			Yes	No
Well Pad	Good	**Locks**		
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/13/2024 11:14
Static Water Level: 17.65 feet below TOC
Total Depth: 50.37 feet below TOC
Water Column: 32.72 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/13/2024
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 32.72 ft. x 50.37 = 1.11 L x 3 Vol. = 3.33 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 3.5
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:15	0.0	184	purge start time						
11:22	1.3	↓	6.85	1,881	63.8	2.42	-96.2	8.06	
11:25	1.9		6.81	1,881	62.5	0.93	-99.6	6.55	
11:28	2.4		6.81	1,881	63.4	0.79	-104.9	6.21	
11:31	3.0		6.81	1,885	64.0	0.75	-109.0	6.76	
11:34	3.5		6.81	1,883	65.3	0.73	-112.1	7.61	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/13/2024 11:34
Sample Method: Low-Flow Sample Equipment: Submersible Pump
Sample Parameters: 6.81 pH 1,883 Spec. Cond. 65.3 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 18.79 feet below TOC Drawdown: 1.14 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Justin Colp **Date:** 8/13/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** G121
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/13/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 72 °F Wind Direction: N S E (W) (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/13/2024 10:21
Static Water Level: 29.34 feet below TOC
Total Depth: 58.56 feet below TOC
Water Column: 29.22 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/13/2024
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 29.22 ft. x 58.56 = 1.29 L x 3 Vol. = 3.87 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 4.0
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:22	0.0	211	purge start time						
10:29	1.5	↓	7.00	1,433	63.0	1.41	-98.4	28.89	
10:32	2.1		6.96	1,442	66.0	1.22	-104.4	26.61	
10:35	2.8		6.94	1,472	64.5	1.05	-110.1	27.56	
10:38	3.4		6.90	1,527	63.2	0.93	-113.6	23.40	
10:41	4.0		6.90	1,530	63.0	0.85	-117.8	22.37	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/13/2024 10:41
Sample Method: Low-Flow Sample Equipment: Submersible Pump
Sample Parameters: 6.90 pH 1,530 Spec. Cond. 63.0 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 30.00 feet below TOC Drawdown: 0.66 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Justin Colp **Date:** 8/13/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** G122
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/13/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 70 °F Wind Direction: N S E (W) (circle two if needed)
Precipitation: (None) Light Heavy Sky: Cloudy Sunny (Partly)

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/13/2024 9:48
Static Water Level: 31.21 feet below TOC
Total Depth: 49.29 feet below TOC
Water Column: 18.08 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/13/2024
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 18.08 ft. x 49.29 = 1.08 L x 3 Vol. = 3.24 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 5.0
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:49	0.0	200	purge start time						
10:02	2.6	↓	6.86	1,724	63.1	2.00	-86.7	20.54	
10:05	3.2		6.84	1,734	62.5	1.66	-91.5	20.95	
10:08	3.8		6.82	1,765	60.9	1.32	-94.3	17.97	
10:11	4.4		6.81	1,781	59.8	1.12	-97.5	17.85	
10:14	5.0		6.80	1,793	62.5	1.01	-100.6	17.43	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/13/2024 10:14
Sample Method: Low-Flow Sample Equipment: Submersible Pump
Sample Parameters: 6.80 pH 1,793 Spec. Cond. 62.5 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 33.07 feet below TOC Drawdown: 1.86 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Justin Colp **Date:** 8/13/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill
Monitoring Point: AW-1
Project Location: Springfield, IL
W.O. Number (s): 24080243
Date (s): 8/13/2024

Field Team Members

Name: Brett Gillihan — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 70 °F — Wind Direction: N S E (W) (circle two if needed)
Precipitation: (None) Light Heavy — Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/13/2024 9:21
Static Water Level: 15.57 feet below TOC
Total Depth: 54.81 feet below TOC
Water Column: 39.24 feet

Purging Activities

Purged By: Brett Gillihan — Purge Date: 8/13/2024
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 39.24 ft. x 54.81 = 1.21 L x 3 Vol. = 3.63 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 4.6
Physical appearance of purge water: Cloudy — Odor: None — Color: Light brown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:21	0.0	150	purge start time						
9:39	2.8	↓	6.71	1,390	63.0	3.14	-24.8	57.38	
9:42	3.3		6.68	1,394	62.5	2.60	-50.0	57.42	
9:45	3.7		6.68	1,390	62.3	2.46	-49.4	57.79	
9:48	4.2		6.66	1,396	62.6	2.45	-56.3	51.84	
9:51	4.6		6.58	1,417	62.5	2.36	-69.5	51.12	

Sampling Activities

Sampled By: Brett Gillihan — Sample Date/Time: 8/13/2024 9:51
Sample Method: Low-Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.58 pH — 1,417 Spec. Cond. — 62.5 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 17.34 feet below TOC — Drawdown: 1.77 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Brett Gillihan — **Date:** 8/13/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** AW-2
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/12/2024

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 72 °F Wind Direction: N S E (W) (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 10:50
Static Water Level: 6.29 feet below TOC
Total Depth: 32.64 feet below TOC
Water Column: 26.35 feet

Purging Activities

Purged By: Tracy Carroll Purge Date: 8/12/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 26.35 ft. x 32.64 = 0.72 L x 3 Vol. = 2.16 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 6.6
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:57	0.0	250	purge start time						
11:11	3.6	↓	6.63	951	65.5	3.21	-106.8	9.84	
11:14	4.3		6.64	957	65.1	3.05	-105.3	5.87	
11:17	5.1		6.64	962	64.6	2.94	-121.1	3.39	
11:20	5.8		6.65	962	64.4	2.87	-111.4	3.44	
11:23	6.6		6.65	963	64.2	2.85	-106.1	2.85	

Sampling Activities

Sampled By: Tracy Carroll Sample Date/Time: 8/12/2024 11:23
Sample Method: Low-Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.65 pH 963 Spec. Cond. 64.2 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 6.36 feet below TOC Drawdown: 0.07 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Tracy Carroll **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** RW-3
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/12/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 74 °F Wind Direction: (N) S E W (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 10:01
Static Water Level: 11.31 feet below TOC
Total Depth: 44.01 feet below TOC
Water Column: 32.70 feet

Purging Activities

Purged By: Justin Colp Purge Date: 8/12/2024
Purge Method: Bladder Pump Well Diameter: 2"
Purge Volume Calculation (L): 32.7 ft. x 44.01 = 0.97 L x 3 Vol. = 2.91 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 3.1
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:03	0.0	200 ↓	purge start time						
10:06	0.6		7.20	764	60.2	2.13	-61.3	7.69	
10:09	1.3		7.22	745	60.0	1.17	-110.3	14.43	
10:12	1.9		7.23	707	59.0	0.99	-122.2	27.14	
10:15	2.5		7.22	699	59.8	0.96	-124.7	35.75	
10:18	3.1		7.23	698	60.3	0.95	-125.9	38.75	

Sampling Activities

Sampled By: Justin Colp Sample Date/Time: 8/12/2024 10:18
Sample Method: Low-Flow Sample Equipment: Bladder Pump
Sample Parameters: 7.23 pH 698 Spec. Cond. 60.3 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 11.46 feet below TOC Drawdown: 0.15 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Duplicate Collected

Form Completed By: Justin Colp **Date:** 8/12/2024

Field Data Sheet

Project Name: CWLP- FGDS Landfill **Monitoring Point:** P07D
Project Location: Springfield, IL
W.O. Number (s): 24080243 **Date (s):** 8/12/2024

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 73 °F Wind Direction: (N) S E W (circle two if needed)
Precipitation: (None) Light Heavy Sky: (Cloudy) Sunny Partly

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Good			

Groundwater Level Measurements

Date/Time Measured: 8/12/2024 11:46
Static Water Level: 5.43 feet below TOC
Total Depth: 32.54 feet below TOC
Water Column: 27.11 feet

Purging Activities

Purged By: Tracy Carroll Purge Date: 8/12/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 27.11 ft. x 32.54 = 0.72 L x 3 Vol. = 2.16 L **Based on 3 water volumes in 3/8" tubing.*
Actual Purge Volume (L): 7.5
Physical appearance of purge water: Clear Odor: None Color: Light orange

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µmhos/cm)	Temp (°F)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:53	0.0	268	purge start time						
12:09	4.3	↓	6.69	1,173	60.4	0.83	-119.1	217.46	
12:12	5.1		6.69	1,173	60.4	0.78	-120.1	161.59	
12:15	5.9		6.70	1,173	60.4	0.74	-120.5	104.52	
12:18	6.7		6.70	1,172	60.2	0.72	-121.0	134.96	
12:21	7.5		6.70	1,172	59.8	0.70	-120.1	172.06	

Sampling Activities

Sampled By: Tracy Carroll Sample Date/Time: 8/12/2024 12:21
Sample Method: Low-Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.70 pH 1,172 Spec. Cond. 59.8 Temp
Field Filtered: No Filter Type:
Water Level: 5.63 feet below TOC Drawdown: 0.20 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

Form Completed By: Tracy Carroll **Date:** 8/12/2024

Site Samping Event: FGDS Landfill
LIMS Workorder: 24080243
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 3Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45985 Technician(s): Brett Gillihan Date: 8/12/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC240612A	4.01	8/12/24 9:59
7.0 Buffer	WC240307F	6.99	8/12/24 9:54
10.0 Buffer	WC240625B	9.99	8/12/24 10:02
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1410	8/12/24 10:09

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.4	8/12/24 10:15
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-BG	LCS	8/12/24 10:19	22.4	7.01	1,410			
CCV-1-BG	CCV	8/12/24 15:30	23.6	7.04	1,416			

Comments:

Field Meter ID: Pine 45985 Technician(s): Brett Gillihan Date: 8/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC240612A	4.02	8/13/24 8:58
7.0 Buffer	WC240307F	7.00	8/13/24 8:54
10.0 Buffer	WC240625B	10.01	8/13/24 9:01
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1412	8/13/24 9:05

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.9	8/13/24 9:15
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-BG	LCS	8/13/24 9:20	23.5	7.01	1,411			
CCV-2-BG	CCV	8/13/24 12:19	24.5	7.02	1,420			

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 24080243
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 3Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 223344 Technician(s): Tracy Carroll Date: 8/12/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC240612A	4.01	8/12/24 10:31
7.0 Buffer	WC240307F	7.01	8/12/24 10:23
10.0 Buffer	WC240625B	10.00	8/12/24 10:39
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1412	8/12/24 10:39

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-TC	LCS	8/12/24 10:44	24.6	7.03	1,410			
CCV-1-TC	CCV	8/12/24 14:28	25.2	7.08	1,453			

Comments:

Field Meter ID: Pine 223344 Technician(s): Tracy Carroll Date: 8/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC240612A	4.00	8/13/24 9:38
7.0 Buffer	WC240307F	7.01	8/13/24 9:35
10.0 Buffer	WC240625B	10.00	8/13/24 9:41
LCS/CCV (7.0 Buffer)	WC231207A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1412	8/13/24 9:37

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-TC	LCS	8/13/24 9:42	21	7.02	1,413			
CCV-2-TC	CCV	8/13/24 14:18	22.5	7.06	1,422			

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 24080243
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 3Q 2024

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 218074 Technician(s): justin colp Date: 8/12/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc240612a	4.00	8/12/24 9:33
7.0 Buffer	wc240307f	6.99	8/12/24 9:30
10.0 Buffer	wc240625b	9.99	8/12/24 9:36
LCS/CCV (7.0 Buffer)	wc231207a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1413	8/12/24 9:39

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.41	8/12/24 9:42
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	8/12/24 9:45	23.2	6.99	1,413	0.41		
CCV-1-JC	CCV	8/12/24 14:44	24.49	7.01	1,427	0.47		

Comments:

Field Meter ID: Pine 218074 Technician(s): justin colp Date: 8/13/2024

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc240612a	3.99	8/13/24 8:55
7.0 Buffer	wc240307f	7.00	8/13/24 8:57
10.0 Buffer	wc240625b	10.00	8/13/24 8:59
LCS/CCV (7.0 Buffer)	wc231207a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	98627	1410	8/13/24 9:04

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.43	8/13/24 9:07
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-JC	LCS	8/13/24 9:10	23.1	7.00	1,410	0.43		
CCV-2-JC	CCV	8/13/24 11:36	24.8	7.02	1,416	0.47		

Comments:

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24090112 RcptNo: 1

Logged by:	Anthony W. Britton	9/3/2024 5:00:00 PM	Anthony Britton
Completed By:	Anthony W. Britton	9/4/2024 2:28:52 PM	Anthony Britton
Reviewed By:	Jennifer Woolf	9/6/2024 3:01:49 PM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
	No. 4608 Seal Date: 8/29/2024 Signed By:			
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	17.2	Good	Yes	4608	8/29/2024	

Summit Environmental Technologies, Inc.
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Website: http://www.settek.com

September 17, 2024

Elizabeth Hurley
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24080243

Dear Elizabeth Hurley:

Order No.: 24081420

Summit Environmental Technologies, Inc. received 12 sample(s) on 8/19/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Website: http://www.settek.com

Case Narrative

WO#: **24081420**
Date: **9/17/2024**

CLIENT: TEKLAB Inc,
Project: 24080243

WorkOrder Narrative:
24081420: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24081420**
Date: **9/17/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Website: http://www.settek.com

Workorder Sample Summary

WO#: **24081420**

17-Sep-24

CLIENT: TEKLAB Inc,
Project: 24080243

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24081420-001	24080243-001		8/12/2024 11:32:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-002	24080243-002		8/13/2024 12:15:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-003	24080243-003		8/12/2024 1:15:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-004	24080243-004		8/13/2024 9:33:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-005	24080243-005		8/12/2024 10:35:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-006	24080243-006		8/13/2024 11:34:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-007	24080243-007		8/13/2024 10:41:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-008	24080243-008		8/13/2024 10:14:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-009	24080243-009		8/13/2024 9:51:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-010	24080243-010		8/12/2024 11:23:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-011	24080243-011		8/12/2024 10:18:00 AM	8/19/2024 12:30:00 PM	Non-Potable Water
24081420-012	24080243-012		8/12/2024 12:21:00 PM	8/19/2024 12:30:00 PM	Non-Potable Water

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Website: http://www.settek.com

DATES REPORT

WO#: **24081420**

17-Sep-24

Client: TEKLAB Inc,
Project: 24080243

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24081420-001A	24080243-001	8/12/2024 11:32:00 AM	Non-Potable Water	Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-002A	24080243-002	8/13/2024 12:15:00 PM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-003A	24080243-003	8/12/2024 1:15:00 PM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-004A	24080243-004	8/13/2024 9:33:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-005A	24080243-005	8/12/2024 10:35:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-006A	24080243-006	8/13/2024 11:34:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-007A	24080243-007	8/13/2024 10:41:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-008A	24080243-008	8/13/2024 10:14:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM

Original

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DATES REPORT

WO#: **24081420**

17-Sep-24

Client: TEKLAB Inc,
Project: 24080243

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24081420-008A	24080243-008	8/13/2024 10:14:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-009A	24080243-009	8/13/2024 9:51:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-010A	24080243-010	8/12/2024 11:23:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-011A	24080243-011	8/12/2024 10:18:00 AM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM
24081420-012A	24080243-012	8/12/2024 12:21:00 PM		Combined Radium (EPA903+904)			9/17/2024 12:00:15 PM
				Radium-226 (EPA 903.0)		9/10/2024 2:19:00 PM	9/16/2024 11:23:00 AM
				Radium-228 (EPA 904.0)		9/10/2024 2:19:00 PM	9/13/2024 2:18:00 PM

Original

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Analytical Report

(consolidated)

WO#: **24081420**

Date Reported: **9/17/2024**

CLIENT: TEKLAB Inc,

Collection Date: 8/13/2024 9:51:00 AM

Project: 24080243

Lab ID: 24081420-009

Matrix: NON-POTABLE WATER

Client Sample ID: 24080243-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RAD226/228				**CALCULATION**			Analyst: **HDJ**
COMBINED RADIUM (EPA903+904)							
Radium-226/Radium-228	ND	2.00		pCi/L	± 0.493	1	9/17/2024 12:00:15 PM
RAD226/228					**E903.0**	**E903-904**	Analyst: **HDJ**
RADIUM-226 (EPA 903.0)							
Radium-226	ND	1.00		pCi/L	± 0.110	1	9/16/2024 11:23:00 AM
Yield	1.00					1	9/16/2024 11:23:00 AM
RAD226/228					**E904.0**	**E903-904**	Analyst: **HDJ**
RADIUM-228 (EPA 904.0)							
Radium-228	ND	1.00		pCi/L	± 0.383	1	9/13/2024 2:18:00 PM
Yield	1.00					1	9/13/2024 2:18:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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QC SUMMARY REPORT

WO#: **24081420**
17-Sep-24

Client: TEKLAB Inc,
Project: 24080243 **BatchID:** **78532**

Sample ID: **MB-78532**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **9/10/2024**	RunNo: **193266**
Client ID: **PBW**	Batch ID: **78532**	TestNo: **E904.0**	**E903-904**	Analysis Date: **9/13/2024**	SeqNo: **5230723**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-78532**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **9/10/2024**	RunNo: **193266**
Client ID: **LCSW**	Batch ID: **78532**	TestNo: **E904.0**	**E903-904**	Analysis Date: **9/13/2024**	SeqNo: **5230724**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.26	1.00	5.000	0	65.2	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-78532**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **9/10/2024**	RunNo: **193266**
Client ID: **LCSS02**	Batch ID: **78532**	TestNo: **E904.0**	**E903-904**	Analysis Date: **9/13/2024**	SeqNo: **5230725**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.71	1.00	5.000	0	74.2	50	130	3.259	12.9	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24081420**
17-Sep-24

Client: TEKLAB Inc,
Project: 24080243 **BatchID:** **78532**

Sample ID: **24081891-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **9/10/2024** RunNo: **193266**
Client ID: **BatchQC** Batch ID: **78532** TestNo: **E904.0** **E903-904** Analysis Date: **9/13/2024** SeqNo: **5230761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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QC SUMMARY REPORT

WO#: **24081420**
17-Sep-24

Client: TEKLAB Inc,
Project: 24080243 **BatchID:** **78532**

Sample ID: **MB-78532** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/10/2024** RunNo: **193273**
Client ID: **PBW** Batch ID: **78532** TestNo: **E903.0** **E903-904** Analysis Date: **9/16/2024** SeqNo: **5230910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-78532** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/10/2024** RunNo: **193273**
Client ID: **LCSW** Batch ID: **78532** TestNo: **E903.0** **E903-904** Analysis Date: **9/16/2024** SeqNo: **5230911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.33	1.00	5.000	0	86.7	70	130				

Sample ID: **LCSD-78532** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/10/2024** RunNo: **193273**
Client ID: **LCSS02** Batch ID: **78532** TestNo: **E903.0** **E903-904** Analysis Date: **9/16/2024** SeqNo: **5230912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.53	1.00	5.000	0	90.7	70	130	4.334	4.53	20	

Sample ID: **24081891-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/10/2024** RunNo: **193273**
Client ID: **BatchQC** Batch ID: **78532** TestNo: **E903.0** **E903-904** Analysis Date: **9/16/2024** SeqNo: **5230934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
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QC SUMMARY REPORT

WO#: **24081420**
17-Sep-24

Client: TEKLAB Inc,
Project: 24080243 **BatchID:** **78532**

Sample ID: **24081891-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/10/2024** RunNo: **193273**
Client ID: **BatchQC** Batch ID: **78532** TestNo: **E903.0** **E903-904** Analysis Date: **9/16/2024** SeqNo: **5230934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **24081894-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **9/10/2024** RunNo: **193273**
Client ID: **BatchQC** Batch ID: **78532** TestNo: **E903.0** **E903-904** Analysis Date: **9/16/2024** SeqNo: **5230936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Pg 1 of 2

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

24080420

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Teklab, Inc. QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Ra226, Ra228 and Combinded Radium per your usual methods.
Changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site. Report 24080243-011 from 24080242-001.*

Project# 24080243

Contact: Shelly Hennessy Email: shennessy@teklabinc.com
Requested Due Date: Standard TAT Billing/PO: 36828 Phone: (618) 344-1004 ext. 36

no containers shipped for 24080243-011 SAH 8/14/24

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	Radium 226	Radium 228									
	24080243-001	8/12/24 1132	HNO3	Groundwater	✔	✔	✔	pH	1	cpm	14					
	24080243-002	8/13/24 1215	HNO3	Groundwater	✔	✔	✔		1		19					
	24080243-003	8/12/24 1315	HNO3	Groundwater	✔	✔	✔		1		56					
	24080243-004	8/13/24 0933	HNO3	Groundwater	✔	✔	✔		1		37					
	24080243-005	8/12/24 1035	HNO3	Groundwater	✔	✔	✔		1		26					
	24080243-006	8/13/24 1134	HNO3	Groundwater	✔	✔	✔		1		18					
	24080243-007	8/13/24 1041	HNO3	Groundwater	✔	✔	✔		1		30					
	24080243-008	8/13/24 1014	HNO3	Groundwater	✔	✔	✔		1		6					
	24080243-009	8/13/24 0951	HNO3	Groundwater	✔	✔	✔		1		24					
	24080243-010	8/12/24 1123	HNO3	Groundwater	✔	✔	✔		1		32					
	24080243-011*	8/12/24 1018	HNO3	Groundwater	✔	✔	✔									

21.6 - 0.1 = 21.5, Fedex Cooler

*Relinquished By	Date/Time	Received By	Date/Time
Amber Quall	8/13/24 1200	Anthony Bratton AUG 19 2024	12 30

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Teklab, Inc. | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Ra226, Ra228 and Combinded Radium per your usual methods.
Changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site. Report 24080243-011 from 24080242-001.

Project# 24080243

Contact: Shelly Hennessy | Email: shennessy@teklabinc.com
Requested Due Date: Standard TAT | Billing/PO: 36828 | Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	Radium 226	Radium 228									
	24080243-012	8/12/24 1221	HNO3	Groundwater	✔	✔	✔	pH	1	12=cpm						
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												

21.6 - 0.1 = 21.5, Fedex Coder

*Relinquished By	Date/Time	Received By	Date/Time
[signature]	8/13/24 1700	[signature] AUG 19 2024	1230

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24081420 RcptNo: 1

Logged by:	Anthony W. Britton	8/19/2024 12:30:00 PM	Anthony Britton
Completed By:	Anthony W. Britton	8/20/2024 1:40:48 PM	Anthony Britton
Reviewed By:	Jennifer Woolf	8/20/2024 7:57:52 PM	Jennifer Woolf

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
	No. Seal Date: Signed By:			
5.	Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
6.	Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
		Not required		
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12.	Were any sample containers received broken?	Yes ☐	No ☑	
13.	Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	21.5	Good	Not Present			

Fourth Quarter 2024

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

December 06, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 24110120

Dear Eric Staley:

TEKLAB, INC received 20 samples on 11/13/2024 3:45:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24110120
Report Date: 06-Dec-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	27
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24110120

Client Project: Ash Pond Monitoring Wells **Report Date:** 06-Dec-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24110120
Report Date: 06-Dec-24

Cooler Receipt Temp: 10.9 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Summit Environmental Technologies. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24110120
Report Date: 06-Dec-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	12/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 11/11/2024 11:03

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	11/11/2024 11:03	R356375
Depth to water	*	-5.00		**8.75**	ft	1	11/11/2024 11:03	R356375
Depth to water from measuring point	*	0		**11.45**	ft	1	11/11/2024 11:03	R356375
Elevation of groundwater surface	*	0		**528.05**	ft	1	11/11/2024 11:03	R356375
Measuring Point Elevation	*	0		**539.50**	ft	1	11/11/2024 11:03	R356375
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	11/11/2024 11:03	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**48**	NTU	1	11/11/2024 11:03	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.8**	°F	1	11/11/2024 11:03	R356375
SW-846 9040B								
pH, Field	*	1.00		**7.13**		1	11/11/2024 11:03	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**531**	µmhos/cm @25C	1	11/11/2024 11:03	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**470**	mg/L	2.5	11/14/2024 12:11	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 17:09	R355975
Chloride	NELAP	5.00		**25.1**	mg/L	10	11/13/2024 17:09	R355975
Sulfate	NELAP	10.0		**ND**	mg/L	10	11/13/2024 17:09	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.180**	mg/L	1	11/12/2024 11:03	231044
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 11:03	231044
Boron	NELAP	0.0200		**0.137**	mg/L	1	11/12/2024 11:03	231044
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 11:03	231044
Calcium	NELAP	0.100		**67.2**	mg/L	1	11/12/2024 11:03	231044
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:03	231044
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:03	231044
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 11:03	231044
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 11:03	231044
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 22:11	231044
Arsenic	NELAP	0.0010		**0.214**	mg/L	5	11/14/2024 0:51	231044
Lithium	*	0.0030		**0.0047**	mg/L	5	11/14/2024 17:29	231044
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 0:51	231044
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/14/2024 17:29	231044
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/13/2024 17:09	231083
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-002
Client Sample ID: AP-1
Matrix: GROUNDWATER
Collection Date: 11/11/2024 11:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**504.29**	ft	1	11/11/2024 11:44	R356375
Depth to water	*	-5.00		**8.12**	ft	1	11/11/2024 11:44	R356375
Depth to water from measuring point	*	0		**10.39**	ft	1	11/11/2024 11:44	R356375
Elevation of groundwater surface	*	0		**524.98**	ft	1	11/11/2024 11:44	R356375
Measuring Point Elevation	*	0		**535.37**	ft	1	11/11/2024 11:44	R356375
Measuring Point Height Above Land Surface	*	0		**2.27**	ft	1	11/11/2024 11:44	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**13**	NTU	1	11/11/2024 11:44	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.2**	°F	1	11/11/2024 11:44	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.54**		1	11/11/2024 11:44	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1380**	µmhos/cm @25C	1	11/11/2024 11:44	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1640**	mg/L	2.5	11/14/2024 12:17	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 17:20	R355975
Chloride	NELAP	5.00		**52.1**	mg/L	10	11/13/2024 17:20	R355975
Sulfate	NELAP	10.0		**849**	mg/L	10	11/13/2024 17:20	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.269**	mg/L	1	11/12/2024 11:05	231044
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 11:05	231044
Boron	NELAP	0.200		**23.6**	mg/L	10	11/14/2024 9:56	231044
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 11:05	231044
Calcium	NELAP	0.100		**237**	mg/L	1	11/12/2024 11:05	231044
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:05	231044
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:05	231044
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 11:05	231044
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 11:05	231044
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 22:45	231044
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 0:56	231044
Lithium	*	0.0030		**0.0094**	mg/L	5	11/14/2024 17:35	231044
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 0:56	231044
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/14/2024 17:35	231044
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/13/2024 17:22	231083
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 11/11/2024 12:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	11/11/2024 12:21	R356375
Depth to water	*	-5.00		**4.04**	ft	1	11/11/2024 12:21	R356375
Depth to water from measuring point	*	0		**6.54**	ft	1	11/11/2024 12:21	R356375
Elevation of groundwater surface	*	0		**529.56**	ft	1	11/11/2024 12:21	R356375
Measuring Point Elevation	*	0		**536.10**	ft	1	11/11/2024 12:21	R356375
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	11/11/2024 12:21	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.0**	NTU	1	11/11/2024 12:21	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.3**	°F	1	11/11/2024 12:21	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.41**		1	11/11/2024 12:21	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1140**	µmhos/cm @25C	1	11/11/2024 12:21	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1160**	mg/L	2.5	11/14/2024 12:18	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 17:32	R355975
Chloride	NELAP	5.00		**35.1**	mg/L	10	11/13/2024 17:32	R355975
Sulfate	NELAP	10.0		**440**	mg/L	10	11/13/2024 17:32	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0727**	mg/L	1	11/12/2024 11:06	231044
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 11:06	231044
Boron	NELAP	0.0200		**3.52**	mg/L	1	11/12/2024 11:06	231044
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 11:06	231044
Calcium	NELAP	0.100		**222**	mg/L	1	11/12/2024 11:06	231044
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:06	231044
Cobalt	NELAP	0.0050		**0.0085**	mg/L	1	11/12/2024 11:06	231044
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 11:06	231044
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 11:06	231044
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 22:49	231044
Arsenic	NELAP	0.0010		**0.0016**	mg/L	5	11/14/2024 1:58	231044
Lithium	*	0.0030		**0.0068**	mg/L	5	11/14/2024 17:40	231044
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 1:58	231044
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/14/2024 17:40	231044
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/13/2024 17:24	231083
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 11/11/2024 12:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	11/11/2024 12:55	R356375
Depth to water	*	-5.00		**7.00**	ft	1	11/11/2024 12:55	R356375
Depth to water from measuring point	*	0		**9.55**	ft	1	11/11/2024 12:55	R356375
Elevation of groundwater surface	*	0		**525.70**	ft	1	11/11/2024 12:55	R356375
Measuring Point Elevation	*	0		**535.25**	ft	1	11/11/2024 12:55	R356375
Measuring Point Height Above Land Surface	*	0		**2.55**	ft	1	11/11/2024 12:55	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**5.7**	NTU	1	11/11/2024 12:55	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**64.7**	°F	1	11/11/2024 12:55	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.48**		1	11/11/2024 12:55	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1070**	µmhos/cm @25C	1	11/11/2024 12:55	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1160**	mg/L	2.5	11/14/2024 12:18	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 17:44	R355975
Chloride	NELAP	5.00		**59.5**	mg/L	10	11/13/2024 17:44	R355975
Sulfate	NELAP	10.0		**558**	mg/L	10	11/13/2024 17:44	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.132**	mg/L	1	11/12/2024 11:08	231044
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 11:08	231044
Boron	NELAP	0.0200		**14.9**	mg/L	1	11/12/2024 11:08	231044
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 11:08	231044
Calcium	NELAP	0.100		**185**	mg/L	1	11/12/2024 11:08	231044
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:08	231044
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:08	231044
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 11:08	231044
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 11:08	231044
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 22:53	231044
Arsenic	NELAP	0.0010		**0.0182**	mg/L	5	11/14/2024 2:04	231044
Lithium	*	0.0030		**0.0062**	mg/L	5	11/14/2024 17:46	231044
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 2:04	231044
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/14/2024 17:46	231044
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/13/2024 17:27	231083
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-005
Client Sample ID: AP-4
Matrix: GROUNDWATER
Collection Date: 11/11/2024 13:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.19**	ft	1	11/11/2024 13:38	R356375
Depth to water	*	-5.00		**7.77**	ft	1	11/11/2024 13:38	R356375
Depth to water from measuring point	*	0		**10.91**	ft	1	11/11/2024 13:38	R356375
Elevation of groundwater surface	*	0		**544.69**	ft	1	11/11/2024 13:38	R356375
Measuring Point Elevation	*	0		**555.60**	ft	1	11/11/2024 13:38	R356375
Measuring Point Height Above Land Surface	*	0		**3.14**	ft	1	11/11/2024 13:38	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**13**	NTU	1	11/11/2024 13:38	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.6**	°F	1	11/11/2024 13:38	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.82**		1	11/11/2024 13:38	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**688**	µmhos/cm @25C	1	11/11/2024 13:38	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**565**	mg/L	2.5	11/14/2024 12:18	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 17:55	R355975
Chloride	NELAP	5.00		**12.3**	mg/L	10	11/13/2024 17:55	R355975
Sulfate	NELAP	10.0		**ND**	mg/L	10	11/13/2024 17:55	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.390**	mg/L	1	11/12/2024 12:39	231044
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 12:39	231044
Boron	NELAP	0.0200		**0.0820**	mg/L	1	11/12/2024 12:39	231044
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 12:39	231044
Calcium	NELAP	0.100		**< 0.100**	mg/L	1	11/12/2024 12:39	231044
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 12:39	231044
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 12:39	231044
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 12:39	231044
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 12:39	231044
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 22:57	231044
Arsenic	NELAP	0.0010		**0.0246**	mg/L	5	11/14/2024 2:09	231044
Lithium	*	0.0030		**0.0077**	mg/L	5	11/14/2024 17:51	231044
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 2:09	231044
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/14/2024 17:51	231044
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/13/2024 17:30	231083
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-006
Client Sample ID: AP-5
Matrix: GROUNDWATER
Collection Date: 11/11/2024 14:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**552.63**	ft	1	11/11/2024 14:28	R356375
Depth to water	*	-5.00		**13.98**	ft	1	11/11/2024 14:28	R356375
Depth to water from measuring point	*	0		**16.28**	ft	1	11/11/2024 14:28	R356375
Elevation of groundwater surface	*	0		**567.62**	ft	1	11/11/2024 14:28	R356375
Measuring Point Elevation	*	0		**583.90**	ft	1	11/11/2024 14:28	R356375
Measuring Point Height Above Land Surface	*	0		**2.30**	ft	1	11/11/2024 14:28	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.0**	NTU	1	11/11/2024 14:28	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.5**	°F	1	11/11/2024 14:28	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.90**		1	11/11/2024 14:28	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**569**	µmhos/cm @25C	1	11/11/2024 14:28	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**470**	mg/L	2.5	11/14/2024 12:18	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 18:07	R355975
Chloride	NELAP	5.00		**7.59**	mg/L	10	11/13/2024 18:07	R355975
Sulfate	NELAP	10.0		**59.2**	mg/L	10	11/13/2024 18:07	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0525**	mg/L	1	11/12/2024 12:41	231044
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 12:41	231044
Boron	NELAP	0.0200		**0.0326**	mg/L	1	11/12/2024 12:41	231044
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 12:41	231044
Calcium	NELAP	0.100		**92.6**	mg/L	1	11/12/2024 12:41	231044
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 12:41	231044
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 12:41	231044
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 12:41	231044
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 12:41	231044
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 23:01	231044
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 2:15	231044
Lithium	*	0.0030		**0.0043**	mg/L	5	11/14/2024 17:57	231044
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 2:15	231044
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/14/2024 17:57	231044
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/13/2024 17:38	231083
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-007
Client Sample ID: AP-6
Matrix: GROUNDWATER
Collection Date: 11/11/2024 10:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**498.20**	ft	1	11/11/2024 10:27	R356375
Depth to water	*	-5.00		**7.39**	ft	1	11/11/2024 10:27	R356375
Depth to water from measuring point	*	0		**9.81**	ft	1	11/11/2024 10:27	R356375
Elevation of groundwater surface	*	0		**528.01**	ft	1	11/11/2024 10:27	R356375
Measuring Point Elevation	*	0		**537.82**	ft	1	11/11/2024 10:27	R356375
Measuring Point Height Above Land Surface	*	0		**2.42**	ft	1	11/11/2024 10:27	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**46**	NTU	1	11/11/2024 10:27	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.2**	°F	1	11/11/2024 10:27	R356375
SW-846 9040B								
pH, Field	*	1.00		**7.00**		1	11/11/2024 10:27	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**557**	µmhos/cm @25C	1	11/11/2024 10:27	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**445**	mg/L	2.5	11/14/2024 12:18	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 18:19	R355975
Chloride	NELAP	5.00		**34.5**	mg/L	10	11/13/2024 18:19	R355975
Sulfate	NELAP	10.0		**ND**	mg/L	10	11/13/2024 18:19	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.154**	mg/L	1	11/12/2024 19:30	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:30	231056
Boron	NELAP	0.0200		**0.248**	mg/L	1	11/12/2024 19:30	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:30	231056
Calcium	NELAP	0.100		**66.0**	mg/L	1	11/12/2024 19:30	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:30	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:30	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:30	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:30	231056
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0021**	mg/L	5	11/20/2024 8:55	231056
Arsenic	NELAP	0.0010		**0.0108**	mg/L	5	11/15/2024 4:50	231056
Lithium	*	0.0030		**0.0104**	mg/L	5	11/20/2024 8:55	231056
Selenium	NELAP	0.0010		**0.0022**	mg/L	5	11/15/2024 4:50	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2024 4:50	231056
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/13/2024 17:40	231083
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 11/13/2024 11:07

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	11/13/2024 11:07	R356375
Depth to water	*	-5.00		**9.78**	ft	1	11/13/2024 11:07	R356375
Depth to water from measuring point	*	0		**12.44**	ft	1	11/13/2024 11:07	R356375
Elevation of groundwater surface	*	0		**526.58**	ft	1	11/13/2024 11:07	R356375
Measuring Point Elevation	*	0		**539.02**	ft	1	11/13/2024 11:07	R356375
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	11/13/2024 11:07	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**55**	NTU	1	11/13/2024 11:07	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.7**	°F	1	11/13/2024 11:07	R356375
SW-846 9040B								
pH, Field	*	1.00		**7.17**		1	11/13/2024 11:07	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**774**	µmhos/cm @25C	1	11/13/2024 11:07	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**470**	mg/L	5	11/18/2024 15:00	R356427
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 7:20	R356148
Chloride	NELAP	5.00		**62.1**	mg/L	10	11/15/2024 7:20	R356148
Sulfate	NELAP	10.0		**ND**	mg/L	10	11/15/2024 7:20	R356148
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.148**	mg/L	1	11/18/2024 11:13	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 11:13	231260
Boron	NELAP	0.0200		**0.332**	mg/L	1	11/18/2024 11:13	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 11:13	231260
Calcium	NELAP	0.100		**61.9**	mg/L	1	11/18/2024 11:13	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 11:13	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 11:13	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 11:13	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 11:13	231260
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 2:41	231194
Arsenic	NELAP	0.0010		**0.0947**	mg/L	5	11/20/2024 2:41	231194
Lithium	*	0.0030		**0.0079**	mg/L	5	11/20/2024 9:47	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 2:41	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 2:41	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 11:23	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

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Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 11/13/2024 13:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	11/13/2024 13:15	R356375
Depth to water	*	-5.00		**4.42**	ft	1	11/13/2024 13:15	R356375
Depth to water from measuring point	*	0		**7.32**	ft	1	11/13/2024 13:15	R356375
Elevation of groundwater surface	*	0		**529.88**	ft	1	11/13/2024 13:15	R356375
Measuring Point Elevation	*	0		**537.20**	ft	1	11/13/2024 13:15	R356375
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	11/13/2024 13:15	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	11/13/2024 13:15	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.3**	°F	1	11/13/2024 13:15	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.78**		1	11/13/2024 13:15	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**733**	µmhos/cm @25C	1	11/13/2024 13:15	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**530**	mg/L	2.5	11/18/2024 15:00	R356427
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 17:39	R356222
Chloride	NELAP	5.00		**23.2**	mg/L	10	11/15/2024 17:39	R356222
Sulfate	NELAP	10.0		**ND**	mg/L	10	11/15/2024 17:39	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.364**	mg/L	1	11/18/2024 11:14	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 11:14	231260
Boron	NELAP	0.0200		**0.0840**	mg/L	1	11/18/2024 11:14	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 11:14	231260
Calcium	NELAP	0.100		**98.4**	mg/L	1	11/18/2024 11:14	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 11:14	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 11:14	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 11:14	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 11:14	231260
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 2:47	231194
Arsenic	NELAP	0.0010		**0.0386**	mg/L	5	11/20/2024 2:47	231194
Lithium	*	0.0030		**0.0069**	mg/L	5	11/20/2024 9:53	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 2:47	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 2:47	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 11:52	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

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Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-010
Client Sample ID: AP-9
Matrix: GROUNDWATER
Collection Date: 11/13/2024 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.70**	ft	1	11/13/2024 12:30	R356375
Depth to water	*	-5.00		**10.13**	ft	1	11/13/2024 12:30	R356375
Depth to water from measuring point	*	0		**13.23**	ft	1	11/13/2024 12:30	R356375
Elevation of groundwater surface	*	0		**527.07**	ft	1	11/13/2024 12:30	R356375
Measuring Point Elevation	*	0		**540.30**	ft	1	11/13/2024 12:30	R356375
Measuring Point Height Above Land Surface	*	0		**3.10**	ft	1	11/13/2024 12:30	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.3**	NTU	1	11/13/2024 12:30	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.7**	°F	1	11/13/2024 12:30	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.80**		1	11/13/2024 12:30	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**968**	µmhos/cm @25C	1	11/13/2024 12:30	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**740**	mg/L	2.5	11/19/2024 15:09	R356516
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 17:51	R356222
Chloride	NELAP	5.00		**23.6**	mg/L	10	11/15/2024 17:51	R356222
Sulfate	NELAP	10.0		**17.7**	mg/L	10	11/15/2024 17:51	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.434**	mg/L	1	11/18/2024 12:05	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:05	231260
Boron	NELAP	0.0200		**0.0995**	mg/L	1	11/18/2024 12:05	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:05	231260
Calcium	NELAP	0.100		**104**	mg/L	1	11/18/2024 12:05	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:05	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:05	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:05	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:05	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 2:53	231194
Arsenic	NELAP	0.0010		**0.0019**	mg/L	5	11/20/2024 2:53	231194
Lithium	*	0.0030		**0.0066**	mg/L	5	11/20/2024 9:58	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 2:53	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 2:53	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 11:55	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-011
Client Sample ID: AP-10
Matrix: GROUNDWATER
Collection Date: 11/12/2024 13:07

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**499.43**	ft	1	11/12/2024 13:07	R356375
Depth to water	*	-5.00		**2.49**	ft	1	11/12/2024 13:07	R356375
Depth to water from measuring point	*	0		**5.59**	ft	1	11/12/2024 13:07	R356375
Elevation of groundwater surface	*	0		**531.91**	ft	1	11/12/2024 13:07	R356375
Measuring Point Elevation	*	0		**537.50**	ft	1	11/12/2024 13:07	R356375
Measuring Point Height Above Land Surface	*	0		**3.10**	ft	1	11/12/2024 13:07	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.2**	NTU	1	11/12/2024 13:07	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.1**	°F	1	11/12/2024 13:07	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.73**		1	11/12/2024 13:07	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1150**	µmhos/cm @25C	1	11/12/2024 13:07	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**790**	mg/L	2.5	11/15/2024 15:28	R356333
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/14/2024 13:51	R356148
Chloride	NELAP	5.00		**25.7**	mg/L	10	11/14/2024 13:51	R356148
Sulfate	NELAP	10.0		**89.4**	mg/L	10	11/14/2024 13:51	R356148
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.628**	mg/L	1	11/15/2024 10:50	231140
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/15/2024 10:50	231140
Boron	NELAP	0.0200		**3.95**	mg/L	1	11/15/2024 10:50	231140
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/15/2024 10:50	231140
Calcium	NELAP	0.100		**140**	mg/L	1	11/15/2024 10:50	231140
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 10:50	231140
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 10:50	231140
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/15/2024 10:50	231140
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/15/2024 10:50	231140
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 10:56	231140
Arsenic	NELAP	0.0010		**0.0011**	mg/L	5	11/16/2024 10:56	231140
Lithium	*	0.0030		**0.0101**	mg/L	5	11/20/2024 10:21	231140
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 10:56	231140
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/16/2024 10:56	231140
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:15	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-012
Client Sample ID: AP-11
Matrix: GROUNDWATER
Collection Date: 11/12/2024 10:01

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**515.15**	ft	1	11/12/2024 10:01	R356375
Depth to water	*	-5.00		**12.63**	ft	1	11/12/2024 10:01	R356375
Depth to water from measuring point	*	0		**15.43**	ft	1	11/12/2024 10:01	R356375
Elevation of groundwater surface	*	0		**522.67**	ft	1	11/12/2024 10:01	R356375
Measuring Point Elevation	*	0		**538.10**	ft	1	11/12/2024 10:01	R356375
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	11/12/2024 10:01	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.1**	NTU	1	11/12/2024 10:01	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.7**	°F	1	11/12/2024 10:01	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.66**		1	11/12/2024 10:01	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**958**	µmhos/cm @25C	1	11/12/2024 10:01	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**686**	mg/L	1	11/15/2024 15:28	R356333
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/14/2024 14:02	R356148
Chloride	NELAP	5.00		**91.0**	mg/L	10	11/14/2024 14:02	R356148
Sulfate	NELAP	10.0		**63.4**	mg/L	10	11/14/2024 14:02	R356148
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.122**	mg/L	1	11/15/2024 14:45	231140
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/15/2024 14:45	231140
Boron	NELAP	0.0200		**0.261**	mg/L	1	11/15/2024 14:45	231140
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/15/2024 14:45	231140
Calcium	NELAP	0.100		**124**	mg/L	1	11/15/2024 14:45	231140
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:45	231140
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:45	231140
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/15/2024 14:45	231140
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/15/2024 14:45	231140
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:01	231140
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:01	231140
Lithium	*	0.0030		**0.0050**	mg/L	5	11/20/2024 10:26	231140
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:01	231140
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/16/2024 11:01	231140
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:17	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-013
Client Sample ID: AP-12
Matrix: GROUNDWATER
Collection Date: 11/12/2024 10:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**510.30**	ft	1	11/12/2024 10:49	R356375
Depth to water	*	-5.00		**15.02**	ft	1	11/12/2024 10:49	R356375
Depth to water from measuring point	*	0		**17.92**	ft	1	11/12/2024 10:49	R356375
Elevation of groundwater surface	*	0		**522.78**	ft	1	11/12/2024 10:49	R356375
Measuring Point Elevation	*	0		**540.70**	ft	1	11/12/2024 10:49	R356375
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	11/12/2024 10:49	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**26**	NTU	1	11/12/2024 10:49	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.6**	°F	1	11/12/2024 10:49	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.59**		1	11/12/2024 10:49	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1550**	µmhos/cm @25C	1	11/12/2024 10:49	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1300**	mg/L	2.5	11/15/2024 15:28	R356333
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/14/2024 15:01	R356148
Chloride	NELAP	5.00		**120**	mg/L	10	11/14/2024 15:01	R356148
Sulfate	NELAP	10.0		**457**	mg/L	10	11/14/2024 15:01	R356148
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0458**	mg/L	1	11/15/2024 14:46	231140
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/15/2024 14:46	231140
Boron	NELAP	0.0200		**< 0.0200**	mg/L	1	11/15/2024 14:46	231140
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/15/2024 14:46	231140
Calcium	NELAP	0.100		**203**	mg/L	1	11/15/2024 14:46	231140
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:46	231140
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:46	231140
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/15/2024 14:46	231140
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/15/2024 14:46	231140
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:07	231140
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:07	231140
Lithium	*	0.0030		**0.0065**	mg/L	5	11/20/2024 10:32	231140
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:07	231140
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/16/2024 11:07	231140
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:20	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357163

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-014
Client Sample ID: AP-13
Matrix: GROUNDWATER
Collection Date: 11/12/2024 11:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.00**	ft	1	11/12/2024 11:25	R356375
Depth to water	*	-5.00		**16.00**	ft	1	11/12/2024 11:25	R356375
Depth to water from measuring point	*	0		**19.40**	ft	1	11/12/2024 11:25	R356375
Elevation of groundwater surface	*	0		**522.60**	ft	1	11/12/2024 11:25	R356375
Measuring Point Elevation	*	0		**542.00**	ft	1	11/12/2024 11:25	R356375
Measuring Point Height Above Land Surface	*	0		**3.40**	ft	1	11/12/2024 11:25	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**7.3**	NTU	1	11/12/2024 11:25	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.8**	°F	1	11/12/2024 11:25	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.67**		1	11/12/2024 11:25	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**776**	µmhos/cm @25C	1	11/12/2024 11:25	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**655**	mg/L	2.5	11/15/2024 15:35	R356333
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/14/2024 15:12	R356148
Chloride	NELAP	5.00		**25.8**	mg/L	10	11/14/2024 15:12	R356148
Sulfate	NELAP	10.0		**121**	mg/L	10	11/14/2024 15:12	R356148
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.120**	mg/L	1	11/15/2024 14:47	231140
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/15/2024 14:47	231140
Boron	NELAP	0.0200		**< 0.0200**	mg/L	1	11/15/2024 14:47	231140
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/15/2024 14:47	231140
Calcium	NELAP	0.100		**103**	mg/L	1	11/15/2024 14:47	231140
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:47	231140
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:47	231140
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/15/2024 14:47	231140
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/15/2024 14:47	231140
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:13	231140
Arsenic	NELAP	0.0010		**0.0038**	mg/L	5	11/16/2024 11:13	231140
Lithium	*	0.0030		**0.0120**	mg/L	5	11/20/2024 10:38	231140
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:13	231140
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/16/2024 11:13	231140
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:38	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-015
Client Sample ID: AP-14
Matrix: GROUNDWATER
Collection Date: 11/12/2024 13:43

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**508.40**	ft	1	11/12/2024 13:43	R356375
Depth to water	*	-5.00		**1.84**	ft	1	11/12/2024 13:43	R356375
Depth to water from measuring point	*	0		**4.64**	ft	1	11/12/2024 13:43	R356375
Elevation of groundwater surface	*	0		**534.96**	ft	1	11/12/2024 13:43	R356375
Measuring Point Elevation	*	0		**539.60**	ft	1	11/12/2024 13:43	R356375
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	11/12/2024 13:43	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.0**	NTU	1	11/12/2024 13:43	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.2**	°F	1	11/12/2024 13:43	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.93**		1	11/12/2024 13:43	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1740**	µmhos/cm @25C	1	11/12/2024 13:43	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1840**	mg/L	2.5	11/15/2024 15:35	R356333
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/14/2024 15:24	R356148
Chloride	NELAP	5.00		**94.0**	mg/L	10	11/14/2024 15:24	R356148
Sulfate	NELAP	10.0		**909**	mg/L	10	11/14/2024 15:24	R356148
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0413**	mg/L	1	11/15/2024 14:47	231140
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/15/2024 14:47	231140
Boron	NELAP	0.200		**21.0**	mg/L	10	11/18/2024 13:45	231140
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/15/2024 14:47	231140
Calcium	NELAP	0.100		**253**	mg/L	1	11/15/2024 14:47	231140
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:47	231140
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:47	231140
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/15/2024 14:47	231140
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/15/2024 14:47	231140
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:18	231140
Arsenic	NELAP	0.0010		**0.0022**	mg/L	5	11/16/2024 11:18	231140
Lithium	*	0.0030		**0.0072**	mg/L	5	11/20/2024 10:43	231140
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:18	231140
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/16/2024 11:18	231140
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:40	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-016
Client Sample ID: T-1
Matrix: GROUNDWATER
Collection Date: 11/12/2024 12:09

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**512.70**	ft	1	11/12/2024 12:09	R356375
Depth to water	*	-5.00		**13.68**	ft	1	11/12/2024 12:09	R356375
Depth to water from measuring point	*	0		**14.01**	ft	1	11/12/2024 12:09	R356375
Elevation of groundwater surface	*	0		**521.64**	ft	1	11/12/2024 12:09	R356375
Measuring Point Elevation	*	0		**535.65**	ft	1	11/12/2024 12:09	R356375
Measuring Point Height Above Land Surface	*	0		**0.33**	ft	1	11/12/2024 12:09	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**23**	NTU	1	11/12/2024 12:09	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.1**	°F	1	11/12/2024 12:09	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.57**		1	11/12/2024 12:09	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1470**	µmhos/cm @25C	1	11/12/2024 12:09	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1060**	mg/L	2.5	11/15/2024 15:35	R356333
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/14/2024 15:59	R356148
Chloride	NELAP	5.00		**233**	mg/L	10	11/14/2024 15:59	R356148
Sulfate	NELAP	10.0		**224**	mg/L	10	11/14/2024 15:59	R356148
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0707**	mg/L	1	11/15/2024 14:48	231140
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/15/2024 14:48	231140
Boron	NELAP	0.0200		**0.150**	mg/L	1	11/15/2024 14:48	231140
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/15/2024 14:48	231140
Calcium	NELAP	0.100		**172**	mg/L	1	11/15/2024 14:48	231140
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:48	231140
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/15/2024 14:48	231140
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/15/2024 14:48	231140
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/15/2024 14:48	231140
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:53	231140
Arsenic	NELAP	0.0010		**0.0019**	mg/L	5	11/16/2024 11:53	231140
Lithium	*	0.0030		**0.0199**	mg/L	5	11/20/2024 10:49	231140
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 11:53	231140
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/16/2024 11:53	231140
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:43	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-017
Client Sample ID: T-2
Matrix: GROUNDWATER
Collection Date: 11/13/2024 13:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**515.18**	ft	1	11/13/2024 13:40	R356375
Depth to water	*	-5.00		**12.83**	ft	1	11/13/2024 13:40	R356375
Depth to water from measuring point	*	0		**15.23**	ft	1	11/13/2024 13:40	R356375
Elevation of groundwater surface	*	0		**534.39**	ft	1	11/13/2024 13:40	R356375
Measuring Point Elevation	*	0		**549.62**	ft	1	11/13/2024 13:40	R356375
Measuring Point Height Above Land Surface	*	0		**2.40**	ft	1	11/13/2024 13:40	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**18**	NTU	1	11/13/2024 13:40	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.5**	°F	1	11/13/2024 13:40	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.54**		1	11/13/2024 13:40	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1870**	µmhos/cm @25C	1	11/13/2024 13:40	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50	H	**1580**	mg/L	2.5	11/21/2024 17:12	R356629
Sample analysis did not meet hold time requirements.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 18:02	R356222
Chloride	NELAP	5.00		**509**	mg/L	10	11/15/2024 18:02	R356222
Sulfate	NELAP	10.0		**142**	mg/L	10	11/15/2024 18:02	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.225**	mg/L	1	11/18/2024 12:07	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:07	231260
Boron	NELAP	0.0200		**0.0507**	mg/L	1	11/18/2024 12:07	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:07	231260
Calcium	NELAP	0.100		**211**	mg/L	1	11/18/2024 12:07	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:07	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:07	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:07	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:07	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 3:00	231194
Arsenic	NELAP	0.0010		**0.0060**	mg/L	5	11/20/2024 3:00	231194
Lithium	*	0.0030		**0.0345**	mg/L	5	11/20/2024 10:43	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 3:00	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 3:00	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 11:58	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-018
Client Sample ID: T-4
Matrix: GROUNDWATER
Collection Date: 11/13/2024 12:07

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**521.52**	ft	1	11/13/2024 12:07	R356375
Depth to water	*	-5.00		**17.24**	ft	1	11/13/2024 12:07	R356375
Depth to water from measuring point	*	0		**19.62**	ft	1	11/13/2024 12:07	R356375
Elevation of groundwater surface	*	0		**529.32**	ft	1	11/13/2024 12:07	R356375
Measuring Point Elevation	*	0		**548.94**	ft	1	11/13/2024 12:07	R356375
Measuring Point Height Above Land Surface	*	0		**2.38**	ft	1	11/13/2024 12:07	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**32**	NTU	1	11/13/2024 12:07	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.1**	°F	1	11/13/2024 12:07	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.65**		1	11/13/2024 12:07	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**648**	µmhos/cm @25C	1	11/13/2024 12:07	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50	H	**695**	mg/L	2.5	11/21/2024 17:12	R356629
Sample analysis did not meet hold time requirements.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 9:06	R356222
Chloride	NELAP	5.00		**ND**	mg/L	10	11/15/2024 9:06	R356222
Sulfate	NELAP	10.0		**104**	mg/L	10	11/15/2024 9:06	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0578**	mg/L	1	11/18/2024 12:08	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:08	231260
Boron	NELAP	0.0200		**0.0565**	mg/L	1	11/18/2024 12:08	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:08	231260
Calcium	NELAP	0.100		**96.8**	mg/L	1	11/18/2024 12:08	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:08	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:08	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:08	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:08	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 3:48	231194
Arsenic	NELAP	0.0010		**0.0055**	mg/L	5	11/20/2024 3:48	231194
Lithium	*	0.0030		**0.0161**	mg/L	5	11/20/2024 10:49	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 3:48	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 3:48	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:00	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-019
Client Sample ID: T-5
Matrix: GROUNDWATER
Collection Date: 11/13/2024 11:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**518.32**	ft	1	11/13/2024 11:35	R356375
Depth to water	*	-5.00		**8.95**	ft	1	11/13/2024 11:35	R356375
Depth to water from measuring point	*	0		**11.46**	ft	1	11/13/2024 11:35	R356375
Elevation of groundwater surface	*	0		**529.20**	ft	1	11/13/2024 11:35	R356375
Measuring Point Elevation	*	0		**540.66**	ft	1	11/13/2024 11:35	R356375
Measuring Point Height Above Land Surface	*	0		**2.51**	ft	1	11/13/2024 11:35	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**10**	NTU	1	11/13/2024 11:35	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.9**	°F	1	11/13/2024 11:35	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.82**		1	11/13/2024 11:35	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**549**	µmhos/cm @25C	1	11/13/2024 11:35	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**382**	mg/L	1	11/19/2024 14:17	R356516
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 9:40	R356222
Chloride	NELAP	5.00		**ND**	mg/L	10	11/15/2024 9:40	R356222
Sulfate	NELAP	10.0		**40.4**	mg/L	10	11/15/2024 9:40	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0564**	mg/L	1	11/18/2024 12:10	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:10	231260
Boron	NELAP	0.0200		**0.0791**	mg/L	1	11/18/2024 12:10	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:10	231260
Calcium	NELAP	0.100		**70.3**	mg/L	1	11/18/2024 12:10	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:10	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:10	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:10	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:10	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 3:54	231194
Arsenic	NELAP	0.0010		**0.0016**	mg/L	5	11/20/2024 3:54	231194
Lithium	*	0.0030		**0.0109**	mg/L	5	11/20/2024 10:54	231194
Selenium	NELAP	0.0010		**0.0012**	mg/L	5	11/20/2024 3:54	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 3:54	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:08	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110120
Client Project: Ash Pond Monitoring Wells
Report Date: 06-Dec-24
Lab ID: 24110120-020
Client Sample ID: T-6
Matrix: GROUNDWATER
Collection Date: 11/13/2024 10:37

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**494.70**	ft	1	11/13/2024 10:37	R356375
Depth to water	*	-5.00		**8.66**	ft	1	11/13/2024 10:37	R356375
Depth to water from measuring point	*	0		**11.02**	ft	1	11/13/2024 10:37	R356375
Elevation of groundwater surface	*	0		**527.30**	ft	1	11/13/2024 10:37	R356375
Measuring Point Elevation	*	0		**538.32**	ft	1	11/13/2024 10:37	R356375
Measuring Point Height Above Land Surface	*	0		**2.36**	ft	1	11/13/2024 10:37	R356375
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**14**	NTU	1	11/13/2024 10:37	R356375
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.1**	°F	1	11/13/2024 10:37	R356375
SW-846 9040B								
pH, Field	*	1.00		**6.97**		1	11/13/2024 10:37	R356375
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**869**	µmhos/cm @25C	1	11/13/2024 10:37	R356375
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**595**	mg/L	2.5	11/19/2024 14:07	R356516
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 10:16	R356222
Chloride	NELAP	5.00		**19.4**	mg/L	10	11/15/2024 10:16	R356222
Sulfate	NELAP	10.0		**ND**	mg/L	10	11/15/2024 10:16	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.306**	mg/L	1	11/18/2024 12:12	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:12	231260
Boron	NELAP	0.0200		**0.210**	mg/L	1	11/18/2024 12:12	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:12	231260
Calcium	NELAP	0.100		**91.4**	mg/L	1	11/18/2024 12:12	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:12	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:12	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:12	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:12	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:00	231194
Arsenic	NELAP	0.0010		**0.0158**	mg/L	5	11/20/2024 4:00	231194
Lithium	*	0.0030		**0.0134**	mg/L	5	11/20/2024 11:00	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:00	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 4:00	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:11	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163
Radium-228	*	0		**See Attached**	pci/L	1	12/04/2024 0:00	R357163

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 24110120
Report Date: 06-Dec-24

Carrier: Daniel Crump

Received By: JMD

Completed by: Amber Dilallo
On: 11-Nov-24

Reviewed by: Ellie Hopkins
On: 14-Nov-24

Pages to follow: Chain of custody 6 Extra pages included 62

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 10.9
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #96651. - JD/amberdilallo - 11/11/2024 4:39:54 PM

Samples were received on 11/12/24 at 15:30 on ice [9.1 - LTG5]. Additional nitric acid (100984) was needed in 1 of 2 containers for AP-10. - MDarling - 11/13/2024 8:38:32 AM

Samples were received on 11/13/24 at 15:45 on ice [10.1C - LTG#5]. pH strip # 96651 - lhenson - 11/14/2024 8:27:05 AM

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24110120

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 10.9 °C 5
Preserved in: [ ] LAB [X] FIELD
pH
LAB NOTES: 96657
FOR LAB USE ONLY
DD 11/11/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Cop

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110120-001	RW-3	11-11-24 1103	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1	11-11-24 1144	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2	1221	Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3	1255	Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4	1338	Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5	1428	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6	1027	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	11-11 / 1610	Jaci Davis	11/11/24 16:10

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24110120

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE ____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110120-012	AP-11		Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14		Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	11-11-1610	Jackie Davis	11/11/24 16:10

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24110120

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 9.1 °C 5

Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES: Acid Rinse (ICP/MS) to 4pH. 0496651 mod II 11/13/24

Client Comments:

*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER

Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

BrettGillihan

RESULTS REQUESTED

☑ Standard ☐ 1-2 Day (100% Surcharge)

☐ Other ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED												
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity								
24110120-001	RW-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
002	AP-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
003	AP-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
004	AP-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
005	AP-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
006	AP-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
007	AP-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
008	AP-7		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
009	AP-8		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
010	AP-9		Groundwater	1	2								✔	✔	✔	✔	✔	✔								
011	AP-10	11-12-24 1307	Groundwater	1	2								✔	✔	✔	✔	✔	✔								

Relinquished By	Date/Time	Received By	Date/Time
[signature]	11-12 / 1530	Jodi Davis	11/12/24 15:30

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

MD 11/13

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24110120

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C

Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES:

*1343 TES 11/21/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:

*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Brett Gillihan

RESULTS REQUESTED

☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110120-012	AP-11	11-12-24 1001	Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12	1049	Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13	1125	Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14	*1343	Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1	1209	Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	11-12/1530	[signature]	11/12/24 15:30

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24110120

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [x] ICE [ ] BLUE ICE [ ] NO ICE 10.1 °C 5
Preserved in: [ ] LAB [x] FIELD FOR LAB USE ONLY
LAB NOTES: PWS 94651
LT 11/14/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [x] No
Are these samples known to be hazardous? [ ] Yes [x] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [x] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
BrettGillihan

RESULTS REQUESTED
[x] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110120-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7	11-13-24 1107	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8	11/13/24 1315	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9	11-13-24 1230	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	11-13/1545		11/13/24 1545

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24110120

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells
SAMPLE COLLECTOR'S NAME: Bret Gilliam

RESULTS REQUESTED: ☑ Standard ☐ 1-2 Day (100% Surcharge) ☐ Other _____ ☐ 3 Day (50% Surcharge)
BILLING INSTRUCTIONS:

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110120-012	AP-11		Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14		Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1	~~1209~~	Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2	11-13-24 1340	Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4	1207	Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5	1135	Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6	1037	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	11-13/1545		11/13/24 1545

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Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: RW-3
Sample ID: 001
Date (s): 11/11/2024

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 56 °F — Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 10:36
Static Water Level: 11.45 feet below TOC
Total Depth: 44.01 feet below TOC
Water Column: 32.56 feet

Purging Activities

Purged By: JC — Purge Date: 11/11/2024
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 32.56 ft. x 0.022 = 0.72 L x 3 Vol. = 2.16 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:37	0.0	173	purge start time						
10:42	0.9	↓	7.12	525.70	14.52	4.56	-168.70	6.48	
10:45	1.4		7.13	532.90	14.51	3.40	-178.00	46.77	
10:48	1.9		7.13	535.30	14.50	2.78	-180.60	90.25	
10:51	2.5		7.13	535.60	14.50	2.41	-181.80	122.85	
10:54	3.0		7.13	535.60	14.47	2.17	-182.50	72.57	
10:57	3.5		7.13	535.40	14.45	1.99	-182.90	112.49	
11:00	4.0		7.13	534.70	14.47	1.87	-183.00	50.61	
11:03	4.5		7.13	531.10	14.90	1.77	-182.40	47.61	

Sampling Activities

Sampled By: JC — Sample Date/Time: 11/11/2024 11:03
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.13 pH — 531.10 Spec. Cond. — 14.90 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 15.89 feet below TOC — Drawdown: 4.44 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210771

Form Completed By: Justin Colp — **Date:** 11/11/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-1
Sample ID: 002
Date (s): 11/11/2024

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 58 °F — Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 11:19
Static Water Level: 10.39 feet below TOC
Total Depth: 31.08 feet below TOC
Water Column: 20.69 feet

Purging Activities

Purged By: JC — Purge Date: 11/11/2024
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 20.69 ft. x 0.022 = 0.46 L x 3 Vol. = 1.38 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.50 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:19	0.0	140	purge start time						
11:26	1.0	↓	6.54	1,269.10	15.84	3.49	-82.60	34.54	
11:29	1.4		6.54	1,307.80	15.87	2.83	-98.40	26.67	
11:32	1.8		6.54	1,328.20	15.98	2.43	-105.40	21.37	
11:35	2.2		6.54	1,343.50	16.07	2.16	-108.70	16.20	
11:38	2.7		6.54	1,356.50	16.17	1.97	-111.20	13.42	
11:41	3.1		6.54	1,368.10	16.23	1.83	-112.70	12.88	
11:44	3.5		6.54	1,377.10	16.24	1.72	-113.90	13.14	

Sampling Activities

Sampled By: JC — Sample Date/Time: 11/11/2024 11:44
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.54 pH — 1,377.10 Spec. Cond. — 16.24 Temp
Field Filtered: No — Filter Type:
Water Level: 10.51 feet below TOC — Drawdown: 0.12 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210771

Form Completed By: Justin Colp — **Date:** 11/11/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-2
Sample ID: 003
Date (s): 11/11/2024

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 60 °F — Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 11:53
Static Water Level: 6.54 feet below TOC
Total Depth: 21.33 feet below TOC
Water Column: 14.79 feet

Purging Activities

Purged By: JC — Purge Date: 11/11/2024
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 14.79 ft. x 0.022 = 0.33 L x 3 Vol. = 0.99 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:53	0.0	214	purge start time						
12:00	1.5	↓	6.42	1,127.80	16.43	3.88	1.10	31.79	
12:03	2.1		6.41	1,131.40	16.38	3.04	-1.30	24.05	
12:06	2.8		6.41	1,134.90	16.33	2.54	-3.40	16.72	
12:09	3.4		6.41	1,137.30	16.31	2.23	-4.90	13.76	
12:12	4.1		6.41	1,138.80	16.27	2.01	-6.20	10.23	
12:15	4.7		6.41	1,140.60	16.25	1.86	-7.10	7.14	
12:18	5.4		6.41	1,142.00	16.24	1.74	-8.10	5.54	
12:21	6.0		6.41	1,143.30	16.26	1.65	-8.80	6.05	

Sampling Activities

Sampled By: JC — Sample Date/Time: 11/11/2024 12:21
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.41 pH — 1,143.30 Spec. Cond. — 16.26 Temp
Field Filtered: No — Filter Type:
Water Level: 6.61 feet below TOC — Drawdown: 0.07 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210771

Form Completed By: [signature] **Date:** 11/11/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-3
Sample ID: 004
Date (s): 11/11/2024

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 61 °F — Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 12:28
Static Water Level: 9.55 feet below TOC
Total Depth: 20.80 feet below TOC
Water Column: 11.25 feet

Purging Activities

Purged By: JC — Purge Date: 11/11/2024
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 11.25 ft. x 0.022 = 0.25 L x 3 Vol. = 0.75 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:28	0.0	167	purge start time						
12:34	1.0	↓	6.50	1,066.10	17.84	4.02	-61.30	48.34	
12:37	1.5		6.48	1,069.40	18.11	3.05	-59.80	33.02	
12:40	2.0		6.48	1,071.90	18.13	2.53	-63.60	25.25	
12:43	2.5		6.48	1,070.90	18.15	2.22	-64.90	18.80	
12:46	3.0		6.48	1,071.00	18.21	2.01	-66.80	13.00	
12:49	3.5		6.48	1,071.60	18.13	1.86	-68.90	9.95	
12:52	4.0		6.48	1,070.80	18.09	1.75	-70.90	7.60	
12:55	4.5		6.48	1,070.20	18.19	1.66	-72.60	5.70	

Sampling Activities

Sampled By: JC — Sample Date/Time: 11/11/2024 12:55
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.48 pH — 1,070.20 Spec. Cond. — 18.19 Temp
Field Filtered: No — Filter Type:
Water Level: 9.55 feet below TOC — Drawdown: 0.00 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210771

Form Completed By: Justin Colp — **Date:** 11/11/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-4
Sample ID: 005
Date (s): 11/11/2024

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 61 °F — Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 13:10
Static Water Level: 10.91 feet below TOC
Total Depth: 60.41 feet below TOC
Water Column: 49.50 feet

Purging Activities

Purged By: JC — Purge Date: 11/11/2024
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 49.5 ft. x 0.022 = 1.09 L x 3 Vol. = 3.27 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:11	0.0	222	purge start time						
13:20	2.0	↓	6.81	681.40	17.79	3.86	-117.30	10.74	
13:23	2.7		6.81	683.50	17.73	3.06	-124.10	11.13	
13:26	3.3		6.82	684.40	17.70	2.55	-128.20	12.26	
13:29	4.0		6.82	686.00	17.61	2.22	-130.50	12.81	
13:32	4.7		6.82	687.30	17.58	1.99	-131.90	12.48	
13:35	5.3		6.82	687.80	17.56	1.83	-132.90	13.25	
13:38	6.0		6.82	688.10	17.53	1.71	-133.50	12.90	

Sampling Activities

Sampled By: JC — Sample Date/Time: 11/11/2024 13:38
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.82 pH — 688.10 Spec. Cond. — 17.53 Temp
Field Filtered: No — Filter Type:
Water Level: 11.09 feet below TOC — Drawdown: 0.18 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210771

Form Completed By: Justin Colp — **Date:** 11/11/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-5
Sample ID: 006
Date (s): 11/11/2024

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 62 °F — Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 13:52
Static Water Level: 16.28 feet below TOC
Total Depth: 31.27 feet below TOC
Water Column: 14.99 feet

Purging Activities

Purged By: JC — Purge Date: 11/11/2024
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 14.99 ft. x 0.022 = 0.33 L x 3 Vol. = 0.99 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:53	0.0	171	purge start time						
14:01	1.4	↓	6.95	560.40	14.92	5.12	16.00	3.62	
14:04	1.9		6.93	563.50	14.84	4.41	21.90	3.94	
14:07	2.4		6.92	565.40	14.82	3.90	26.70	3.71	
14:10	3.0		6.92	566.90	14.81	3.55	30.90	3.68	
14:13	3.5		6.91	567.90	14.79	3.31	34.80	3.91	
14:16	4.0		6.91	568.60	14.81	3.11	38.00	4.72	
14:19	4.5		6.91	569.00	14.81	2.97	40.80	5.23	
14:22	5.0		6.91	569.30	14.77	2.85	43.10	5.53	
14:25	5.5		6.91	569.20	14.75	2.75	45.20	5.69	
14:28	6.0		6.90	569.40	14.73	2.68	47.10	7.95	

Sampling Activities

Sampled By: JC — Sample Date/Time: 11/11/2024 14:28
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.90 pH — 569.40 Spec. Cond. — 14.73 Temp
Field Filtered: No — Filter Type:
Water Level: 17.51 feet below TOC — Drawdown: 1.23 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210771

Form Completed By: Justin Colp — **Date:** 11/11/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-6
Sample ID: 007
Date (s): 11/11/2024

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 54 °F — Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 9:53
Static Water Level: 9.81 feet below TOC
Total Depth: 39.62 feet below TOC
Water Column: 29.81 feet

Purging Activities

Purged By: JC — Purge Date: 11/11/2024
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 29.81 ft. x 0.022 = 0.66 L x 3 Vol. = 1.98 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:54	0.0	152	purge start time						
10:00	1.0	↓	6.94	559.70	14.34	4.83	-126.70	19.66	
10:03	1.4		6.96	559.30	14.54	3.83	-128.70	40.45	
10:06	1.9		6.97	559.40	14.80	3.29	-127.40	48.92	
10:09	2.3		6.98	559.10	14.87	2.94	-124.90	39.08	
10:12	2.8		6.98	558.90	14.93	2.69	-123.30	41.40	
10:15	3.2		6.99	558.00	14.95	2.48	-122.00	40.96	
10:18	3.7		6.99	558.10	14.97	2.32	-120.90	60.40	
10:21	4.1		6.99	558.00	14.98	2.18	-119.80	43.02	
10:24	4.6		7.00	557.50	14.98	2.06	-118.70	40.71	
10:27	5.0		7.00	557.40	15.09	1.96	-117.40	46.15	

Sampling Activities

Sampled By: JC — Sample Date/Time: 11/11/2024 10:27
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.00 pH — 557.40 Spec. Cond. — 15.09 Temp
Field Filtered: No — Filter Type:
Water Level: 15.35 feet below TOC — Drawdown: 5.54 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210771

Form Completed By: Justin Colp — **Date:** 11/11/2024

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-7
Project Location:	Springfield, IL	**Sample ID:**	008
W.O. Number (s):	24110120	**Date (s):**	11/13/2024

Field Team Members

Name: Brett Gillihan — Affiliation: TekLab, Inc.

Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 53 °F — Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 10:47

Static Water Level: 12.44 feet below TOC

Total Depth: 42.52 feet below TOC

Water Column: 30.08 feet

Purging Activities

Purged By: BG — Purge Date: 11/13/2024

Purge Method: Bladder Pump — Well Diameter: 2"

Purge Volume Calculation (L): 30.08 ft. x 0.022 = 0.66 L x 3 Vol. = 1.98 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 6.00 L

Physical appearance of purge water: Clear — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:47	0.0	300	purge start time						
10:52	1.5	↓	7.31	711.40	13.46	1.34	-87.00	12.06	
10:55	2.4		7.22	748.70	13.77	0.95	-105.20	152.78	
10:58	3.3		7.19	765.90	13.83	0.87	-117.50	16.64	
11:01	4.2		7.18	771.50	13.87	0.77	-125.10	18.78	
11:04	5.1		7.17	775.00	13.73	0.69	-130.40	47.72	
11:07	6.0		7.17	774.30	13.70	0.64	-134.40	55.07	

Sampling Activities

Sampled By: BG — Sample Date/Time: 11/13/2024 11:07

Sample Method: Low Flow — Sample Equipment: Bladder Pump

Sample Parameters: 7.17 pH — 774.30 Spec. Cond. — 13.70 Temp

Field Filtered: No — Filter Type:

Water Level: 12.89 feet below TOC — Drawdown: 0.45 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan — **Date:** 11/13/2024

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-8
Project Location:	Springfield, IL	**Sample ID:**	009
W.O. Number (s):	24110120	**Date (s):**	11/13/2024

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.

Name: Affiliation:

Weather Conditions

Temp: 49 °F Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 12:55

Static Water Level: 7.32 feet below TOC

Total Depth: 39.60 feet below TOC

Water Column: 32.28 feet

Purging Activities

Purged By: TC Purge Date: 11/13/2024

Purge Method: Peristaltic Pump Well Diameter: 2"

Purge Volume Calculation (L): 32.28 ft. x 0.022 = 0.71 L x 3 Vol. = 2.13 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 6.00 L

Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:55	0.0	300	purge start time						
13:03	2.4	↓	6.79	733.30	14.12	1.20	-155.50	3.49	
13:06	3.3		6.79	733.60	14.08	0.94	-159.80	3.00	
13:09	4.2		6.78	733.40	14.09	0.81	-161.10	5.05	
13:12	5.1		6.78	733.30	14.10	0.74	-161.90	8.64	
13:15	6.0		6.78	733.20	14.07	0.69	-162.70	11.93	

Sampling Activities

Sampled By: TC Sample Date/Time: 11/13/2024 13:15

Sample Method: Low Flow Sample Equipment: Peristaltic Pump

Sample Parameters: 6.78 pH 733.20 Spec. Cond. 14.07 Temp

Field Filtered: Yes Filter Type: Inline Disposable

Water Level: 7.65 feet below TOC Drawdown: 0.33 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45720

Form Completed By: Tracy Carroll **Date:** 11/13/2024

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-9
Project Location:	Springfield, IL	**Sample ID:**	010
W.O. Number (s):	24110120	**Date (s):**	11/13/2024

Field Team Members

Name: Brett Gillihan — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 58 °F — Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 12:17
Static Water Level: 13.23 feet below TOC
Total Depth: 39.60 feet below TOC
Water Column: 26.37 feet

Purging Activities

Purged By: BG — Purge Date: 11/13/2024
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 26.37 ft. x 0.022 = 0.58 L x 3 Vol. = 1.74 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear — Odor: Slight — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:17	0.0	346	purge start time						
12:21	1.4	↓	6.80	969.80	14.66	2.46	-31.70	10.41	
12:24	2.4		6.80	964.80	14.77	2.34	-52.80	5.50	
12:27	3.5		6.80	968.30	14.83	2.18	-61.60	4.90	
12:30	4.5		6.80	968.20	14.86	1.77	-67.20	8.30	

Sampling Activities

Sampled By: BG — Sample Date/Time: 11/13/2024 12:30
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.80 pH — 968.20 Spec. Cond. — 14.86 Temp
Field Filtered: No — Filter Type:
Water Level: 13.62 feet below TOC — Drawdown: 0.39 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan — **Date:** 11/13/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-10
Sample ID: 011
Date (s): 11/12/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 53 °F
Wind Direction: ☐ N ☐ S ☑ W ☐ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/12/2024 12:48
Static Water Level: 5.59 feet below TOC
Total Depth: 38.07 feet below TOC
Water Column: 32.48 feet

Purging Activities

Purged By: BG
Purge Date: 11/12/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 32.48 ft. x 0.022 = 0.71 L x 3 Vol. = 2.13 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear
Odor: Slight
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:48	0.0	316	purge start time						
12:52	1.3	↓	6.88	1,154.40	13.84	1.87	-91.80	6.65	
12:55	2.2		6.79	1,152.30	13.93	1.57	-89.20	5.80	
12:58	3.2		6.76	1,152.90	13.91	1.45	-88.40	4.83	
13:01	4.1		6.75	1,152.60	13.92	1.39	-87.40	4.48	
13:04	5.1		6.74	1,154.10	13.92	1.21	-88.10	4.32	
13:07	6.0		6.73	1,152.60	13.96	1.18	-88.70	4.17	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/12/2024 13:07
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.73 pH 1,152.60 Spec. Cond. 13.96 Temp
Field Filtered: No Filter Type:
Water Level: 5.96 feet below TOC
Drawdown: 0.37 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan
Date: 11/12/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-11
Sample ID: 012
Date (s): 11/12/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 46 °F
Wind Direction: ☐ N ☐ S ☑ W ☐ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/12/2024 9:42
Static Water Level: 15.43 feet below TOC
Total Depth: 22.95 feet below TOC
Water Column: 7.52 feet

Purging Activities

Purged By: BG
Purge Date: 11/12/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 7.52 ft. x 0.022 = 0.17 L x 3 Vol. = 0.51 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear
Odor: Moderate
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:42	0.0	263	purge start time						
9:49	1.8	↓	6.98	960.80	13.91	2.87	-75.70	9.56	
9:52	2.6		6.83	959.50	14.03	2.38	-69.00	6.33	
9:55	3.4		6.74	959.00	14.16	2.08	-61.90	5.02	
9:58	4.2		6.69	958.40	14.20	1.91	-56.20	4.41	
10:01	5.0		6.66	958.40	14.28	1.75	-52.10	4.11	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/12/2024 10:01
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.66 pH 958.40 Spec. Cond. 14.28 Temp
Field Filtered: No Filter Type:
Water Level: 15.78 feet below TOC
Drawdown: 0.35 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/12/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-12
Sample ID: 013
Date (s): 11/12/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 47 °F
Wind Direction: ☐ N ☐ S ☑ W ☐ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/12/2024 10:32
Static Water Level: 17.92 feet below TOC
Total Depth: 30.40 feet below TOC
Water Column: 12.48 feet

Purging Activities

Purged By: BG
Purge Date: 11/12/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 12.48 ft. x 0.022 = 0.27 L x 3 Vol. = 0.81 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear
Odor: Moderate
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:32	0.0	265	purge start time						
10:37	1.4	↓	6.71	1,546.30	13.57	1.75	-87.40	21.96	
10:40	2.2		6.63	1,552.80	13.68	1.50	-88.30	21.69	
10:43	3.0		6.61	1,556.30	13.67	1.36	-89.00	22.15	
10:46	3.8		6.60	1,556.60	13.64	1.25	-89.10	22.86	
10:49	4.5		6.59	1,554.80	13.67	1.19	-88.30	25.61	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/12/2024 10:49
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.59 pH 1,554.80 Spec. Cond. 13.67 Temp
Field Filtered: No Filter Type:
Water Level: 18.14 feet below TOC
Drawdown: 0.22 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan
Date: 11/12/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-13
Sample ID: 014
Date (s): 11/12/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 51 °F
Wind Direction: ☐ N ☐ S ☑ W ☐ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/12/2024 11:01
Static Water Level: 19.40 feet below TOC
Total Depth: 31.00 feet below TOC
Water Column: 11.60 feet

Purging Activities

Purged By: BG Purge Date: 11/12/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 11.6 ft. x 0.022 = 0.26 L x 3 Vol. = 0.78 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear Odor: Strong Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:01	0.0	208	purge start time						
11:13	2.6	↓	6.71	777.40	13.10	1.30	-95.90	16.55	
11:16	3.2		6.70	776.60	13.17	1.24	-96.80	11.82	
11:19	3.8		6.69	776.60	13.22	1.20	-97.10	9.99	
11:22	4.5		6.68	776.30	13.23	1.16	-96.40	10.64	
11:25	5.1		6.67	776.10	13.20	1.12	-95.10	7.29	

Sampling Activities

Sampled By: BG Sample Date/Time: 11/12/2024 11:25
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.67 pH 776.10 Spec. Cond. 13.20 Temp
Field Filtered: No Filter Type:
Water Level: 19.49 feet below TOC Drawdown: 0.09 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan Date: 11/12/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: AP-14
Sample ID: 015
Date (s): 11/12/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 54 °F
Wind Direction: ☐ N ☐ S ☑ W ☐ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/12/2024 13:23
Static Water Level: 4.64 feet below TOC
Total Depth: 31.20 feet below TOC
Water Column: 26.56 feet

Purging Activities

Purged By: 54
Purge Date: 11/12/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 26.56 ft. x 0.022 = 0.58 L x 3 Vol. = 1.74 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear
Odor: None
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:23	0.0	75	purge start time						
13:28	0.4	↓	6.99	1,752.50	13.64	2.88	-45.90	15.14	
13:31	0.6		6.97	1,747.60	13.56	2.40	-41.10	39.05	
13:34	0.9		6.95	1,744.50	13.55	2.13	-39.00	143.38	
13:37	1.1		6.94	1,745.20	13.55	1.95	-38.10	11.17	
13:40	1.3		6.94	1,746.10	13.48	1.86	-37.60	9.13	
13:43	1.5		6.93	1,744.20	13.45	1.73	-37.40	8.02	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/12/2024 13:43
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.93 pH 1,744.20 Spec. Cond. 13.45 Temp
Field Filtered: No Filter Type:
Water Level: 5.21 feet below TOC
Drawdown: 0.57 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/12/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: T-1
Sample ID: 016
Date (s): 11/12/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 51 °F
Wind Direction: ☐ N ☐ S ☑ W ☐ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/12/2024 11:37
Static Water Level: 14.01 feet below TOC
Total Depth: 22.95 feet below TOC
Water Column: 8.94 feet

Purging Activities

Purged By: BG
Purge Date: 11/12/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 8.94 ft. x 0.022 = 0.2 L x 3 Vol. = 0.6 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear
Odor: Slight
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:37	0.0	141	purge start time						
11:54	2.4	↓	6.57	1,463.40	13.80	1.39	-1.60	21.72	
11:57	2.8		6.57	1,464.20	13.79	1.31	-5.60	17.93	
12:00	3.2		6.57	1,464.00	13.82	1.27	-8.50	19.93	
12:03	3.7		6.57	1,467.00	13.83	1.34	-8.70	21.43	
12:06	4.1		6.57	1,469.00	13.87	1.34	-8.70	20.67	
12:09	4.5		6.57	1,468.80	13.93	1.32	-8.50	23.17	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/12/2024 12:09
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.57 pH 1,468.80 Spec. Cond. 13.93 Temp
Field Filtered: No Filter Type:
Water Level: 14.37 feet below TOC
Drawdown: 0.36 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/12/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: T-2
Sample ID: 017
Date (s): 11/113/24

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 58 °F
Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 13:17
Static Water Level: 15.23 feet below TOC
Total Depth: 34.44 feet below TOC
Water Column: 19.21 feet

Purging Activities

Purged By: BG Purge Date: 11/113/24
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 19.21 ft. x 0.022 = 0.42 L x 3 Vol. = 1.26 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.50 L
Physical appearance of purge water: Clear Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:17	0.0	152	purge start time						
13:28	1.7	↓	6.57	1,878.50	13.27	1.72	-34.80	23.07	
13:31	2.1		6.56	1,874.10	13.09	1.43	-35.10	20.38	
13:34	2.6		6.55	1,870.40	13.02	1.30	-36.00	20.18	
13:37	3.0		6.55	1,871.80	13.02	1.24	-36.70	21.93	
13:40	3.5		6.54	1,874.80	13.05	1.20	-36.70	18.34	

Sampling Activities

Sampled By: BG Sample Date/Time: 11/13/2024 13:40
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.54 pH 1,874.80 Spec. Cond. 13.05 Temp
Field Filtered: No Filter Type:
Water Level: 15.73 feet below TOC Drawdown: 0.50 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/13/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: T-4
Sample ID: 018
Date (s): 11/13/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 56 °F
Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 11:43
Static Water Level: 19.62 feet below TOC
Total Depth: 27.42 feet below TOC
Water Column: 7.80 feet

Purging Activities

Purged By: BG
Purge Date: 11/13/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 7.8 ft. x 0.022 = 0.17 L x 3 Vol. = 0.51 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Cloudy
Odor: None
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:43	0.0	167	purge start time						
11:55	2.0	↓	6.70	650.20	14.40	1.41	-1.30	43.33	
11:58	2.5		6.67	649.10	14.37	1.45	6.20	44.30	
12:01	3.0		6.65	648.90	14.54	1.48	11.60	39.93	
12:04	3.5		6.65	649.90	14.57	1.45	15.50	34.46	
12:07	4.0		6.65	648.30	14.51	1.42	18.50	32.39	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/13/2024 12:07
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.65 pH 648.30 Spec. Cond. 14.51 Temp
Field Filtered: No Filter Type:
Water Level: 20.42 feet below TOC
Drawdown: 0.80 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/13/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: T-5
Sample ID: 019
Date (s): 11/13/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 56 °F
Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 11:13
Static Water Level: 11.46 feet below TOC
Total Depth: 22.34 feet below TOC
Water Column: 10.88 feet

Purging Activities

Purged By: BG
Purge Date: 11/13/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 10.88 ft. x 0.022 = 0.24 L x 3 Vol. = 0.72 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear
Odor: None
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:13	0.0	182	purge start time						
11:23	1.9	↓	6.88	570.50	15.02	2.44	-28.80	39.93	
11:26	2.4		6.86	557.00	15.35	2.33	-22.50	22.88	
11:29	2.9		6.84	551.80	15.42	2.29	-16.60	15.29	
11:32	3.5		6.83	549.80	15.44	2.25	-11.40	11.52	
11:35	4.0		6.82	548.60	15.52	2.21	-6.80	10.43	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/13/2024 11:35
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.82 pH 548.60 Spec. Cond. 15.52 Temp
Field Filtered: No Filter Type:
Water Level: 11.86 feet below TOC
Drawdown: 0.40 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/13/2024

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 24110120
Monitoring Point: T-6
Sample ID: 020
Date (s): 11/13/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 52 °F
Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 10:16
Static Water Level: 11.02 feet below TOC
Total Depth: 52.00 feet below TOC
Water Column: 40.98 feet

Purging Activities

Purged By: BG
Purge Date: 11/13/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 40.98 ft. x 0.022 = 0.9 L x 3 Vol. = 2.7 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear
Odor: None
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:16	0.0	214	purge start time						
10:25	1.9	↓	7.19	876.30	14.43	1.67	-110.70	15.38	
10:28	2.6		7.08	874.80	14.82	1.62	-113.10	16.26	
10:31	3.2		7.02	872.10	14.59	1.34	-114.50	7.87	
10:34	3.9		6.99	868.80	14.41	1.16	-115.80	22.88	
10:37	4.5		6.97	868.80	14.51	1.10	-117.10	14.37	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/13/2024 10:37
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.97 pH 868.80 Spec. Cond. 14.51 Temp
Field Filtered: No Filter Type:
Water Level: 11.34 feet below TOC
Drawdown: 0.32 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/13/2024

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

December 05, 2024

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 24110120

Dear Shelly Hennessy:

Order No.: 24111575

Summit Environmental Technologies, Inc. received 20 sample(s) on 11/20/2024 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **24111575**
Date: **12/5/2024**

CLIENT: TEKLAB Inc,
Project: 24110120

WorkOrder Narrative:
24111575: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, In
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **24111575**
Date: **12/5/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **24111575**
05-Dec-24

CLIENT: TEKLAB Inc,
Project: 24110120

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24111575-001	24110120-001		11/11/2024 11:03:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-002	24110120-002		11/11/2024 11:44:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-003	24110120-003		11/11/2024 12:21:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-004	24110120-004		11/11/2024 12:55:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-005	24110120-005		11/11/2024 1:38:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-006	24110120-006		11/11/2024 2:28:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-007	24110120-007		11/11/2024 10:27:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-008	24110120-008		11/13/2024 11:07:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-009	24110120-009		11/13/2024 1:15:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-010	24110120-010		11/13/2024 12:30:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-011	24110120-011		11/12/2024 1:07:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-012	24110120-012		11/12/2024 10:01:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-013	24110120-013		11/12/2024 10:49:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-014	24110120-014		11/12/2024 11:25:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-015	24110120-015		11/12/2024 1:49:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-016	24110120-016		11/12/2024 12:09:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-017	24110120-017		11/13/2024 1:40:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-018	24110120-018		11/13/2024 12:07:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-019	24110120-019		11/13/2024 11:35:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111575-020	24110120-020		11/13/2024 10:37:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC. Analytical Laboratories

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

DATES REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24111575-001A	24110120-001	11/11/2024 11:03:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-002A	24110120-002	11/11/2024 11:44:00 AM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-003A	24110120-003	11/11/2024 12:21:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-004A	24110120-004	11/11/2024 12:55:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-005A	24110120-005	11/11/2024 1:38:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-006A	24110120-006	11/11/2024 2:28:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-007A	24110120-007	11/11/2024 10:27:00 AM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-008A	24110120-008	11/13/2024 11:07:00 AM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-009A	24110120-009	11/13/2024 1:15:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-010A	24110120-010	11/13/2024 12:30:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-011A	24110120-011	11/12/2024 1:07:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111575-012A	24110120-012	11/12/2024 10:01:00 AM		Radium-226 (EPA 903.0)		11/26/2024 1:09:00 PM	12/5/2024 9:34:00 AM

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SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC. Analytical Laboratories

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Website: http://www.settek.com

DATES REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24111575-012A	24110120-012	11/12/2024 10:01:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		11/26/2024 1:09:00 PM	12/4/2024 2:33:00 PM
24111575-013A	24110120-013	11/12/2024 10:49:00 AM		Radium-226 (EPA 903.0)		11/22/2024 11:34:00 AM	11/29/2024 9:41:00 AM
				Radium-228 (EPA 904.0)		11/22/2024 11:34:00 AM	11/27/2024 2:09:00 PM
24111575-014A	24110120-014	11/12/2024 11:25:00 AM		Radium-226 (EPA 903.0)		11/26/2024 1:09:00 PM	12/5/2024 9:34:00 AM
				Radium-228 (EPA 904.0)		11/26/2024 1:09:00 PM	12/4/2024 2:33:00 PM
24111575-015A	24110120-015	11/12/2024 1:49:00 PM		Radium-226 (EPA 903.0)		11/26/2024 1:09:00 PM	12/5/2024 9:34:00 AM
				Radium-228 (EPA 904.0)		11/26/2024 1:09:00 PM	12/4/2024 2:33:00 PM
24111575-016A	24110120-016	11/12/2024 12:09:00 PM		Radium-226 (EPA 903.0)		11/26/2024 1:09:00 PM	12/5/2024 9:34:00 AM
				Radium-228 (EPA 904.0)		11/26/2024 1:09:00 PM	12/4/2024 2:33:00 PM
24111575-017A	24110120-017	11/13/2024 1:40:00 PM		Radium-226 (EPA 903.0)		11/26/2024 1:09:00 PM	12/5/2024 9:34:00 AM
				Radium-228 (EPA 904.0)		11/26/2024 1:09:00 PM	12/4/2024 2:33:00 PM
24111575-018A	24110120-018	11/13/2024 12:07:00 PM		Radium-226 (EPA 903.0)		11/26/2024 1:09:00 PM	12/5/2024 9:34:00 AM
				Radium-228 (EPA 904.0)		11/26/2024 1:09:00 PM	12/4/2024 2:33:00 PM
24111575-019A	24110120-019	11/13/2024 11:35:00 AM		Radium-226 (EPA 903.0)		11/26/2024 1:09:00 PM	12/5/2024 9:34:00 AM
				Radium-228 (EPA 904.0)		11/26/2024 1:09:00 PM	12/4/2024 2:33:00 PM
24111575-020A	24110120-020	11/13/2024 10:37:00 AM		Radium-226 (EPA 903.0)		11/26/2024 1:09:00 PM	12/5/2024 9:34:00 AM
				Radium-228 (EPA 904.0)		11/26/2024 1:09:00 PM	12/4/2024 2:33:00 PM

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,

Collection Date: 11/11/2024 11:03:00 AM

Project: 24110120

Lab ID: 24111575-001

Matrix: NON-POTABLE WATER

Client Sample ID: 24110120-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.100	1	12/4/2024 9:31:52 AM
Yield	1.00					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	1.23	1.00		pCi/L	± 0.650	1	12/3/2024 4:29:04 PM
Yield	0.980					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,

Collection Date: 11/11/2024 11:44:00 AM

Project: 24110120

Lab ID: 24111575-002

Matrix: NON-POTABLE WATER

Client Sample ID: 24110120-002

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.130	1	12/4/2024 9:31:52 AM
Yield	0.980					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.490	1	12/3/2024 4:29:04 PM
Yield	0.930					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/11/2024 12:21:00 PM
Project: 24110120
Lab ID: 24111575-003
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-003

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.0600	1	12/4/2024 9:31:52 AM
Yield	1.00					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.450	1	12/3/2024 4:29:04 PM
Yield	0.990					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

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WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/11/2024 12:55:00 PM
Project: 24110120
Lab ID: 24111575-004
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-004

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.0700	1	12/4/2024 9:31:52 AM
Yield	0.810					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.630	1	12/3/2024 4:29:04 PM
Yield	0.780					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

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WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/11/2024 1:38:00 PM
Project: 24110120
Lab ID: 24111575-005
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-005

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.120	1	12/4/2024 9:31:52 AM
Yield	0.990					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.710	1	12/3/2024 4:29:04 PM
Yield	0.860					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

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WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/11/2024 2:28:00 PM
Project: 24110120
Lab ID: 24111575-006
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-006

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.0700	1	12/4/2024 9:31:52 AM
Yield	1.00					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.590	1	12/3/2024 4:29:04 PM
Yield	0.990					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

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WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/11/2024 10:27:00 AM
Project: 24110120
Lab ID: 24111575-007
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-007

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.0700	1	12/4/2024 9:31:52 AM
Yield	0.980					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.520	1	12/3/2024 4:29:04 PM
Yield	1.00					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/13/2024 11:07:00 AM
Project: 24110120
Lab ID: 24111575-008
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-008

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.100	1	12/4/2024 9:31:52 AM
Yield	1.00					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	ND	1.00		pCi/L	± 0.660	1	12/3/2024 4:29:04 PM
Yield	0.880					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/13/2024 1:15:00 PM

Project: 24110120

Lab ID: 24111575-009
Matrix: NON-POTABLE WATER

Client Sample ID: 24110120-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	1.05	1.00		pCi/L	± 0.200	1	12/4/2024 9:31:52 AM
Yield	0.970					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	1.52	1.00		pCi/L	± 0.770	1	12/3/2024 4:29:04 PM
Yield	0.930					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/13/2024 12:30:00 PM
Project: 24110120
Lab ID: 24111575-010
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-010

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.130	1	12/4/2024 9:31:52 AM
Yield	0.980					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	1.01	1.00		pCi/L	± 0.670	1	12/3/2024 4:29:04 PM
Yield	0.960					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,

Collection Date: 11/12/2024 1:07:00 PM

Project: 24110120

Lab ID: 24111575-011

Matrix: NON-POTABLE WATER

Client Sample ID: 24110120-011

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.210	1	12/4/2024 9:31:52 AM
Yield	0.790					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	1.61	1.00		pCi/L	± 0.870	1	12/3/2024 4:29:04 PM
Yield	0.770					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,

Collection Date: 11/12/2024 10:01:00 AM

Project: 24110120

Lab ID: 24111575-012

Matrix: NON-POTABLE WATER

Client Sample ID: 24110120-012

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0600	1	12/5/2024 9:34:00 AM
Yield	1.00					1	12/5/2024 9:34:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.340	1	12/4/2024 2:33:00 PM
Yield	1.00					1	12/4/2024 2:33:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/12/2024 10:49:00 AM
Project: 24110120
Lab ID: 24111575-013
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-013

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0800	1	11/29/2024 9:41:00 AM
Yield	0.970					1	11/29/2024 9:41:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.340	1	11/27/2024 2:09:00 PM
Yield	0.960					1	11/27/2024 2:09:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/12/2024 11:25:00 AM
Project: 24110120
Lab ID: 24111575-014
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-014

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0500	1	12/5/2024 9:34:00 AM
Yield	1.00					1	12/5/2024 9:34:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.390	1	12/4/2024 2:33:00 PM
Yield	0.900					1	12/4/2024 2:33:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC.
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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/12/2024 1:49:00 PM
Project: 24110120
Lab ID: 24111575-015
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-015

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0700	1	12/5/2024 9:34:00 AM
Yield	1.00					1	12/5/2024 9:34:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.390	1	12/4/2024 2:33:00 PM
Yield	1.00					1	12/4/2024 2:33:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/12/2024 12:09:00 PM
Project: 24110120
Lab ID: 24111575-016
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-016

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.110	1	12/5/2024 9:34:00 AM
Yield	1.00					1	12/5/2024 9:34:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.340	1	12/4/2024 2:33:00 PM
Yield	1.00					1	12/4/2024 2:33:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/13/2024 1:40:00 PM
Project: 24110120
Lab ID: 24111575-017
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-017

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.100	1	12/5/2024 9:34:00 AM
Yield	1.00					1	12/5/2024 9:34:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.380	1	12/4/2024 2:33:00 PM
Yield	0.990					1	12/4/2024 2:33:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/13/2024 12:07:00 PM
Project: 24110120
Lab ID: 24111575-018
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-018

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0700	1	12/5/2024 9:34:00 AM
Yield	1.00					1	12/5/2024 9:34:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.400	1	12/4/2024 2:33:00 PM
Yield	1.00					1	12/4/2024 2:33:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/13/2024 11:35:00 AM
Project: 24110120
Lab ID: 24111575-019
Matrix: NON-POTABLE WATER
Client Sample ID: 24110120-019

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.0600	1	12/5/2024 9:34:00 AM
Yield	1.00					1	12/5/2024 9:34:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	ND	1.00		pCi/L	± 0.390	1	12/4/2024 2:33:00 PM
Yield	1.00					1	12/4/2024 2:33:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **24111575**

Date Reported: **12/5/2024**

CLIENT: TEKLAB Inc,

Collection Date: 11/13/2024 10:37:00 AM

Project: 24110120

Lab ID: 24111575-020

Matrix: NON-POTABLE WATER

Client Sample ID: 24110120-020

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **DHF**
Radium-226	ND	1.00		pCi/L	± 0.110	1	12/5/2024 9:34:00 AM
Yield	1.00					1	12/5/2024 9:34:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **DHF**
Radium-228	1.08	1.00		pCi/L	± 0.450	1	12/4/2024 2:33:00 PM
Yield	1.00					1	12/4/2024 2:33:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80532**

Sample ID: **MB-80532** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/26/2024** RunNo: **198234**
Client ID: **BatchQC** Batch ID: **80532** TestNo: **E904.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5359799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-80532** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/26/2024** RunNo: **198234**
Client ID: **BatchQC** Batch ID: **80532** TestNo: **E904.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5359800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.06	1.00	5.000	0	61.2	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-80532** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/26/2024** RunNo: **198234**
Client ID: **BatchQC** Batch ID: **80532** TestNo: **E904.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5359801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.45	1.00	5.000	0	69.0	50	130	3.060	12.0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80532**

Sample ID: **24111631-001EDUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/26/2024** RunNo: **198234**
Client ID: **BatchQC** Batch ID: **80532** TestNo: **E904.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5359814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24111575**
05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80532**

Sample ID: **MB-80532**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/26/2024**	RunNo: **198237**
Client ID: **BatchQC**	Batch ID: **80532**	TestNo: **E903.0**	**E903-904**	Analysis Date: **12/5/2024**	SeqNo: **5359889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-80532**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/26/2024**	RunNo: **198237**
Client ID: **BatchQC**	Batch ID: **80532**	TestNo: **E903.0**	**E903-904**	Analysis Date: **12/5/2024**	SeqNo: **5359890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	3.53	1.00	5.000	0	70.6	70	130				QLR

Sample ID: **LCSD-80532**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/26/2024**	RunNo: **198237**
Client ID: **BatchQC**	Batch ID: **80532**	TestNo: **E903.0**	**E903-904**	Analysis Date: **12/5/2024**	SeqNo: **5359891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.98	1.00	5.000	0	99.6	70	130	3.530	34.1	20	R

Sample ID: **24111631-001EDUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/26/2024**	RunNo: **198237**
Client ID: **BatchQC**	Batch ID: **80532**	TestNo: **E903.0**	**E903-904**	Analysis Date: **12/5/2024**	SeqNo: **5359904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80532**

Sample ID: **24111631-001EDUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/26/2024** RunNo: **198237**
Client ID: **BatchQC** Batch ID: **80532** TestNo: **E903.0** **E903-904** Analysis Date: **12/5/2024** SeqNo: **5359904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80533**

Sample ID: **MB-80533** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197941**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E904.0** **E903-904** Analysis Date: **11/27/2024** SeqNo: **5352672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-80533** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197941**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E904.0** **E903-904** Analysis Date: **11/27/2024** SeqNo: **5352673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.41	1.00	5.000	0	68.2	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-80533** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197941**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E904.0** **E903-904** Analysis Date: **11/27/2024** SeqNo: **5352674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.37	1.00	5.000	0	67.4	50	130	3.410	1.18	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80533**

Sample ID: **24111225-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197941**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E904.0** **E903-904** Analysis Date: **11/27/2024** SeqNo: **5352689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **24111363-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197941**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E904.0** **E903-904** Analysis Date: **11/27/2024** SeqNo: **5352692**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.11	1.00		0	0			0.9300	17.6	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80533**

Sample ID: **MB-80533**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197943**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/29/2024**	SeqNo: **5352721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-80533**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197943**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/29/2024**	SeqNo: **5352722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.06	1.00	5.000	0	101	70	130				

Sample ID: **LCSD-80533**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197943**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/29/2024**	SeqNo: **5352723**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.18	1.00	5.000	0	83.6	70	130	5.060	19.0	20	

Sample ID: **24111225-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197943**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/29/2024**	SeqNo: **5352733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80533**

Sample ID: **24111225-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197943**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E903.0** **E903-904** Analysis Date: **11/29/2024** SeqNo: **5352733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **24111363-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197943**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E903.0** **E903-904** Analysis Date: **11/29/2024** SeqNo: **5352735**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80535**

Sample ID: **MB-80535** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358242**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-80535** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358243**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.46	1.00	5.000	0	89.2	50	130				
Yield	0.970			0	0						

Sample ID: **LCSD-80535** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.32	1.00	5.000	0	106	50	130	4.460	17.6	20	
Yield	0.970			0	0			0.9700	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80535**

Sample ID: **24111317-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358249**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			0.7500	28.6		

Sample ID: **24111607-001DDUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	0.910			0	0			1.000	9.42		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Laboratories

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Cuyahoga Falls, Ohio 44223
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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111575**
05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80535**

Sample ID: **MB-80535** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198160**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E903.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5358431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	0.990										

Sample ID: **LCS-80535** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198160**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E903.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5358432**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.81	1.00	5.000	0	116	70	130				

Sample ID: **LCSD-80535** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198160**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E903.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5358433**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.22	1.00	5.000	0	104	70	130	5.810	10.7	20	

Sample ID: **24111317-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198160**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E903.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5358438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111575**

05-Dec-24

Client: TEKLAB Inc,
Project: 24110120 **BatchID:** **80535**

Sample ID: **24111317-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198160**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E903.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5358438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							0.8200	19.8	0	

Sample ID: **24111607-001DDUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198160**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E903.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5358458**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	0.980							1.000	2.02	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

Pg 1 of 2

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

24111575

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

17.4-0.0: 17.4°C
17.2-0.0: 17.2°C
17.3-0.0: 17.3°C
CS intact 11/18/24

Cooler Temp: 17.2-17.4 (Sampler: Client

Fedex, Cooler

QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 24110120

Contact: Shelly Hennessy
Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT
Billing/PO: 37434
Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	CPM						pH			
	24110120-001	11/11/24 1103	HNO3	Groundwater	✔	32						1			
	24110120-002	11/11/24 1144	HNO3	Groundwater	✔	22						1			
	24110120-003	11/11/24 1221	HNO3	Groundwater	✔	14						1			
	24110120-004	11/11/24 1255	HNO3	Groundwater	✔	30						1			
	24110120-005	11/11/24 1338	HNO3	Groundwater	✔	30						1			
	24110120-006	11/11/24 1428	HNO3	Groundwater	✔	40						1			
	24110120-007	11/11/24 1027	HNO3	Groundwater	✔	36						1			
	24110120-008	11/13/24 1107	HNO3	Groundwater	✔	36						1			
	24110120-009	11/13/24 1315	HNO3	Groundwater	✔	42						1			
	24110120-010	11/13/24 1230	HNO3	Groundwater	✔	28						1			
	24110120-011	11/12/24 1307	HNO3	Groundwater	✔	30						1			

*Relinquished By	Date/Time	Received By	Date/Time
[signature]		[signature]	11/20/24, 1300

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc 17.4-0.0=17.4°C
5445 Horseshoe Lake Road 17.2-0.0=17.2°C Fedex, Cooler
Collinsville, IL 62234 17.3-0.0=17.3°C CS intact 11/18/24

Cooler Temp: 17.2-17.4°C Sampler: Client QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 24110120

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 37434 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	C	pm					pH				
	24110120-012	11/12/24 1001	HNO3	Groundwater	✔		24					1				
	24110120-013	11/12/24 1049	HNO3	Groundwater	✔		32					1				
	24110120-014	11/12/24 1125	HNO3	Groundwater	✔		32					1				
	24110120-015	11/12/24 1349	HNO3	Groundwater	✔		26					1				
	24110120-016	11/12/24 1209	HNO3	Groundwater	✔		22					1				
	24110120-017	11/13/24 1340	HNO3	Groundwater	✔		40					1				
	24110120-018	11/13/24 1207	HNO3	Groundwater	✔		28					1				
	24110120-019	11/13/24 1135	HNO3	Groundwater	✔		26					1				
	24110120-020	11/13/24 1037	HNO3	Groundwater	✔		20					1				
			HNO3	Groundwater												
			HNO3	Groundwater												

*Relinquished By	Date/Time	Received By	Date/Time
[signature]		[signature]	11/20/24, 1300

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SubCocRevA
3/2/2016

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

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3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24111575 RcptNo: 1

Logged by:	Anthony W. Britton	11/20/2024 1:00:00 PM	Anthony Britton
Completed By:	Anthony W. Britton	11/21/2024 1:24:10 PM	Anthony Britton
Reviewed By:	Jennifer Woolf	11/26/2024 11:15:22 AM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☑ No ☐ Not Present ☐
   No. Seal Date: 11/18/2024 Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	17.4	Good	Yes		11/18/2024	

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Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24111575 RcptNo: 1

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	17.2	Good	Yes		11/18/2024	
3	17.3	Good	Yes		11/18/2024	

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

December 09, 2024

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 24110121

Dear Eric Staley:

TEKLAB, INC received 12 samples on 11/13/2024 3:45:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 24110121
Report Date: 09-Dec-24

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 24110121

Client Project: FGDS Landfill **Report Date:** 09-Dec-24

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24

Cooler Receipt Temp: 10.9 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Summit Environmental Technologies. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

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Springfield, IL 62711-9415
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Downers Grove, IL 60515
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Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2025	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2025	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	12/31/2024	Collinsville
Arkansas	ADEQ	88-0966		3/14/2025	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	UST	0073		1/31/2025	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 11/11/2024 10:26

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.53**	ft	1	11/11/2024 10:26	R356376
Depth to water	*	-5.00		**4.65**	ft	1	11/11/2024 10:26	R356376
Depth to water from measuring point	*	0		**7.45**	ft	1	11/11/2024 10:26	R356376
Elevation of groundwater surface	*	0		**539.35**	ft	1	11/11/2024 10:26	R356376
Measuring Point Elevation	*	0		**546.80**	ft	1	11/11/2024 10:26	R356376
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	11/11/2024 10:26	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**11**	NTU	1	11/11/2024 10:26	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.4**	°F	1	11/11/2024 10:26	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.55**		1	11/11/2024 10:26	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1180**	µmhos/cm @25C	1	11/11/2024 10:26	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**905**	mg/L	2.5	11/14/2024 12:21	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 18:30	R355975
Chloride	NELAP	5.00		**106**	mg/L	10	11/13/2024 18:30	R355975
Sulfate	NELAP	10.0		**265**	mg/L	10	11/13/2024 18:30	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0342**	mg/L	1	11/12/2024 19:32	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:32	231056
Boron	NELAP	0.0200		**0.126**	mg/L	1	11/12/2024 19:32	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:32	231056
Calcium	NELAP	0.100		**164**	mg/L	1	11/12/2024 19:32	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:32	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:32	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:32	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:32	231056
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	11/16/2024 1:06	231056
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 4:56	231056
Lithium	*	0.0030		**0.0167**	mg/L	5	11/20/2024 9:00	231056
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 4:56	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2024 4:56	231056

LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.
Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.

SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:46	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-002
Client Sample ID: G110
Matrix: GROUNDWATER
Collection Date: 11/13/2024 10:24

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.05**	ft	1	11/13/2024 10:24	R356376
Depth to water	*	-5.00		**22.15**	ft	1	11/13/2024 10:24	R356376
Depth to water from measuring point	*	0		**24.76**	ft	1	11/13/2024 10:24	R356376
Elevation of groundwater surface	*	0		**532.44**	ft	1	11/13/2024 10:24	R356376
Measuring Point Elevation	*	0		**557.20**	ft	1	11/13/2024 10:24	R356376
Measuring Point Height Above Land Surface	*	0		**2.61**	ft	1	11/13/2024 10:24	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**62**	NTU	1	11/13/2024 10:24	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.9**	°F	1	11/13/2024 10:24	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.70**		1	11/13/2024 10:24	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**616**	µmhos/cm @25C	1	11/13/2024 10:24	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**550**	mg/L	2.5	11/19/2024 14:07	R356516
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 10:27	R356222
Chloride	NELAP	5.00		**5.59**	mg/L	10	11/15/2024 10:27	R356222
Sulfate	NELAP	10.0		**ND**	mg/L	10	11/15/2024 10:27	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.178**	mg/L	1	11/18/2024 12:13	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:13	231260
Boron	NELAP	0.0200		**0.101**	mg/L	1	11/18/2024 12:13	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:13	231260
Calcium	NELAP	0.100		**109**	mg/L	1	11/18/2024 12:13	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:13	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:13	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:13	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:13	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:06	231194
Arsenic	NELAP	0.0010		**0.0058**	mg/L	5	11/20/2024 11:05	231194
Lithium	*	0.0030		**< 0.0030**	mg/L	5	11/20/2024 11:05	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 11:05	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 4:06	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:13	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-003
Client Sample ID: R111
Matrix: GROUNDWATER
Collection Date: 11/11/2024 11:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**498.25**	ft	1	11/11/2024 11:29	R356376
Depth to water	*	-5.00		**25.24**	ft	1	11/11/2024 11:29	R356376
Depth to water from measuring point	*	0		**25.24**	ft	1	11/11/2024 11:29	R356376
Elevation of groundwater surface	*	0		**528.76**	ft	1	11/11/2024 11:29	R356376
Measuring Point Elevation	*	0		**554.00**	ft	1	11/11/2024 11:29	R356376
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	11/11/2024 11:29	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**14**	NTU	1	11/11/2024 11:29	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.9**	°F	1	11/11/2024 11:29	R356376
SW-846 9040B								
pH, Field	*	1.00		**5.96**		1	11/11/2024 11:29	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1130**	µmhos/cm @25C	1	11/11/2024 11:29	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**875**	mg/L	2.5	11/14/2024 12:22	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 18:42	R355975
Chloride	NELAP	5.00		**202**	mg/L	10	11/13/2024 18:42	R355975
Sulfate	NELAP	10.0		**33.3**	mg/L	10	11/13/2024 18:42	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.686**	mg/L	1	11/12/2024 19:33	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:33	231056
Boron	NELAP	0.0200		**4.19**	mg/L	1	11/12/2024 19:33	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:33	231056
Calcium	NELAP	0.100		**169**	mg/L	1	11/12/2024 19:33	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:33	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:33	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:33	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:33	231056
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	11/16/2024 1:10	231056
Arsenic	NELAP	0.0010		**0.0185**	mg/L	5	11/15/2024 5:01	231056
Lithium	*	0.0030		**0.0066**	mg/L	5	11/20/2024 9:06	231056
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 5:01	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2024 5:01	231056

LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.
Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.

SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:49	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-004
Client Sample ID: G112
Matrix: GROUNDWATER
Collection Date: 11/11/2024 12:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.99**	ft	1	11/11/2024 12:27	R356376
Depth to water	*	-5.00		**25.62**	ft	1	11/11/2024 12:27	R356376
Depth to water from measuring point	*	0		**27.80**	ft	1	11/11/2024 12:27	R356376
Elevation of groundwater surface	*	0		**527.00**	ft	1	11/11/2024 12:27	R356376
Measuring Point Elevation	*	0		**554.80**	ft	1	11/11/2024 12:27	R356376
Measuring Point Height Above Land Surface	*	0		**2.18**	ft	1	11/11/2024 12:27	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.7**	NTU	1	11/11/2024 12:27	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.6**	°F	1	11/11/2024 12:27	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.21**		1	11/11/2024 12:27	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1260**	µmhos/cm @25C	1	11/11/2024 12:27	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1050**	mg/L	2.5	11/14/2024 12:22	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 18:54	R355975
Chloride	NELAP	5.00		**184**	mg/L	10	11/13/2024 18:54	R355975
Sulfate	NELAP	10.0		**234**	mg/L	10	11/13/2024 18:54	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.423**	mg/L	1	11/12/2024 19:35	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:35	231056
Boron	NELAP	0.0200		**0.435**	mg/L	1	11/12/2024 19:35	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:35	231056
Calcium	NELAP	0.100		**203**	mg/L	1	11/12/2024 19:35	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:35	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:35	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:35	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:35	231056
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	11/16/2024 1:43	231056
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 5:07	231056
Lithium	*	0.0030		**0.0214**	mg/L	5	11/20/2024 9:11	231056
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 5:07	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2024 5:07	231056

LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.
Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.

SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:51	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-005
Client Sample ID: G113
Matrix: GROUNDWATER
Collection Date: 11/11/2024 11:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**524.85**	ft	1	11/11/2024 11:16	R356376
Depth to water	*	-5.00		**5.17**	ft	1	11/11/2024 11:16	R356376
Depth to water from measuring point	*	0		**7.67**	ft	1	11/11/2024 11:16	R356376
Elevation of groundwater surface	*	0		**530.03**	ft	1	11/11/2024 11:16	R356376
Measuring Point Elevation	*	0		**537.70**	ft	1	11/11/2024 11:16	R356376
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	11/11/2024 11:16	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.4**	NTU	1	11/11/2024 11:16	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.1**	°F	1	11/11/2024 11:16	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.14**		1	11/11/2024 11:16	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**972**	µmhos/cm @25C	1	11/11/2024 11:16	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**785**	mg/L	2.5	11/14/2024 12:22	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 19:40	R355975
Chloride	NELAP	5.00		**30.7**	mg/L	10	11/13/2024 19:40	R355975
Sulfate	NELAP	10.0		**164**	mg/L	10	11/13/2024 19:40	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.186**	mg/L	1	11/12/2024 19:37	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:37	231056
Boron	NELAP	0.0200		**1.07**	mg/L	1	11/12/2024 19:37	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:37	231056
Calcium	NELAP	0.100		**174**	mg/L	1	11/12/2024 19:37	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:37	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:37	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:37	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:37	231056
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	11/16/2024 1:47	231056
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 5:12	231056
Lithium	*	0.0030		**0.0031**	mg/L	5	11/20/2024 10:04	231056
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 5:12	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2024 5:12	231056

LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.
Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.

SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 12:54	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-006
Client Sample ID: G120
Matrix: GROUNDWATER
Collection Date: 11/13/2024 11:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**502.73**	ft	1	11/13/2024 11:18	R356376
Depth to water	*	-5.00		**16.72**	ft	1	11/13/2024 11:18	R356376
Depth to water from measuring point	*	0		**16.72**	ft	1	11/13/2024 11:18	R356376
Elevation of groundwater surface	*	0		**536.38**	ft	1	11/13/2024 11:18	R356376
Measuring Point Elevation	*	0		**553.10**	ft	1	11/13/2024 11:18	R356376
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	11/13/2024 11:18	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**30**	NTU	1	11/13/2024 11:18	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.2**	°F	1	11/13/2024 11:18	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.55**		1	11/13/2024 11:18	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1380**	µmhos/cm @25C	1	11/13/2024 11:18	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	100		**1430**	mg/L	5	11/19/2024 14:17	R356516
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 10:39	R356222
Chloride	NELAP	5.00		**37.4**	mg/L	10	11/15/2024 10:39	R356222
Sulfate	NELAP	10.0		**565**	mg/L	10	11/15/2024 10:39	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.565**	mg/L	1	11/18/2024 12:15	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:15	231260
Boron	NELAP	0.0200		**7.50**	mg/L	1	11/18/2024 12:15	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:15	231260
Calcium	NELAP	0.100		**263**	mg/L	1	11/18/2024 12:15	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:15	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:15	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:15	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:15	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:12	231194
Arsenic	NELAP	0.0010		**0.0119**	mg/L	5	11/20/2024 4:12	231194
Lithium	*	0.0030		**0.0086**	mg/L	5	11/20/2024 11:11	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:12	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 4:12	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:16	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	11/27/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-007
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 11/11/2024 13:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	11/11/2024 13:30	R356376
Depth to water	*	-5.00		**32.66**	ft	1	11/11/2024 13:30	R356376
Depth to water from measuring point	*	0		**34.53**	ft	1	11/11/2024 13:30	R356376
Elevation of groundwater surface	*	0		**521.07**	ft	1	11/11/2024 13:30	R356376
Measuring Point Elevation	*	0		**555.60**	ft	1	11/11/2024 13:30	R356376
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	11/11/2024 13:30	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	11/11/2024 13:30	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.2**	°F	1	11/11/2024 13:30	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.75**		1	11/11/2024 13:30	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1370**	µmhos/cm @25C	1	11/11/2024 13:30	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1040**	mg/L	2.5	11/14/2024 12:22	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 19:52	R355975
Chloride	NELAP	5.00		**29.0**	mg/L	10	11/13/2024 19:52	R355975
Sulfate	NELAP	10.0		**311**	mg/L	10	11/13/2024 19:52	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.626**	mg/L	1	11/12/2024 19:38	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:38	231056
Boron	NELAP	0.0200		**3.68**	mg/L	1	11/12/2024 19:38	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:38	231056
Calcium	NELAP	0.100		**191**	mg/L	1	11/12/2024 19:38	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:38	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:38	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:38	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:38	231056
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	11/16/2024 1:51	231056
Arsenic	NELAP	0.0010		**0.0160**	mg/L	5	11/15/2024 5:18	231056
Lithium	*	0.0030		**0.0079**	mg/L	5	11/20/2024 10:10	231056
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 5:18	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2024 5:18	231056

LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.
Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.

SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 13:02	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-008
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 11/11/2024 14:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**505.11**	ft	1	11/11/2024 14:10	R356376
Depth to water	*	-5.00		**28.50**	ft	1	11/11/2024 14:10	R356376
Depth to water from measuring point	*	0		**30.24**	ft	1	11/11/2024 14:10	R356376
Elevation of groundwater surface	*	0		**524.16**	ft	1	11/11/2024 14:10	R356376
Measuring Point Elevation	*	0		**554.40**	ft	1	11/11/2024 14:10	R356376
Measuring Point Height Above Land Surface	*	0		**1.74**	ft	1	11/11/2024 14:10	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**5.7**	NTU	1	11/11/2024 14:10	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.4**	°F	1	11/11/2024 14:10	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	11/11/2024 14:10	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1590**	µmhos/cm @25C	1	11/11/2024 14:10	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1360**	mg/L	2.5	11/14/2024 12:22	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 20:04	R355975
Chloride	NELAP	5.00		**37.6**	mg/L	10	11/13/2024 20:04	R355975
Sulfate	NELAP	10.0		**547**	mg/L	10	11/13/2024 20:04	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.468**	mg/L	1	11/12/2024 19:40	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:40	231056
Boron	NELAP	0.0200	S	**11.7**	mg/L	1	11/12/2024 19:40	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:40	231056
Calcium	NELAP	0.100	S	**246**	mg/L	1	11/12/2024 19:40	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:40	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:40	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:40	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:40	231056
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	BS	**< 0.0010**	mg/L	5	11/16/2024 1:14	231056
Arsenic	NELAP	0.0010		**0.0029**	mg/L	5	11/15/2024 5:24	231056
Lithium	*	0.0030		**0.0070**	mg/L	5	11/20/2024 9:17	231056
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 5:24	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2024 5:24	231056
Matrix spike recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable.								
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 13:17	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 11/11/2024 12:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	11/11/2024 12:06	R356376
Depth to water	*	-5.00		**11.79**	ft	1	11/11/2024 12:06	R356376
Depth to water from measuring point	*	0		**14.54**	ft	1	11/11/2024 12:06	R356376
Elevation of groundwater surface	*	0		**541.06**	ft	1	11/11/2024 12:06	R356376
Measuring Point Elevation	*	0		**555.60**	ft	1	11/11/2024 12:06	R356376
Measuring Point Height Above Land Surface	*	0		**2.75**	ft	1	11/11/2024 12:06	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**19**	NTU	1	11/11/2024 12:06	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.6**	°F	1	11/11/2024 12:06	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.56**		1	11/11/2024 12:06	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1410**	µmhos/cm @25C	1	11/11/2024 12:06	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1100**	mg/L	2.5	11/14/2024 12:25	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 20:15	R355975
Chloride	NELAP	5.00		**37.3**	mg/L	10	11/13/2024 20:15	R355975
Sulfate	NELAP	10.0		**388**	mg/L	10	11/13/2024 20:15	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.446**	mg/L	1	11/12/2024 19:52	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:52	231056
Boron	NELAP	0.0200		**8.91**	mg/L	1	11/12/2024 19:52	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:52	231056
Calcium	NELAP	0.100		**193**	mg/L	1	11/12/2024 19:52	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:52	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:52	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:52	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:52	231056
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	11/16/2024 1:56	231056
Arsenic	NELAP	0.0010		**0.168**	mg/L	5	11/16/2024 7:57	231056
Lithium	*	0.0030		**0.0113**	mg/L	5	11/20/2024 10:15	231056
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/16/2024 7:57	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/18/2024 16:43	231056

LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.
Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.

SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 13:20	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-010
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 11/13/2024 12:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	11/13/2024 12:38	R356376
Depth to water	*	-5.00		**1.21**	ft	1	11/13/2024 12:38	R356376
Depth to water from measuring point	*	0		**4.51**	ft	1	11/13/2024 12:38	R356376
Elevation of groundwater surface	*	0		**525.47**	ft	1	11/13/2024 12:38	R356376
Measuring Point Elevation	*	0		**529.98**	ft	1	11/13/2024 12:38	R356376
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	11/13/2024 12:38	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.6**	NTU	1	11/13/2024 12:38	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.6**	°F	1	11/13/2024 12:38	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.73**		1	11/13/2024 12:38	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**840**	µmhos/cm @25C	1	11/13/2024 12:38	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50	H	**795**	mg/L	2.5	11/21/2024 17:12	R356629
Sample analysis did not meet hold time requirements.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 10:51	R356222
Chloride	NELAP	5.00		**25.7**	mg/L	10	11/15/2024 10:51	R356222
Sulfate	NELAP	10.0		**99.2**	mg/L	10	11/15/2024 10:51	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.516**	mg/L	1	11/18/2024 12:16	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:16	231260
Boron	NELAP	0.0200		**2.46**	mg/L	1	11/18/2024 12:16	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:16	231260
Calcium	NELAP	0.100		**144**	mg/L	1	11/18/2024 12:16	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:16	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:16	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:16	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:16	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:18	231194
Arsenic	NELAP	0.0010		**0.0130**	mg/L	5	11/20/2024 4:18	231194
Lithium	*	0.0030		**0.0062**	mg/L	5	11/20/2024 11:17	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:18	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 4:18	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:24	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-011
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 11/11/2024 11:03

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	11/11/2024 11:03	R356376
Depth to water	*	-5.00		**8.75**	ft	1	11/11/2024 11:03	R356376
Depth to water from measuring point	*	0		**11.45**	ft	1	11/11/2024 11:03	R356376
Elevation of groundwater surface	*	0		**528.05**	ft	1	11/11/2024 11:03	R356376
Measuring Point Elevation	*	0		**539.50**	ft	1	11/11/2024 11:03	R356376
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	11/11/2024 11:03	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**48**	NTU	1	11/11/2024 11:03	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.8**	°F	1	11/11/2024 11:03	R356376
SW-846 9040B								
pH, Field	*	1.00		**7.13**		1	11/11/2024 11:03	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**531**	µmhos/cm @25C	1	11/11/2024 11:03	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**470**	mg/L	2.5	11/14/2024 12:11	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 0:00	R355975
Chloride	NELAP	5.00		**25.1**	mg/L	10	11/13/2024 0:00	R355975
Sulfate	NELAP	10.0		**ND**	mg/L	10	11/13/2024 0:00	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.180**	mg/L	1	11/12/2024 11:03	231044
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 11:03	231044
Boron	NELAP	0.0200		**0.137**	mg/L	1	11/12/2024 11:03	231044
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 11:03	231044
Calcium	NELAP	0.100		**67.2**	mg/L	1	11/12/2024 11:03	231044
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:03	231044
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 11:03	231044
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 11:03	231044
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 11:03	231044
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 22:11	231044
Arsenic	NELAP	0.0010		**0.214**	mg/L	5	11/14/2024 0:51	231044
Lithium	*	0.0030		**0.0047**	mg/L	5	11/14/2024 17:29	231044
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/14/2024 0:51	231044
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/14/2024 17:29	231044
LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/13/2024 0:00	231083
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 24110121
Client Project: FGDS Landfill
Report Date: 09-Dec-24
Lab ID: 24110121-012
Client Sample ID: P07D
Matrix: GROUNDWATER
Collection Date: 11/13/2024 12:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	11/13/2024 12:06	R356376
Depth to water	*	-5.00		**1.37**	ft	1	11/13/2024 12:06	R356376
Depth to water from measuring point	*	0		**4.37**	ft	1	11/13/2024 12:06	R356376
Elevation of groundwater surface	*	0		**523.88**	ft	1	11/13/2024 12:06	R356376
Measuring Point Elevation	*	0		**528.25**	ft	1	11/13/2024 12:06	R356376
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	11/13/2024 12:06	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	11/13/2024 12:06	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.0**	°F	1	11/13/2024 12:06	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	11/13/2024 12:06	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1110**	µmhos/cm @25C	1	11/13/2024 12:06	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50	H	**1020**	mg/L	2.5	11/21/2024 17:12	R356629
Sample analysis did not meet hold time requirements.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 11:37	R356222
Chloride	NELAP	5.00		**32.2**	mg/L	10	11/15/2024 11:37	R356222
Sulfate	NELAP	10.0		**305**	mg/L	10	11/15/2024 11:37	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.857**	mg/L	1	11/18/2024 12:47	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:47	231260
Boron	NELAP	0.0200		**5.40**	mg/L	1	11/18/2024 12:47	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:47	231260
Calcium	NELAP	0.100		**189**	mg/L	1	11/18/2024 12:47	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:47	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:47	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:47	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:47	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:24	231194
Arsenic	NELAP	0.0010		**0.0360**	mg/L	5	11/20/2024 4:24	231194
Lithium	*	0.0030		**0.0095**	mg/L	5	11/20/2024 11:22	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:24	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 4:24	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:27	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 24110121
Report Date: 09-Dec-24

Carrier: Brett Gillihan

Received By: JMD

Completed by: Amber Dilallo
On: 11-Nov-24

Reviewed by: Ellie Hopkins
On: 14-Nov-24

Pages to follow: Chain of custody 4 Extra pages included 42

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	10.9
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice	☐
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐			
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.					
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑		
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑		
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐		
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑		

Any No responses must be detailed below or on the COC.

pH strip #96651. - JD/amberdilallo - 11/11/2024 4:58:57 PM

Samples were received on 11/13/24 at 15:45 on ice [10.5C - LTG#5]. ph strip #96651. Additional nitric acid (100984) was needed for P07D upon arrival at the laboratory.- lhenson - 11/14/2024 8:39:22 AM

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24110124

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [x] ICE [ ] BLUE ICE [ ] NO ICE 10.9 °C S
Preserved in: [ ] LAB [x] FIELD FOR LAB USE ONLY
LAB NOTES: PO# 96057
JD 11/11/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [x] No
Are these samples known to be hazardous? [ ] Yes [x] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [x] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24110120-001

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Brett Gillihan

RESULTS REQUESTED
[x] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110124-001	R101	11-11-24 1026	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111	11/11/24 1129	Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112	11/11/24 1227	Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113	11-11-24 1116	Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121	11-11-24 1330	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122	11-11-24 1410	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1	11-11-24 1206	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3	11-11-24 1103	Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
Brett Gillihan	11-11-24 1610	Jackie Davis	11/11/24 16:10

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24110121

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110121-012	P07D		Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	11-11 / 1610	Jackie Davis	11/11/24 16:10

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 24110124

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 10.5°C 5
Preserved in: [X] ~~LAB~~ [ ] FIELD FOR LAB USE ONLY
LAB NOTES: PtN 96057
added HNO3 (100984) POD LM 11/14/24

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event. 24110120-001

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
TCarroll

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110124-001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110	11/13/24 1024	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120	11/13/24 1118	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2	11/13/24 1238	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	11-13/1545		11/13/24 1545

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 24110121

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No

Are these samples known to be hazardous? ☐ Yes ☑ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE ____ °C

Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY

LAB NOTES:

Client Comments:

*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025

PROJECT NAME/NUMBER

FGDS Landfill

SAMPLE COLLECTOR'S NAME

TCrouch

RESULTS REQUESTED

☑ Standard ☐ 1-2 Day (100% Surcharge)

☐ Other ____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
24110121-012	P07D	11/13/24 1320	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	11-13/1545		11/13/24 1545

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Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: R101
Sample ID: 001
Date (s): 11/11/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 55 °F
Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 10:00
Static Water Level: 7.45 feet below TOC
Total Depth: 35.27 feet below TOC
Water Column: 27.82 feet

Purging Activities

Purged By: BG
Purge Date: 11/11/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 27.82 ft. x 0.022 = 0.61 L x 3 Vol. = 1.83 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear
Odor: Slight
Color: clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:00	0.0	154	purge start time						
10:11	1.7	↓	6.50	1,179.40	13.55	0.97	-8.70	13.48	
10:14	2.2		6.52	1,179.10	13.57	0.92	-6.80	14.93	
10:17	2.6		6.53	1,178.90	13.60	0.88	-10.40	16.39	
10:20	3.1		6.54	1,179.10	13.60	0.87	-15.10	13.59	
10:23	3.5		6.54	1,178.70	13.60	0.85	-19.90	12.12	
10:26	4.0		6.55	1,178.70	13.58	0.84	-24.30	10.74	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/11/2024 10:26
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.55 pH 1,178.70 Spec. Cond. 13.58 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 7.56 feet below TOC Drawdown: 0.11 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/11/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: G110
Sample ID: 002
Date (s): 11/13/2024

Field Team Members

Name: Tracy Carroll — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 48 °F — Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 10:02
Static Water Level: 24.76 feet below TOC
Total Depth: 57.15 feet below TOC
Water Column: 32.39 feet

Purging Activities

Purged By: TC — Purge Date: 11/13/2024
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 32.39 ft. x 0.022 = 0.71 L x 3 Vol. = 2.13 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.50 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:03	0.0	262	purge start time						
10:09	1.6	↓	6.80	606.80	14.25	1.58	-127.50	13.35	
10:12	2.4		6.79	609.30	14.27	1.34	-138.40	14.52	
10:15	3.1		6.76	610.30	14.32	1.19	-143.60	17.07	
10:18	3.9		6.72	613.80	14.39	1.10	-145.80	24.07	
10:21	4.7		6.71	615.10	14.47	1.03	-147.50	37.25	
10:24	5.5		6.70	615.80	14.37	0.97	-148.30	62.27	

Sampling Activities

Sampled By: TC — Sample Date/Time: 11/13/2024 10:24
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.70 pH — 615.80 Spec. Cond. — 14.37 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 24.91 feet below TOC — Drawdown: 0.15 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45720

Form Completed By: Tracy Carroll — **Date:** 11/13/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: R111
Sample ID: 003
Date (s): 11/11/2024

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 53 °F Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 11:02
Static Water Level: 25.24 feet below TOC
Total Depth: 55.75 feet below TOC
Water Column: 30.51 feet

Purging Activities

Purged By: TC Purge Date: 11/11/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 30.51 ft. x 0.022 = 0.67 L x 3 Vol. = 2.01 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:02	0.0	222	purge start time						
11:11	2.0	↓	6.02	1,073.20	14.28	3.04	-1.90	7.77	
11:14	2.7		6.00	1,099.80	14.26	2.68	-6.70	8.75	
11:17	3.4		5.98	1,111.70	14.27	2.44	-9.90	9.68	
11:20	4.0		5.97	1,118.70	14.30	2.26	-12.60	12.64	
11:23	4.7		5.96	1,124.70	14.33	2.13	-14.90	7.74	
11:26	5.4		5.96	1,129.30	14.32	2.02	-17.20	10.77	
11:29	6.0		5.96	1,133.70	14.37	1.93	-19.00	13.81	

Sampling Activities

Sampled By: TC Sample Date/Time: 11/11/2024 11:29
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 5.96 pH 1,133.70 Spec. Cond. 14.37 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 25.38 feet below TOC Drawdown: 0.14 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45720

Form Completed By: Tracy Carroll **Date:** 11/11/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: G112
Sample ID: 004
Date (s): 11/11/2024

Field Team Members

Name: Tracy Carroll — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 55 °F — Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 11:58
Static Water Level: 27.80 feet below TOC
Total Depth: 58.81 feet below TOC
Water Column: 31.01 feet

Purging Activities

Purged By: TC — Purge Date: 11/11/2024
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 31.01 ft. x 0.022 = 0.68 L x 3 Vol. = 2.04 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.00 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:58	0.0	103	purge start time						
12:12	1.4	↓	6.41	1,237.60	16.01	4.01	43.10	4.39	
12:15	1.8		6.32	1,254.40	15.87	3.40	39.00	4.03	
12:18	2.1		6.27	1,258.60	15.88	2.96	35.20	4.59	
12:21	2.4		6.24	1,260.50	15.86	2.69	31.20	4.29	
12:24	2.7		6.22	1,260.40	15.87	2.47	27.30	4.65	
12:27	3.0		6.21	1,260.90	15.89	2.31	23.50	4.70	

Sampling Activities

Sampled By: TC — Sample Date/Time: 11/11/2024 12:27
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.21 pH — 1,260.90 Spec. Cond. — 15.89 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 28.73 feet below TOC — Drawdown: 0.93 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45720

Form Completed By: Tracy Carroll — **Date:** 11/11/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: G113
Sample ID: 005
Date (s): 11/11/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 57 °F
Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 10:51
Static Water Level: 7.67 feet below TOC
Total Depth: 12.85 feet below TOC
Water Column: 5.18 feet

Purging Activities

Purged By: BG
Purge Date: 11/11/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 5.18 ft. x 0.022 = 0.11 L x 3 Vol. = 0.33 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 2.00 L
Physical appearance of purge water: Clear
Odor: None
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:51	0.0	80	purge start time						
11:01	0.8	↓	6.21	960.90	15.47	1.23	-95.10	98.48	
11:04	1.0		6.19	960.90	15.49	1.09	-97.30	35.36	
11:07	1.3		6.17	962.20	15.49	0.96	-100.50	15.18	
11:10	1.5		6.15	966.40	15.54	0.93	-104.00	10.46	
11:13	1.8		6.15	969.80	15.59	0.92	-107.00	8.65	
11:16	2.0		6.14	971.60	15.59	0.89	-108.80	8.40	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/11/2024 11:16
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.14 pH 971.60 Spec. Cond. 15.59 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 8.65 feet below TOC Drawdown: 0.98 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/11/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: G120
Sample ID: 006
Date (s): 11/13/2024

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 49 °F Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 10:57
Static Water Level: 16.72 feet below TOC
Total Depth: 50.37 feet below TOC
Water Column: 33.65 feet

Purging Activities

Purged By: TC Purge Date: 11/13/2024
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 33.65 ft. x 0.022 = 0.74 L x 3 Vol. = 2.22 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 8.00 L
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:57	0.0	381	purge start time						
11:09	4.6	↓	6.55	1,379.10	15.07	0.94	-166.80	19.19	
11:12	5.7		6.55	1,377.70	15.21	0.94	-166.70	20.28	
11:15	6.9		6.55	1,377.10	15.40	0.96	-161.80	26.04	
11:18	8.0		6.55	1,381.20	15.65	0.93	-164.60	29.66	

Sampling Activities

Sampled By: TC Sample Date/Time: 11/13/2024 11:18
Sample Method: Low Flow Sample Equipment: Submersible Pump
Sample Parameters: 6.55 pH 1,381.20 Spec. Cond. 15.65 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 17.38 feet below TOC Drawdown: 0.66 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45720

Form Completed By: Tracy Carroll **Date:** 11/13/2024

Field Data Sheet

Project Name: FGDS Landfill | **Monitoring Point:** G121
Project Location: Springfield, IL | **Sample ID:** 007
W.O. Number (s): 24110121 | **Date (s):** 11/11/2024

Field Team Members

Name: Brett Gillihan | Affiliation: TekLab, Inc.
Name: Danny Crump | Affiliation: TekLab, Inc.

Weather Conditions

Temp: 61 °F | Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy | Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 13:07
Static Water Level: 34.53 feet below TOC
Total Depth: 58.56 feet below TOC
Water Column: 24.03 feet

Purging Activities

Purged By: BG | Purge Date: 11/11/2024
Purge Method: Submersible Pump | Well Diameter: 2"
Purge Volume Calculation (L): 24.03 ft. x 0.022 = 0.53 L x 3 Vol. = 1.59 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Slightly cloudy | Odor: None | Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:07	0.0	304	purge start time						
13:21	4.3	↓	6.77	1,375.80	14.29	0.72	-126.20	21.03	
13:24	5.2		6.76	1,375.00	14.39	0.70	-127.60	16.22	
13:27	6.1		6.75	1,372.30	14.56	0.67	-128.80	14.20	
13:30	7.0		6.75	1,372.70	14.54	0.65	-129.80	12.07	

Sampling Activities

Sampled By: BG | Sample Date/Time: 11/11/2024 13:30
Sample Method: Low Flow | Sample Equipment: Submersible Pump
Sample Parameters: 6.75 pH | 1,372.70 Spec. Cond. | 14.54 Temp
Field Filtered: Yes | Filter Type: Inline Disposable
Water Level: 35.76 feet below TOC | Drawdown: 1.23 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan | **Date:** 11/11/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: G122
Sample ID: 008
Date (s): 11/11/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 62 °F
Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 13:46
Static Water Level: 30.24 feet below TOC
Total Depth: 49.29 feet below TOC
Water Column: 19.05 feet

Purging Activities

Purged By: BG Purge Date: 11/11/2024
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 19.05 ft. x 0.022 = 0.42 L x 3 Vol. = 1.26 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:46	0.0	292	purge start time						
13:58	3.5	↓	6.70	1,560.70	14.16	1.82	-86.50	13.00	
14:01	4.4		6.67	1,573.10	14.21	1.62	-88.90	9.64	
14:04	5.3		6.66	1,583.50	14.16	1.42	-90.70	10.31	
14:07	6.1		6.65	1,589.40	14.13	1.26	-92.60	9.34	
14:10	7.0		6.64	1,593.40	14.13	1.12	-94.50	5.71	

Sampling Activities

Sampled By: BG Sample Date/Time: 11/11/2024 14:10
Sample Method: Low Flow Sample Equipment: Submersible Pump
Sample Parameters: 6.64 pH 1,593.40 Spec. Cond. 14.13 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 31.15 feet below TOC Drawdown: 0.91 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/11/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: AW-1
Sample ID: 009
Date (s): 11/11/2024

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 60 °F
Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 11:39
Static Water Level: 14.54 feet below TOC
Total Depth: 54.81 feet below TOC
Water Column: 40.27 feet

Purging Activities

Purged By: BG
Purge Date: 11/11/2024
Purge Method: Peristaltic Pump
Well Diameter: 2"
Purge Volume Calculation (L): 40.27 ft. x 0.022 = 0.89 L x 3 Vol. = 2.67 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Slightly cloudy
Odor: None
Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:39	0.0	167	purge start time						
11:51	2.0	↓	6.61	1,402.90	15.51	1.63	-108.90	22.99	
11:54	2.5		6.58	1,405.40	15.51	1.47	-108.00	14.38	
11:57	3.0		6.57	1,404.70	15.44	1.35	-107.00	14.62	
12:00	3.5		6.57	1,405.60	15.35	1.24	-106.70	22.00	
12:03	4.0		6.56	1,405.40	15.33	1.15	-106.90	17.79	
12:06	4.5		6.56	1,408.20	15.33	1.08	-107.20	19.26	

Sampling Activities

Sampled By: BG
Sample Date/Time: 11/11/2024 12:06
Sample Method: Low Flow
Sample Equipment: Peristaltic Pump
Sample Parameters: 6.56 pH 1,408.20 Spec. Cond. 15.33 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 15.42 feet below TOC Drawdown: 0.88 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Brett Gillihan **Date:** 11/11/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: AW-2
Sample ID: 010
Date (s): 11/13/2024

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 50 °F Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 12:17
Static Water Level: 4.51 feet below TOC
Total Depth: 32.64 feet below TOC
Water Column: 28.13 feet

Purging Activities

Purged By: TC Purge Date: 11/13/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 28.13 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.50 L
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:22	0.0	344	purge start time						
12:29	2.4	↓	6.74	831.00	14.99	1.22	-161.90	8.74	
12:32	3.4		6.74	831.40	14.97	1.03	-165.70	6.42	
12:35	4.5		6.74	834.50	14.88	0.92	-168.10	5.54	
12:38	5.5		6.73	840.40	14.78	0.84	-169.60	6.63	

Sampling Activities

Sampled By: TC Sample Date/Time: 11/13/2024 12:38
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.73 pH 840.40 Spec. Cond. 14.78 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 4.68 feet below TOC Drawdown: 0.17 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45720

Form Completed By: Tracy Carroll **Date:** 11/13/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: RW-3
Sample ID: 011
Date (s): 11/11/2024

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 56 °F
Wind Direction: ☐ N ☐ S ☐ W ☑ E ☐ SE ☐ SW ☐ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 11/11/2024 10:36
Static Water Level: 11.45 feet below TOC
Total Depth: 44.01 feet below TOC
Water Column: 32.56 feet

Purging Activities

Purged By: JC
Purge Date: 11/11/2024
Purge Method: Bladder Pump
Well Diameter: 2"
Purge Volume Calculation (L): 32.56 ft. x 0.022 = 0.72 L x 3 Vol. = 2.16 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear
Odor: None
Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:37	0.0	173	purge start time						
10:42	0.9	↓	7.12	525.70	14.52	4.56	-168.70	6.48	
10:45	1.4		7.13	532.90	14.51	3.40	-178.00	46.77	
10:48	1.9		7.13	535.30	14.50	2.78	-180.60	90.25	
10:51	2.5		7.13	535.60	14.50	2.41	-181.80	122.85	
10:54	3.0		7.13	535.60	14.47	2.17	-182.50	72.57	
10:57	3.5		7.13	535.40	14.45	1.99	-182.90	112.49	
11:00	4.0		7.13	534.70	14.47	1.87	-183.00	50.61	
11:03	4.5		7.13	531.10	14.90	1.77	-182.40	47.61	

Sampling Activities

Sampled By: JC
Sample Date/Time: 11/11/2024 11:03
Sample Method: Low Flow
Sample Equipment: Bladder Pump
Sample Parameters: 7.13 pH 531.10 Spec. Cond. 14.90 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 15.89 feet below TOC Drawdown: 4.44 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210771
-

Form Completed By: Justin Colp **Date:** 11/11/2024

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 24110121
Monitoring Point: P07D
Sample ID: 012
Date (s): 11/13/2024

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 49 °F Wind Direction: ☐ N ☐ S ☐ W ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 11/13/2024 11:32
Static Water Level: 4.37 feet below TOC
Total Depth: 32.54 feet below TOC
Water Column: 28.17 feet

Purging Activities

Purged By: TC Purge Date: 11/13/2024
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 28.17 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 12.00 L
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:32	0.0	353	purge start time						
11:42	3.5	↓	6.64	1,105.90	13.81	0.90	-170.80	46.43	
11:45	4.6		6.64	1,105.30	13.78	0.76	-173.00	28.62	
11:48	5.6		6.64	1,104.40	13.79	0.68	-174.30	15.93	
11:51	6.7		6.64	1,105.30	13.78	0.60	-176.00	263.87	
11:54	7.8		*Tubing disconnected from flow cell*						
11:57	8.8		6.64	1,105.50	13.72	1.35	-162.50	11.85	
12:00	9.9		6.64	1,105.80	13.77	0.81	-169.30	7.34	
12:03	10.9		6.64	1,106.30	13.90	0.65	-172.60	8.25	
12:06	12.0		6.64	1,106.20	13.88	0.58	-174.30	12.08	

Sampling Activities

Sampled By: TC Sample Date/Time: 11/13/2024 12:06
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.64 pH 1,106.20 Spec. Cond. 13.88 Temp
Field Filtered: No Filter Type:
Water Level: 4.70 feet below TOC Drawdown: 0.33 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45720

Form Completed By: Tracy Carroll **Date:** 11/13/2024

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Website: http://www.settek.com

Case Narrative

WO#: **24111568**
Date: **12/6/2024**

CLIENT: TEKLAB Inc,
Project: 24110121

WorkOrder Narrative:
24111568: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

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Qualifiers and Acronyms

WO#: **24111568**
Date: **12/6/2024**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **24111568**
06-Dec-24

CLIENT: TEKLAB Inc,
Project: 24110121

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
24111568-001	24110121-001		11/11/2024 10:26:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-002	24110121-002		11/13/2024 10:24:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-003	24110121-003		11/11/2024 11:29:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-004	24110121-004		11/11/2024 12:27:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-005	24110121-005		11/11/2024 11:16:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-006	24110121-006		11/13/2024 11:18:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-007	24110121-007		11/11/2024 1:30:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-008	24110121-008		11/11/2024 2:10:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-009	24110121-009		11/11/2024 12:06:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-010	24110121-010		11/11/2024 12:38:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-011	24110121-011		11/11/2024 11:03:00 AM	11/20/2024 1:00:00 PM	Non-Potable Water
24111568-012	24110121-012		11/13/2024 12:06:00 PM	11/20/2024 1:00:00 PM	Non-Potable Water

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DATES REPORT

WO#: **24111568**

06-Dec-24

Client: TEKLAB Inc,
Project: 24110121

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24111568-001A	24110121-001	11/11/2024 10:26:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		11/22/2024 11:34:00 A	11/29/2024 9:41:00 AM
				Radium-228 (EPA 904.0)		11/22/2024 11:34:00 A	11/27/2024 2:09:00 PM
24111568-002A	24110121-002	11/13/2024 10:24:00 AM		Radium-226 (EPA 903.0)		11/22/2024 11:34:00 A	11/29/2024 9:41:00 AM
				Radium-228 (EPA 904.0)		11/22/2024 11:34:00 A	11/27/2024 2:09:00 PM
24111568-003A	24110121-003	11/11/2024 11:29:00 AM		Radium-226 (EPA 903.0)		11/22/2024 11:34:00 A	11/29/2024 9:41:00 AM
				Radium-228 (EPA 904.0)		11/22/2024 11:34:00 A	11/27/2024 2:09:00 PM
24111568-004A	24110121-004	11/11/2024 12:27:00 PM		Radium-226 (EPA 903.0)		11/22/2024 11:34:00 A	11/29/2024 9:41:00 AM
				Radium-228 (EPA 904.0)		11/22/2024 11:34:00 A	11/27/2024 2:09:00 PM
24111568-005A	24110121-005	11/11/2024 11:16:00 AM		Radium-226 (EPA 903.0)		11/22/2024 11:34:00 A	11/29/2024 9:41:00 AM
				Radium-228 (EPA 904.0)		11/22/2024 11:34:00 A	11/27/2024 2:09:00 PM
24111568-006A	24110121-006	11/13/2024 11:18:00 AM		Radium-226 (EPA 903.0)		11/22/2024 11:34:00 A	11/29/2024 9:41:00 AM
				Radium-228 (EPA 904.0)		11/22/2024 11:34:00 A	11/27/2024 2:09:00 PM
24111568-007A	24110121-007	11/11/2024 1:30:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111568-008A	24110121-008	11/11/2024 2:10:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111568-009A	24110121-009	11/11/2024 12:06:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111568-010A	24110121-010	11/11/2024 12:38:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111568-011A	24110121-011	11/11/2024 11:03:00 AM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM
				Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM
24111568-012A	24110121-012	11/13/2024 12:06:00 PM		Radium-226 (EPA 903.0)		11/23/2024 8:45:00 AM	12/4/2024 9:31:52 AM

Original

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DATES REPORT

WO#: **24111568**

06-Dec-24

Client: TEKLAB Inc,

Project: 24110121

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
24111568-012A	24110121-012	11/13/2024 12:06:00 PM	Non-Potable Water	Radium-228 (EPA 904.0)		11/23/2024 8:45:00 AM	12/3/2024 4:29:04 PM

Original

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Analytical Report

(consolidated)

WO#: **24111568**

Date Reported: **12/6/2024**

CLIENT: TEKLAB Inc,
Collection Date: 11/11/2024 12:06:00 PM
Project: 24110121
Lab ID: 24111568-009
Matrix: NON-POTABLE WATER
Client Sample ID: 24110121-009

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **SMZ**
Radium-226	ND	1.00		pCi/L	± 0.240	1	12/4/2024 9:31:52 AM
Yield	0.570					1	12/4/2024 9:31:52 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **SMZ**
Radium-228	1.17	1.00		pCi/L	± 1.12	1	12/3/2024 4:29:04 PM
Yield	0.470					1	12/3/2024 4:29:04 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111568**
06-Dec-24

Client: TEKLAB Inc,
Project: 24110121 **BatchID:** **80533**

Sample ID: **MB-80533**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197941**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E904.0**	**E903-904**	Analysis Date: **11/27/2024**	SeqNo: **5352672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-80533**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197941**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E904.0**	**E903-904**	Analysis Date: **11/27/2024**	SeqNo: **5352673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.41	1.00	5.000	0	68.2	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-80533**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197941**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E904.0**	**E903-904**	Analysis Date: **11/27/2024**	SeqNo: **5352674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.37	1.00	5.000	0	67.4	50	130	3.410	1.18	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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QC SUMMARY REPORT

WO#: **24111568**

06-Dec-24

Client: TEKLAB Inc,
Project: 24110121 **BatchID:** **80533**

Sample ID: **24111225-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197941**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E904.0** **E903-904** Analysis Date: **11/27/2024** SeqNo: **5352689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **24111363-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197941**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E904.0** **E903-904** Analysis Date: **11/27/2024** SeqNo: **5352692**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	1.11	1.00		0	0			0.9300	17.6	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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QC SUMMARY REPORT

WO#: **24111568**

06-Dec-24

Client: TEKLAB Inc,
Project: 24110121 **BatchID:** **80533**

Sample ID: **MB-80533**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197943**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/29/2024**	SeqNo: **5352721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-80533**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197943**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/29/2024**	SeqNo: **5352722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.06	1.00	5.000	0	101	70	130				

Sample ID: **LCSD-80533**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197943**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/29/2024**	SeqNo: **5352723**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.18	1.00	5.000	0	83.6	70	130	5.060	19.0	20	

Sample ID: **24111225-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/22/2024**	RunNo: **197943**
Client ID: **BatchQC**	Batch ID: **80533**	TestNo: **E903.0**	**E903-904**	Analysis Date: **11/29/2024**	SeqNo: **5352733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

SUMMIT ENVIRONMENTAL TECHNOLOGIES, INC
Analytical Laboratories

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111568**

06-Dec-24

Client: TEKLAB Inc,
Project: 24110121 **BatchID:** **80533**

Sample ID: **24111225-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197943**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E903.0** **E903-904** Analysis Date: **11/29/2024** SeqNo: **5352733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **24111363-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/22/2024** RunNo: **197943**
Client ID: **BatchQC** Batch ID: **80533** TestNo: **E903.0** **E903-904** Analysis Date: **11/29/2024** SeqNo: **5352735**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Laboratories

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111568**
06-Dec-24

Client: TEKLAB Inc,
Project: 24110121 **BatchID:** **80535**

Sample ID: **MB-80535** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358242**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-80535** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358243**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.46	1.00	5.000	0	89.2	50	130				
Yield	0.970			0	0						

Sample ID: **LCSD-80535** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	5.32	1.00	5.000	0	106	50	130	4.460	17.6	20	
Yield	0.970			0	0			0.9700	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111568**
06-Dec-24

Client: TEKLAB Inc,
Project: 24110121 **BatchID:** **80535**

Sample ID: **24111317-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358249**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			0.7500	28.6		

Sample ID: **24111607-001DDUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198153**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E904.0** **E903-904** Analysis Date: **12/3/2024** SeqNo: **5358269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	0.910			0	0			1.000	9.42		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Laboratories

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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111568**
06-Dec-24

Client: TEKLAB Inc,
Project: 24110121 **BatchID:** **80535**

Sample ID: **MB-80535**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/23/2024**	RunNo: **198160**
Client ID: **BatchQC**	Batch ID: **80535**	TestNo: **E903.0**	**E903-904**	Analysis Date: **12/4/2024**	SeqNo: **5358431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	0.990										

Sample ID: **LCS-80535**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/23/2024**	RunNo: **198160**
Client ID: **BatchQC**	Batch ID: **80535**	TestNo: **E903.0**	**E903-904**	Analysis Date: **12/4/2024**	SeqNo: **5358432**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.81	1.00	5.000	0	116	70	130				

Sample ID: **LCSD-80535**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/23/2024**	RunNo: **198160**
Client ID: **BatchQC**	Batch ID: **80535**	TestNo: **E903.0**	**E903-904**	Analysis Date: **12/4/2024**	SeqNo: **5358433**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.22	1.00	5.000	0	104	70	130	5.810	10.7	20	

Sample ID: **24111317-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **11/23/2024**	RunNo: **198160**
Client ID: **BatchQC**	Batch ID: **80535**	TestNo: **E903.0**	**E903-904**	Analysis Date: **12/4/2024**	SeqNo: **5358438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **24111568**
06-Dec-24

Client: TEKLAB Inc,
Project: 24110121 **BatchID:** **80535**

Sample ID: **24111317-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198160**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E903.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5358438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							0.8200	19.8	0	

Sample ID: **24111607-001DDUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **11/23/2024** RunNo: **198160**
Client ID: **BatchQC** Batch ID: **80535** TestNo: **E903.0** **E903-904** Analysis Date: **12/4/2024** SeqNo: **5358458**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	0.980							1.000	2.02	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

24111568

Teklab Inc 17.2-0.0= 17.2°C
5445 Horseshoe Lake Road 17.7-0.0= 17.7°C
Collinsville, IL 62234

Cooler Temp: 17.2-17.7°C Sampler: Client QC Level: 2

Fedex, cooler

CS intact 11/18/24

Project# 24110121

Comments: **Please Issue reports and invoices via email only**

Please analyze for Radium 226/228 per your usual methods.

Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site. 24110121-011 report from 24110120-001.

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 37435 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228	CPM	PH
	24110121-001	11/11/24 1026	HNO3	Groundwater	✔	20	1
	24110121-002	11/13/24 1024	HNO3	Groundwater	✔	42	1
	24110121-003	11/11/24 1129	HNO3	Groundwater	✔	32	1
	24110121-004	11/11/24 1227	HNO3	Groundwater	✔	24	1
	24110121-005	11/11/24 1116	HNO3	Groundwater	✔	34	1
	24110121-006	11/13/24 1118	HNO3	Groundwater	✔	32	1
	24110121-007	11/11/24 1330	HNO3	Groundwater	✔	36.	1
	24110121-008	11/11/24 1410	HNO3	Groundwater	✔	22	1
	24110121-009	11/11/24 1206	HNO3	Groundwater	✔	32	1
	24110121-010	11/11/24 1238	HNO3	Groundwater	✔	18	1
	24110121-011	11/11/24 1103	HNO3	Groundwater	✔	Did not receive	

*Relinquished By	Date/Time	Received By	Date/Time
[signature]		[signature]	11/20/24, 1300

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

17.2-0.0 = 17.2c
17.7-0.0 = 17.7c

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Fedex, cooler

Cooler Temp: 17.2-17.7 c Sampler: Client QC Level: 2

CS intact 11/18/24

Project# 24110121

Comments: **Please Issue reports and invoices via email only**

Please analyze for Radium 226/228 per your usual methods.

Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.

Samples collected from an IL site. 24110121-011 report from 24110120-001.

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com

Requested Due Date: Standard TAT Billing/PO: 37435 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228											
						cpm						pCi				
	24110121-012	11/13/24 1206	HNO3	Groundwater	✔	30						1				
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												

*Relinquished By	Date/Time	Received By	Date/Time
Shawn Dilorio			11/20/24, 1300

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

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Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24111568 RcptNo: 1

Logged by:	Anthony W. Britton	11/20/2024 1:00:00 PM	Anthony Britton
Completed By:	Anthony W. Britton	11/21/2024 1:02:25 PM	Anthony Britton
Reviewed By:	Jennifer Woolf	11/26/2024 10:57:53 AM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☑ No ☐ Not Present ☐
   No. Seal Date: 11/18/2024 Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	17.7	Good	Yes		11/18/2024	

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Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 24111568 RcptNo: 1

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	17.2	Good	Yes		11/18/2024	

First Quarter 2025

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 31, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 25020749

Dear Eric Staley:

TEKLAB, INC received 20 samples on 2/21/2025 12:22:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25020749
Report Date: 31-Mar-25

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	26
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25020749

Client Project: Ash Pond Monitoring Wells **Report Date:** 31-Mar-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25020749
Report Date: 31-Mar-25

Cooler Receipt Temp: 9.9 °C

An employee of Teklab, Inc. collected the sample(s).

AP-14 was frozen, no sample collected.

Radium 226/228 analysis was performed by Alliance Technical Group. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

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Springfield, IL 62711-9415
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Email KKlostermann@teklabinc.com

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Lenexa, KS 66214
Phone (913) 541-1998
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Collinsville Air

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Downers Grove, IL 60515
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Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25020749
Report Date: 31-Mar-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 02/18/2025 12:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	02/18/2025 12:00	R360883
Depth to water	*	-5.00		**6.86**	ft	1	02/18/2025 12:00	R360883
Depth to water from measuring point	*	0		**9.56**	ft	1	02/18/2025 12:00	R360883
Elevation of groundwater surface	*	0		**529.94**	ft	1	02/18/2025 12:00	R360883
Measuring Point Elevation	*	0		**539.50**	ft	1	02/18/2025 12:00	R360883
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	02/18/2025 12:00	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**21**	NTU	1	02/18/2025 12:00	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**53.5**	°F	1	02/18/2025 12:00	R360883
SW-846 9040B								
pH, Field	*	1.00		**7.10**		1	02/18/2025 12:00	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**623**	µmhos/cm @25C	1	02/18/2025 12:00	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**372**	mg/L	1.25	02/19/2025 10:55	R360584
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/19/2025 9:38	R360503
Chloride	NELAP	5.00		**25.4**	mg/L	10	02/19/2025 9:38	R360503
Sulfate	NELAP	10.0		**ND**	mg/L	10	02/19/2025 9:38	R360503
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.136**	mg/L	1	02/20/2025 17:08	234945
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 17:08	234945
Boron	NELAP	0.0200		**0.126**	mg/L	1	02/20/2025 17:08	234945
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 17:08	234945
Calcium	NELAP	0.100		**64.5**	mg/L	1	02/24/2025 11:25	234945
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:08	234945
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:08	234945
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 17:08	234945
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 17:08	234945
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:19	234945
Arsenic	NELAP	0.0010		**0.0961**	mg/L	5	02/20/2025 11:19	234945
Lithium	*	0.0030		**0.0047**	mg/L	5	02/24/2025 8:08	234945
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:19	234945
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 11:19	234945
LCS recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/19/2025 11:09	234976
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-002
Client Sample ID: AP-1
Matrix: GROUNDWATER
Collection Date: 02/18/2025 12:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**504.29**	ft	1	02/18/2025 12:38	R360883
Depth to water	*	-5.00		**8.52**	ft	1	02/18/2025 12:38	R360883
Depth to water from measuring point	*	0		**10.79**	ft	1	02/18/2025 12:38	R360883
Elevation of groundwater surface	*	0		**524.58**	ft	1	02/18/2025 12:38	R360883
Measuring Point Elevation	*	0		**535.37**	ft	1	02/18/2025 12:38	R360883
Measuring Point Height Above Land Surface	*	0		**2.27**	ft	1	02/18/2025 12:38	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**17**	NTU	1	02/18/2025 12:38	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.8**	°F	1	02/18/2025 12:38	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.55**		1	02/18/2025 12:38	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1670**	µmhos/cm @25C	1	02/18/2025 12:38	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	33		**1600**	mg/L	1.67	02/19/2025 10:56	R360584
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/19/2025 9:49	R360503
Chloride	NELAP	5.00		**49.3**	mg/L	10	02/19/2025 9:49	R360503
Sulfate	NELAP	10.0		**834**	mg/L	10	02/19/2025 9:49	R360503
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.307**	mg/L	1	02/20/2025 17:09	234945
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 17:09	234945
Boron	NELAP	0.200		**21.7**	mg/L	10	02/25/2025 11:16	234945
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 17:09	234945
Calcium	NELAP	0.100		**245**	mg/L	1	02/24/2025 11:32	234945
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:09	234945
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:09	234945
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 17:09	234945
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 17:09	234945
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:25	234945
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:25	234945
Lithium	*	0.0030		**0.0105**	mg/L	5	02/24/2025 8:14	234945
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:25	234945
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 11:25	234945
LCS recovered outside upper control limitsfor Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/19/2025 11:12	234976
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 02/18/2025 13:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	02/18/2025 13:15	R360883
Depth to water	*	-5.00		**5.37**	ft	1	02/18/2025 13:15	R360883
Depth to water from measuring point	*	0		**7.87**	ft	1	02/18/2025 13:15	R360883
Elevation of groundwater surface	*	0		**528.23**	ft	1	02/18/2025 13:15	R360883
Measuring Point Elevation	*	0		**536.10**	ft	1	02/18/2025 13:15	R360883
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	02/18/2025 13:15	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**25**	NTU	1	02/18/2025 13:15	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**52.3**	°F	1	02/18/2025 13:15	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.44**		1	02/18/2025 13:15	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1250**	µmhos/cm @25C	1	02/18/2025 13:15	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1070**	mg/L	1	02/19/2025 10:57	R360584
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/19/2025 10:01	R360503
Chloride	NELAP	5.00		**35.8**	mg/L	10	02/19/2025 10:01	R360503
Sulfate	NELAP	10.0		**397**	mg/L	10	02/19/2025 10:01	R360503
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0710**	mg/L	1	02/20/2025 17:10	234945
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 17:10	234945
Boron	NELAP	0.0200		**3.53**	mg/L	1	02/20/2025 17:10	234945
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 17:10	234945
Calcium	NELAP	0.100		**198**	mg/L	1	02/24/2025 11:33	234945
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:10	234945
Cobalt	NELAP	0.0050		**0.0140**	mg/L	1	02/24/2025 11:33	234945
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 17:10	234945
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 17:10	234945
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:31	234945
Arsenic	NELAP	0.0010		**0.0022**	mg/L	5	02/20/2025 11:31	234945
Lithium	*	0.0030		**0.0060**	mg/L	5	02/24/2025 8:19	234945
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:31	234945
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 11:31	234945
LCS recovered outside upper control limitsfor Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/19/2025 11:14	234976
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 02/19/2025 11:54

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	02/19/2025 11:54	R360883
Depth to water	*	-5.00		**7.20**	ft	1	02/19/2025 11:54	R360883
Depth to water from measuring point	*	0		**9.75**	ft	1	02/19/2025 11:54	R360883
Elevation of groundwater surface	*	0		**525.50**	ft	1	02/19/2025 11:54	R360883
Measuring Point Elevation	*	0		**535.25**	ft	1	02/19/2025 11:54	R360883
Measuring Point Height Above Land Surface	*	0		**2.55**	ft	1	02/19/2025 11:54	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**61**	NTU	1	02/19/2025 11:54	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**52.1**	°F	1	02/19/2025 11:54	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.54**		1	02/19/2025 11:54	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1270**	µmhos/cm @25C	1	02/19/2025 11:54	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**1150**	mg/L	1.25	02/20/2025 11:38	R360650
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/20/2025 10:28	R360529
Chloride	NELAP	5.00		**61.5**	mg/L	10	02/20/2025 10:28	R360529
Sulfate	NELAP	10.0		**569**	mg/L	10	02/20/2025 10:28	R360529
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.120**	mg/L	1	02/20/2025 16:39	235016
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 16:39	235016
Boron	NELAP	0.0200		**12.1**	mg/L	1	02/20/2025 16:39	235016
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 16:39	235016
Calcium	NELAP	0.100		**168**	mg/L	1	02/24/2025 10:50	235016
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:39	235016
Cobalt	NELAP	0.0050		**0.0057**	mg/L	1	02/20/2025 16:39	235016
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 16:39	235016
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 16:39	235016
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 14:51	235016
Arsenic	NELAP	0.0010		**0.0137**	mg/L	5	02/20/2025 14:51	235016
Lithium	*	0.0030		**0.0052**	mg/L	5	02/20/2025 14:51	235016
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 14:51	235016
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 14:51	235016
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/20/2025 10:35	235028
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-005
Client Sample ID: AP-4
Matrix: GROUNDWATER
Collection Date: 02/18/2025 10:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.19**	ft	1	02/18/2025 10:38	R360883
Depth to water	*	-5.00		**7.54**	ft	1	02/18/2025 10:38	R360883
Depth to water from measuring point	*	0		**10.68**	ft	1	02/18/2025 10:38	R360883
Elevation of groundwater surface	*	0		**544.92**	ft	1	02/18/2025 10:38	R360883
Measuring Point Elevation	*	0		**555.60**	ft	1	02/18/2025 10:38	R360883
Measuring Point Height Above Land Surface	*	0		**3.14**	ft	1	02/18/2025 10:38	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**18**	NTU	1	02/18/2025 10:38	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.8**	°F	1	02/18/2025 10:38	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.78**		1	02/18/2025 10:38	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**786**	µmhos/cm @25C	1	02/18/2025 10:38	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	33		**508**	mg/L	1.67	02/19/2025 10:57	R360584
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/19/2025 10:13	R360503
Chloride	NELAP	5.00		**12.4**	mg/L	10	02/19/2025 10:13	R360503
Sulfate	NELAP	10.0		**ND**	mg/L	10	02/19/2025 10:13	R360503
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.378**	mg/L	1	02/20/2025 17:10	234945
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 17:10	234945
Boron	NELAP	0.0200		**0.0913**	mg/L	1	02/20/2025 17:10	234945
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 17:10	234945
Calcium	NELAP	0.100		**113**	mg/L	1	02/24/2025 11:34	234945
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:10	234945
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:10	234945
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 17:10	234945
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 17:10	234945
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0014**	mg/L	5	02/21/2025 12:06	234945
Arsenic	NELAP	0.0010		**0.0210**	mg/L	5	02/20/2025 11:36	234945
Lithium	*	0.0030		**0.0087**	mg/L	5	02/24/2025 8:25	234945
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:36	234945
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 11:36	234945
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/19/2025 11:16	234976
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-006
Client Sample ID: AP-5
Matrix: GROUNDWATER
Collection Date: 02/18/2025 10:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**552.63**	ft	1	02/18/2025 10:10	R360883
Depth to water	*	-5.00		**12.68**	ft	1	02/18/2025 10:10	R360883
Depth to water from measuring point	*	0		**14.98**	ft	1	02/18/2025 10:10	R360883
Elevation of groundwater surface	*	0		**568.92**	ft	1	02/18/2025 10:10	R360883
Measuring Point Elevation	*	0		**583.90**	ft	1	02/18/2025 10:10	R360883
Measuring Point Height Above Land Surface	*	0		**2.30**	ft	1	02/18/2025 10:10	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.7**	NTU	1	02/18/2025 10:10	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**53.4**	°F	1	02/18/2025 10:10	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.83**		1	02/18/2025 10:10	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**662**	µmhos/cm @25C	1	02/18/2025 10:10	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**474**	mg/L	1	02/19/2025 10:57	R360584
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/19/2025 11:23	R360503
Chloride	NELAP	5.00		**8.40**	mg/L	10	02/19/2025 11:23	R360503
Sulfate	NELAP	10.0		**59.7**	mg/L	10	02/19/2025 11:23	R360503
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0532**	mg/L	1	02/20/2025 17:11	234945
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 17:11	234945
Boron	NELAP	0.0200		**0.0435**	mg/L	1	02/20/2025 17:11	234945
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 17:11	234945
Calcium	NELAP	0.100		**97.3**	mg/L	1	02/24/2025 11:35	234945
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:11	234945
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:11	234945
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 17:11	234945
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 17:11	234945
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:42	234945
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:42	234945
Lithium	*	0.0030		**0.0043**	mg/L	5	02/24/2025 9:56	234945
Selenium	NELAP	0.0010		**0.0011**	mg/L	5	02/20/2025 11:42	234945
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 11:42	234945
LCS recovered outside upper control limitsfor Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/19/2025 11:18	234976
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-007
Client Sample ID: AP-6
Matrix: GROUNDWATER
Collection Date: 02/18/2025 11:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**498.20**	ft	1	02/18/2025 11:32	R360883
Depth to water	*	-5.00		**6.14**	ft	1	02/18/2025 11:32	R360883
Depth to water from measuring point	*	0		**8.56**	ft	1	02/18/2025 11:32	R360883
Elevation of groundwater surface	*	0		**529.26**	ft	1	02/18/2025 11:32	R360883
Measuring Point Elevation	*	0		**537.82**	ft	1	02/18/2025 11:32	R360883
Measuring Point Height Above Land Surface	*	0		**2.42**	ft	1	02/18/2025 11:32	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**7.8**	NTU	1	02/18/2025 11:32	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**52.0**	°F	1	02/18/2025 11:32	R360883
SW-846 9040B								
pH, Field	*	1.00		**7.21**		1	02/18/2025 11:32	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**617**	µmhos/cm @25C	1	02/18/2025 11:32	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**398**	mg/L	1	02/19/2025 10:59	R360584
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**0.54**	mg/L	10	02/19/2025 11:34	R360503
Chloride	NELAP	5.00		**33.0**	mg/L	10	02/19/2025 11:34	R360503
Sulfate	NELAP	10.0		**ND**	mg/L	10	02/19/2025 11:34	R360503
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.137**	mg/L	1	02/20/2025 17:12	234945
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 17:12	234945
Boron	NELAP	0.0200		**0.228**	mg/L	1	02/20/2025 17:12	234945
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 17:12	234945
Calcium	NELAP	0.100		**64.4**	mg/L	1	02/24/2025 11:35	234945
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:12	234945
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:12	234945
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 17:12	234945
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 17:12	234945
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 12:28	234945
Arsenic	NELAP	0.0010		**0.0120**	mg/L	5	02/20/2025 12:28	234945
Lithium	*	0.0030		**0.0063**	mg/L	5	02/24/2025 10:01	234945
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 12:28	234945
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 12:28	234945
LCS recovered outside upper control limitsfor Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/19/2025 11:25	234976
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 02/20/2025 11:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	02/20/2025 11:42	R360883
Depth to water	*	-5.00		**9.26**	ft	1	02/20/2025 11:42	R360883
Depth to water from measuring point	*	0		**11.92**	ft	1	02/20/2025 11:42	R360883
Elevation of groundwater surface	*	0		**527.10**	ft	1	02/20/2025 11:42	R360883
Measuring Point Elevation	*	0		**539.02**	ft	1	02/20/2025 11:42	R360883
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	02/20/2025 11:42	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**50**	NTU	1	02/20/2025 11:42	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**53.5**	°F	1	02/20/2025 11:42	R360883
SW-846 9040B								
pH, Field	*	1.00		**7.38**		1	02/20/2025 11:42	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**795**	µmhos/cm @25C	1	02/20/2025 11:42	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**430**	mg/L	1	02/21/2025 14:52	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 11:39	R360629
Chloride	NELAP	5.00		**51.7**	mg/L	10	02/21/2025 11:39	R360629
Sulfate	NELAP	10.0		**11.6**	mg/L	10	02/21/2025 11:39	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.105**	mg/L	1	02/24/2025 13:34	235068
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 13:34	235068
Boron	NELAP	0.0200		**0.244**	mg/L	1	02/24/2025 13:34	235068
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 13:34	235068
Calcium	NELAP	0.100		**57.6**	mg/L	1	02/24/2025 13:34	235068
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 13:34	235068
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 13:34	235068
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 13:34	235068
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 13:34	235068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:30	235068
Arsenic	NELAP	0.0010		**0.0248**	mg/L	5	02/25/2025 8:04	235068
Lithium	*	0.0030		**0.0056**	mg/L	5	02/25/2025 8:04	235068
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:30	235068
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 11:30	235068
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:12	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 02/19/2025 12:26

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	02/19/2025 12:26	R360883
Depth to water	*	-5.00		**2.61**	ft	1	02/19/2025 12:26	R360883
Depth to water from measuring point	*	0		**5.51**	ft	1	02/19/2025 12:26	R360883
Elevation of groundwater surface	*	0		**531.69**	ft	1	02/19/2025 12:26	R360883
Measuring Point Elevation	*	0		**537.20**	ft	1	02/19/2025 12:26	R360883
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	02/19/2025 12:26	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.2**	NTU	1	02/19/2025 12:26	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**49.2**	°F	1	02/19/2025 12:26	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.89**		1	02/19/2025 12:26	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**850**	µmhos/cm @25C	1	02/19/2025 12:26	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**548**	mg/L	1.25	02/20/2025 11:39	R360650
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/20/2025 10:39	R360529
Chloride	NELAP	5.00		**22.5**	mg/L	10	02/20/2025 10:39	R360529
Sulfate	NELAP	10.0		**ND**	mg/L	10	02/20/2025 10:39	R360529
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.355**	mg/L	1	02/20/2025 16:40	235016
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 16:40	235016
Boron	NELAP	0.0200		**0.0784**	mg/L	1	02/24/2025 10:52	235016
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 16:40	235016
Calcium	NELAP	0.100		**91.3**	mg/L	1	02/24/2025 10:52	235016
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:40	235016
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:40	235016
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 16:40	235016
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 16:40	235016
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 14:57	235016
Arsenic	NELAP	0.0010		**0.0487**	mg/L	5	02/20/2025 14:57	235016
Lithium	*	0.0030		**0.0080**	mg/L	5	02/20/2025 14:57	235016
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 14:57	235016
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 14:57	235016
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/20/2025 10:52	235028
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-010
Client Sample ID: AP-9
Matrix: GROUNDWATER
Collection Date: 02/20/2025 12:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.70**	ft	1	02/20/2025 12:16	R360883
Depth to water	*	-5.00		**10.19**	ft	1	02/20/2025 12:16	R360883
Depth to water from measuring point	*	0		**13.29**	ft	1	02/20/2025 12:16	R360883
Elevation of groundwater surface	*	0		**527.01**	ft	1	02/20/2025 12:16	R360883
Measuring Point Elevation	*	0		**540.30**	ft	1	02/20/2025 12:16	R360883
Measuring Point Height Above Land Surface	*	0		**3.10**	ft	1	02/20/2025 12:16	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**54**	NTU	1	02/20/2025 12:16	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**52.2**	°F	1	02/20/2025 12:16	R360883
SW-846 9040B								
pH, Field	*	1.00		**7.02**		1	02/20/2025 12:16	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1080**	µmhos/cm @25C	1	02/20/2025 12:16	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	200		**880**	mg/L	10	02/21/2025 14:53	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 11:51	R360629
Chloride	NELAP	5.00		**23.5**	mg/L	10	02/21/2025 11:51	R360629
Sulfate	NELAP	10.0		**16.1**	mg/L	10	02/21/2025 11:51	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.431**	mg/L	1	02/24/2025 14:38	235068
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 14:38	235068
Boron	NELAP	0.0200		**0.0874**	mg/L	1	02/24/2025 14:38	235068
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 14:38	235068
Calcium	NELAP	0.100		**98.4**	mg/L	1	02/24/2025 14:38	235068
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:38	235068
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:38	235068
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 14:38	235068
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 14:38	235068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:36	235068
Arsenic	NELAP	0.0010		**0.0023**	mg/L	5	02/25/2025 8:10	235068
Lithium	*	0.0030		**0.0064**	mg/L	5	02/25/2025 8:10	235068
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:36	235068
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 11:36	235068
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:14	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-011
Client Sample ID: AP-10
Matrix: GROUNDWATER
Collection Date: 02/19/2025 12:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**499.43**	ft	1	02/19/2025 12:53	R360883
Depth to water	*	-5.00		**0.94**	ft	1	02/19/2025 12:53	R360883
Depth to water from measuring point	*	0		**4.04**	ft	1	02/19/2025 12:53	R360883
Elevation of groundwater surface	*	0		**533.46**	ft	1	02/19/2025 12:53	R360883
Measuring Point Elevation	*	0		**537.50**	ft	1	02/19/2025 12:53	R360883
Measuring Point Height Above Land Surface	*	0		**3.10**	ft	1	02/19/2025 12:53	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.5**	NTU	1	02/19/2025 12:53	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**49.5**	°F	1	02/19/2025 12:53	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.67**		1	02/19/2025 12:53	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1090**	µmhos/cm @25C	1	02/19/2025 12:53	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**788**	mg/L	1.25	02/20/2025 11:39	R360650
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/20/2025 10:51	R360529
Chloride	NELAP	5.00		**24.4**	mg/L	10	02/20/2025 10:51	R360529
Sulfate	NELAP	10.0		**84.4**	mg/L	10	02/20/2025 10:51	R360529
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.565**	mg/L	1	02/20/2025 16:40	235016
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 16:40	235016
Boron	NELAP	0.0200		**3.36**	mg/L	1	02/20/2025 16:40	235016
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 16:40	235016
Calcium	NELAP	0.100		**127**	mg/L	1	02/24/2025 10:52	235016
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:40	235016
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:40	235016
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 16:40	235016
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 16:40	235016
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 15:03	235016
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 15:03	235016
Lithium	*	0.0030		**0.0082**	mg/L	5	02/20/2025 15:03	235016
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 15:03	235016
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 15:03	235016
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/20/2025 10:54	235028
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-012
Client Sample ID: AP-11
Matrix: GROUNDWATER
Collection Date: 02/20/2025 11:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**515.15**	ft	1	02/20/2025 11:56	R360883
Depth to water	*	-5.00		**12.44**	ft	1	02/20/2025 11:56	R360883
Depth to water from measuring point	*	0		**15.24**	ft	1	02/20/2025 11:56	R360883
Elevation of groundwater surface	*	0		**522.86**	ft	1	02/20/2025 11:56	R360883
Measuring Point Elevation	*	0		**538.10**	ft	1	02/20/2025 11:56	R360883
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	02/20/2025 11:56	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**14**	NTU	1	02/20/2025 11:56	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**48.9**	°F	1	02/20/2025 11:56	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.40**		1	02/20/2025 11:56	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**706**	µmhos/cm @25C	1	02/20/2025 11:56	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**740**	mg/L	1	02/21/2025 14:54	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 12:37	R360629
Chloride	NELAP	5.00		**95.1**	mg/L	10	02/21/2025 12:37	R360629
Sulfate	NELAP	10.0		**65.5**	mg/L	10	02/21/2025 12:37	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.134**	mg/L	1	02/24/2025 14:39	235068
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 14:39	235068
Boron	NELAP	0.0200		**0.221**	mg/L	1	02/24/2025 14:39	235068
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 14:39	235068
Calcium	NELAP	0.100		**135**	mg/L	1	02/24/2025 14:39	235068
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:39	235068
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:39	235068
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 14:39	235068
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 14:39	235068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:41	235068
Arsenic	NELAP	0.0010		**0.0015**	mg/L	5	02/25/2025 8:15	235068
Lithium	*	0.0030		**0.0040**	mg/L	5	02/25/2025 8:15	235068
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:41	235068
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 11:41	235068
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:21	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-013
Client Sample ID: AP-12
Matrix: GROUNDWATER
Collection Date: 02/20/2025 13:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**510.30**	ft	1	02/20/2025 13:06	R360883
Depth to water	*	-5.00		**15.18**	ft	1	02/20/2025 13:06	R360883
Depth to water from measuring point	*	0		**18.08**	ft	1	02/20/2025 13:06	R360883
Elevation of groundwater surface	*	0		**522.62**	ft	1	02/20/2025 13:06	R360883
Measuring Point Elevation	*	0		**540.70**	ft	1	02/20/2025 13:06	R360883
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	02/20/2025 13:06	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.6**	NTU	1	02/20/2025 13:06	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**51.3**	°F	1	02/20/2025 13:06	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.55**		1	02/20/2025 13:06	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1020**	µmhos/cm @25C	1	02/20/2025 13:06	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1250**	mg/L	1	02/21/2025 14:54	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 12:49	R360629
Chloride	NELAP	5.00		**114**	mg/L	10	02/21/2025 12:49	R360629
Sulfate	NELAP	10.0		**433**	mg/L	10	02/21/2025 12:49	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0450**	mg/L	1	02/24/2025 14:41	235068
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 14:41	235068
Boron	NELAP	0.0200		**0.0217**	mg/L	1	02/24/2025 14:41	235068
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 14:41	235068
Calcium	NELAP	0.100		**197**	mg/L	1	02/24/2025 14:41	235068
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:41	235068
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:41	235068
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 14:41	235068
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 14:41	235068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:47	235068
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2025 8:21	235068
Lithium	*	0.0030		**0.0057**	mg/L	5	02/25/2025 8:21	235068
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:47	235068
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 11:47	235068
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:28	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-014
Client Sample ID: AP-13
Matrix: GROUNDWATER
Collection Date: 02/20/2025 13:41

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.00**	ft	1	02/20/2025 13:41	R360883
Depth to water	*	-5.00		**15.04**	ft	1	02/20/2025 13:41	R360883
Depth to water from measuring point	*	0		**18.44**	ft	1	02/20/2025 13:41	R360883
Elevation of groundwater surface	*	0		**523.56**	ft	1	02/20/2025 13:41	R360883
Measuring Point Elevation	*	0		**542.00**	ft	1	02/20/2025 13:41	R360883
Measuring Point Height Above Land Surface	*	0		**3.40**	ft	1	02/20/2025 13:41	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.7**	NTU	1	02/20/2025 13:41	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**50.7**	°F	1	02/20/2025 13:41	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.69**		1	02/20/2025 13:41	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**527**	µmhos/cm @25C	1	02/20/2025 13:41	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	200		**620**	mg/L	10	02/21/2025 14:55	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 13:01	R360629
Chloride	NELAP	5.00		**26.8**	mg/L	10	02/21/2025 13:01	R360629
Sulfate	NELAP	10.0		**94.5**	mg/L	10	02/21/2025 13:01	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.118**	mg/L	1	02/24/2025 14:42	235068
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 14:42	235068
Boron	NELAP	0.0200		**0.0369**	mg/L	1	02/24/2025 14:42	235068
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 14:42	235068
Calcium	NELAP	0.100	S	**101**	mg/L	1	02/24/2025 14:42	235068
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:42	235068
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:42	235068
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 14:42	235068
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 14:42	235068
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 13:26	235068
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2025 8:32	235068
Lithium	*	0.0030		**0.0088**	mg/L	5	02/25/2025 8:32	235068
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 13:26	235068
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 13:26	235068
CCV recovered outside the upper control limits for Se. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:30	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-016
Client Sample ID: T-1
Matrix: GROUNDWATER
Collection Date: 02/20/2025 14:13

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**512.70**	ft	1	02/20/2025 14:13	R360883
Depth to water	*	-5.00		**13.51**	ft	1	02/20/2025 14:13	R360883
Depth to water from measuring point	*	0		**13.84**	ft	1	02/20/2025 14:13	R360883
Elevation of groundwater surface	*	0		**521.81**	ft	1	02/20/2025 14:13	R360883
Measuring Point Elevation	*	0		**535.65**	ft	1	02/20/2025 14:13	R360883
Measuring Point Height Above Land Surface	*	0		**0.33**	ft	1	02/20/2025 14:13	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	02/20/2025 14:13	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**50.6**	°F	1	02/20/2025 14:13	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.59**		1	02/20/2025 14:13	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**955**	µmhos/cm @25C	1	02/20/2025 14:13	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1010**	mg/L	1	02/21/2025 14:56	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 13:36	R360629
Chloride	NELAP	5.00		**220**	mg/L	10	02/21/2025 13:36	R360629
Sulfate	NELAP	10.0		**163**	mg/L	10	02/21/2025 13:36	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0691**	mg/L	1	02/24/2025 10:02	235106
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 10:02	235106
Boron	NELAP	0.0200		**0.170**	mg/L	1	02/24/2025 10:02	235106
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 10:02	235106
Calcium	NELAP	0.100		**157**	mg/L	1	02/24/2025 10:02	235106
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:02	235106
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/25/2025 11:20	235106
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 10:02	235106
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 10:02	235106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 13:09	235106
Arsenic	NELAP	0.0010		**0.0023**	mg/L	5	02/24/2025 13:09	235106
Lithium	*	0.0030		**0.0142**	mg/L	5	02/25/2025 8:27	235106
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2025 8:27	235106
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 13:09	235106
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:32	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-017
Client Sample ID: T-2
Matrix: GROUNDWATER
Collection Date: 02/20/2025 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**515.18**	ft	1	02/20/2025 12:30	R360883
Depth to water	*	-5.00		**23.25**	ft	1	02/20/2025 12:30	R360883
Depth to water from measuring point	*	0		**25.65**	ft	1	02/20/2025 12:30	R360883
Elevation of groundwater surface	*	0		**523.97**	ft	1	02/20/2025 12:30	R360883
Measuring Point Elevation	*	0		**549.62**	ft	1	02/20/2025 12:30	R360883
Measuring Point Height Above Land Surface	*	0		**2.40**	ft	1	02/20/2025 12:30	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**11**	NTU	1	02/20/2025 12:30	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**50.0**	°F	1	02/20/2025 12:30	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.53**		1	02/20/2025 12:30	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1290**	µmhos/cm @25C	1	02/20/2025 12:30	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1270**	mg/L	1	02/21/2025 14:57	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 13:47	R360629
Chloride	NELAP	5.00		**500**	mg/L	10	02/21/2025 13:47	R360629
Sulfate	NELAP	10.0		**135**	mg/L	10	02/21/2025 13:47	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.217**	mg/L	1	02/24/2025 10:02	235106
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 10:02	235106
Boron	NELAP	0.0200		**0.0466**	mg/L	1	02/24/2025 10:02	235106
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 10:02	235106
Calcium	NELAP	0.100		**210**	mg/L	1	02/24/2025 10:02	235106
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:02	235106
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:02	235106
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 10:02	235106
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 10:02	235106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 13:14	235106
Arsenic	NELAP	0.0010		**0.0073**	mg/L	5	02/24/2025 13:14	235106
Lithium	*	0.0030		**0.0314**	mg/L	5	02/25/2025 9:53	235106
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2025 9:53	235106
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 13:14	235106
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:35	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-018
Client Sample ID: T-4
Matrix: GROUNDWATER
Collection Date: 02/19/2025 14:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**521.52**	ft	1	02/19/2025 14:00	R360883
Depth to water	*	-5.00		**16.03**	ft	1	02/19/2025 14:00	R360883
Depth to water from measuring point	*	0		**18.41**	ft	1	02/19/2025 14:00	R360883
Elevation of groundwater surface	*	0		**530.53**	ft	1	02/19/2025 14:00	R360883
Measuring Point Elevation	*	0		**548.94**	ft	1	02/19/2025 14:00	R360883
Measuring Point Height Above Land Surface	*	0		**2.38**	ft	1	02/19/2025 14:00	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**56**	NTU	1	02/19/2025 14:00	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**49.4**	°F	1	02/19/2025 14:00	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	02/19/2025 14:00	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**520**	µmhos/cm @25C	1	02/19/2025 14:00	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**472**	mg/L	1	02/20/2025 11:40	R360650
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/20/2025 11:02	R360529
Chloride	NELAP	5.00		**ND**	mg/L	10	02/20/2025 11:02	R360529
Sulfate	NELAP	10.0		**121**	mg/L	10	02/20/2025 11:02	R360529
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0500**	mg/L	1	02/20/2025 16:41	235016
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 16:41	235016
Boron	NELAP	0.0200		**0.0454**	mg/L	1	02/24/2025 10:54	235016
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 16:41	235016
Calcium	NELAP	0.100		**89.2**	mg/L	1	02/24/2025 10:54	235016
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:41	235016
Cobalt	NELAP	0.0050		**0.0052**	mg/L	1	02/20/2025 16:41	235016
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 16:41	235016
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 16:41	235016
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 15:09	235016
Arsenic	NELAP	0.0010		**0.0049**	mg/L	5	02/20/2025 15:09	235016
Lithium	*	0.0030		**0.0147**	mg/L	5	02/20/2025 15:09	235016
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 15:09	235016
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 15:09	235016
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/20/2025 10:56	235028
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-019
Client Sample ID: T-5
Matrix: GROUNDWATER
Collection Date: 02/19/2025 12:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**518.32**	ft	1	02/19/2025 12:29	R360883
Depth to water	*	-5.00		**5.48**	ft	1	02/19/2025 12:29	R360883
Depth to water from measuring point	*	0		**7.99**	ft	1	02/19/2025 12:29	R360883
Elevation of groundwater surface	*	0		**532.67**	ft	1	02/19/2025 12:29	R360883
Measuring Point Elevation	*	0		**540.66**	ft	1	02/19/2025 12:29	R360883
Measuring Point Height Above Land Surface	*	0		**2.51**	ft	1	02/19/2025 12:29	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.7**	NTU	1	02/19/2025 12:29	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**43.1**	°F	1	02/19/2025 12:29	R360883
SW-846 9040B								
pH, Field	*	1.00		**6.72**		1	02/19/2025 12:29	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**448**	µmhos/cm @25C	1	02/19/2025 12:29	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**374**	mg/L	1	02/20/2025 11:40	R360650
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/20/2025 11:37	R360529
Chloride	NELAP	5.00		**ND**	mg/L	10	02/20/2025 11:37	R360529
Sulfate	NELAP	10.0		**40.7**	mg/L	10	02/20/2025 11:37	R360529
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0535**	mg/L	1	02/20/2025 16:42	235016
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 16:42	235016
Boron	NELAP	0.0200		**0.0608**	mg/L	1	02/20/2025 16:42	235016
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 16:42	235016
Calcium	NELAP	0.100		**70.1**	mg/L	1	02/24/2025 11:08	235016
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:42	235016
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:42	235016
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 16:42	235016
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 16:42	235016
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 15:16	235016
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/21/2025 16:26	235016
Lithium	*	0.0030		**0.0101**	mg/L	5	02/20/2025 15:16	235016
Selenium	NELAP	0.0010		**0.0012**	mg/L	5	02/21/2025 16:26	235016
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 15:16	235016
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/20/2025 10:59	235028
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020749
Client Project: Ash Pond Monitoring Wells
Report Date: 31-Mar-25
Lab ID: 25020749-020
Client Sample ID: T-6
Matrix: GROUNDWATER
Collection Date: 02/19/2025 13:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**494.70**	ft	1	02/19/2025 13:00	R360883
Depth to water	*	-5.00		**7.44**	ft	1	02/19/2025 13:00	R360883
Depth to water from measuring point	*	0		**9.80**	ft	1	02/19/2025 13:00	R360883
Elevation of groundwater surface	*	0		**528.52**	ft	1	02/19/2025 13:00	R360883
Measuring Point Elevation	*	0		**538.32**	ft	1	02/19/2025 13:00	R360883
Measuring Point Height Above Land Surface	*	0		**2.36**	ft	1	02/19/2025 13:00	R360883
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**29**	NTU	1	02/19/2025 13:00	R360883
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**45.9**	°F	1	02/19/2025 13:00	R360883
SW-846 9040B								
pH, Field	*	1.00		**7.30**		1	02/19/2025 13:00	R360883
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**661**	µmhos/cm @25C	1	02/19/2025 13:00	R360883
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**530**	mg/L	1	02/20/2025 11:41	R360650
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/20/2025 11:49	R360529
Chloride	NELAP	5.00		**18.9**	mg/L	10	02/20/2025 11:49	R360529
Sulfate	NELAP	10.0		**ND**	mg/L	10	02/20/2025 11:49	R360529
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.166**	mg/L	1	02/20/2025 16:43	235016
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 16:43	235016
Boron	NELAP	0.0200		**0.187**	mg/L	1	02/20/2025 16:43	235016
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 16:43	235016
Calcium	NELAP	0.100		**82.2**	mg/L	1	02/24/2025 11:08	235016
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:43	235016
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:43	235016
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 16:43	235016
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 16:43	235016
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 16:06	235016
Arsenic	NELAP	0.0010		**0.0037**	mg/L	5	02/20/2025 16:06	235016
Lithium	*	0.0030		**0.0098**	mg/L	5	02/20/2025 16:06	235016
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 16:06	235016
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 16:06	235016
CCV recovered outside the upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/20/2025 11:01	235028
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25020749
Report Date: 31-Mar-25

Carrier: Justin Colp

Received By: AMD

Completed by: Amber Dilallo
On: 18-Feb-25

Reviewed by: Ellie Hopkins
On: 21-Feb-25

Pages to follow: Chain of custody 6 Extra pages included 61

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 9.9
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Samples were received on 2/18/25 at 1500 on ice [9.9, 11.5C - LTG#5]. pH strip #101358. - NR/amberdilallo - 2/18/2025 3:21:57 PM

Samples were received on 2/19/25 at 1550 on ice [6.9C - LTG#9]. pH strip #101358. - CF/amberdilallo - 2/19/2025 4:10:24 PM

Samples were received on 2/20/25 at 15:55 on ice [temp5.5C, 6.7 - LTG#9]. pH# 101358. Added nitric acid (102194) to AP-7 and AP-9. - EK/lhenson - 2/20/2025 4:21:47 PM

Sample AP-14 COC was received on 12/21/25 at 1222. No sample due to location being frozen. - lhenson - 2/21/2025 12:55:27 PM

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25020749

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE #1 9.8 °C #2 11.5 °C AS
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: 10/35-Y 2/18

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25020749-001	RW-3	2-18-25 / 1200	Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1	2-18-25 / 1238	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2	2-18-25 / 1315	Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4	2-18-25 / 1038	Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5	2-18-25 / 1010	Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6	2-18-25 / 1132	Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	2-18-25 1500	[illegible]	2/18/25 1500

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25020749

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 6.9 °C #9
Preserved in: [ ] LAB [X] FIELD
FOR LAB USE ONLY
LAB NOTES: PA✓101358
CF 2/19/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25020749-001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3	2-19-25 / 1154	Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8	2-19-25 / 1226	Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10	2-19-25 / 1253	Groundwater	1	2								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
[signature]	2-19 / 1550	Carli Fenton	2/19/25 15:50

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25020749

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Gip

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25020749-012	AP-11		Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14		Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4	2-1425 / 1400	Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5	2-1425 / 1229	Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6	2-1425 / 1300	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	2-19 / 1550	[signature]	2/19/25 15:00

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25020749

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

5.5

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 6.7 °C (9)
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: Added HNO3 (102194) to AP-7 2 liter and PH/101358 AP-9 2 liter. EK 2/20/2025

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Gdp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25020749-001	RW-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	AP-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	AP-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	AP-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	AP-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	AP-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	AP-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	AP-7	2-20-25 / 1142	Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AP-8		Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AP-9	2-20-25 / 1216	Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	AP-10		Groundwater	1	2								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
[signature]	2-20 / 1555	[signature]	2/20/25 1555

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25020749

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25020749-012	AP-11	2/20/25 1150	Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12	2/20/25 1306	Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13	2/20/25 1341	Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14		Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1	2/20/25 1413	Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2	2/20/25 1230	Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	2-20 / 1555	[signature]	2/20/25 1555

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25020749

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE NA °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25020749-012	AP-11		Groundwater	1	2								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14 NO Sample	2-27-25 / Frozen	Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1 Frozen @ 2-24)		Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
Jeremy Carroll	2/26/25 1222	Emily Kassakoski	2/26/25 1222

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Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: RW-3
Sample ID: 001
Date (s): 2/18/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 8 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	No			

Groundwater Level Measurements

Date/Time Measured: 2/18/2025 11:44
Static Water Level: 9.56 feet below TOC
Total Depth: 44.01 feet below TOC
Water Column: 34.45 feet

Purging Activities

Purged By: JC — Purge Date: 2/18/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 34.45 ft. x 0.022 = 0.76 L x 3 Vol. = 2.28 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: lt brown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:45	0.0	333	purge start time						
11:48	1.0	↓	7.08	616.30	11.66	1.23	-125.20	41.78	
11:51	2.0		7.08	629.50	11.89	0.70	-143.50	48.63	
11:54	3.0		7.09	631.70	11.94	0.58	-151.00	29.58	
11:57	4.0		7.10	629.70	11.94	0.54	-154.20	25.24	
12:00	5.0		7.10	622.80	11.96	0.54	-154.20	20.73	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/18/2025 12:00
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.10 pH — 622.80 Spec. Cond. — 11.96 Temp
Field Filtered: No — Filter Type:
Water Level: 15.15 feet below TOC — Drawdown: 5.59 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/18/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-1
Sample ID: 002
Date (s): 2/18/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 10 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/18/2025 12:18
Static Water Level: 10.79 feet below TOC
Total Depth: 31.08 feet below TOC
Water Column: 20.29 feet

Purging Activities

Purged By: JC — Purge Date: 2/18/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 20.29 ft. x 0.022 = 0.45 L x 3 Vol. = 1.35 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.50 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:18	0.0	325	purge start time						
12:23	1.6	↓	6.54	1,482.30	12.09	1.18	-66.20	25.12	
12:26	2.6		6.53	1,548.60	12.40	0.76	-78.00	22.97	
12:29	3.6		6.53	1,599.00	12.40	0.59	-84.80	28.22	
12:32	4.6		6.54	1,644.70	12.49	0.54	-88.60	24.22	
12:35	5.5		6.55	1,666.90	12.48	0.52	-91.20	21.71	
12:38	6.5		6.55	1,674.70	12.64	0.49	-93.10	16.80	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/18/2025 12:38
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.55 pH — 1,674.70 Spec. Cond. — 12.64 Temp
Field Filtered: No — Filter Type:
Water Level: 11.14 feet below TOC — Drawdown: 0.35 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/18/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-2
Sample ID: 003
Date (s): 2/18/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 11 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/18/2025 12:49
Static Water Level: 7.87 feet below TOC
Total Depth: 21.33 feet below TOC
Water Column: 13.46 feet

Purging Activities

Purged By: JC — Purge Date: 2/18/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 13.46 ft. x 0.022 = 0.3 L x 3 Vol. = 0.9 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 8.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: lt brown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:50	0.0	320	purge start time						
12:57	2.2	↓	6.45	1,232.60	10.86	0.94	6.10	135.27	
13:00	3.2		6.45	1,236.30	10.82	0.78	9.00	86.86	
13:03	4.2		6.44	1,238.60	11.21	0.69	10.50	62.32	
13:06	5.1		6.44	1,238.00	11.62	0.63	11.50	43.73	
13:09	6.1		6.44	1,245.20	11.08	0.60	12.40	32.16	
13:12	7.0		6.44	1,248.50	11.15	0.57	13.10	29.84	
13:15	8.0		6.44	1,254.10	11.29	0.56	13.50	25.46	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/18/2025 13:15
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.44 pH — 1,254.10 Spec. Cond. — 11.29 Temp
Field Filtered: No — Filter Type:
Water Level: 7.94 feet below TOC — Drawdown: 0.07 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/18/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-3
Sample ID: 004
Date (s): 2/19/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 14 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/19/2025 11:09
Static Water Level: 9.75 feet below TOC
Total Depth: 20.80 feet below TOC
Water Column: 11.05 feet

Purging Activities

Purged By: JC — Purge Date: 2/19/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 11.05 ft. x 0.022 = 0.24 L x 3 Vol. = 0.72 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 14.00 L
Physical appearance of purge water: Cloudy — Odor: None — Color: lt brown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:09	0.0	311	purge start time						
11:15	1.9	↓	6.48	1,265.80	11.69	1.24	-23.70	267.20	
11:18	2.8		6.49	1,263.40	11.69	1.17	-33.90	240.68	
11:21	3.7		6.51	1,262.30	11.63	1.16	-43.20	217.87	
11:24	4.7		6.52	1,261.30	11.49	1.11	-48.00	203.38	
11:27	5.6		6.53	1,261.40	11.53	1.02	-51.50	187.54	
11:30	6.5		6.53	1,261.50	11.52	0.96	-52.80	180.34	
11:33	7.5		6.54	1,261.10	11.38	0.92	-54.00	159.27	
11:36	8.4		6.54	1,263.20	11.22	0.88	-53.90	133.35	
11:39	9.3		6.54	1,261.50	11.22	0.85	-55.10	117.37	
11:42	10.3		6.54	1,263.30	11.12	0.81	-56.20	101.61	
11:45	11.2		6.54	1,264.30	11.35	0.78	-56.40	84.49	
11:48	12.1		6.54	1,264.70	11.42	0.75	-56.40	73.00	
11:51	13.1		6.54	1,265.30	11.25	0.73	-56.80	62.82	
11:54	14.0		6.54	1,266.60	11.18	0.70	-57.00	60.69	

Sampled By: JC — Sample Date/Time: 2/19/2025 11:54
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.54 pH — 1,266.60 Spec. Cond. — 11.18 Temp
Field Filtered: No — Filter Type:
Water Level: 9.96 feet below TOC — Drawdown: 0.21 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/19/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-4
Sample ID: 005
Date (s): 2/18/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 7 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	No			

Groundwater Level Measurements

Date/Time Measured: 2/18/2025 10:21
Static Water Level: 10.68 feet below TOC
Total Depth: 60.41 feet below TOC
Water Column: 49.73 feet

Purging Activities

Purged By: JC — Purge Date: 2/18/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 49.73 ft. x 0.022 = 1.09 L x 3 Vol. = 3.27 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:22	0.0	250	purge start time						
10:26	1.0	↓	6.74	776.20	12.00	2.48	-105.00	12.85	
10:29	1.8		6.76	782.80	12.64	1.51	-118.20	16.19	
10:32	2.5		6.77	785.10	12.68	1.20	-123.00	18.55	
10:35	3.3		6.77	787.50	12.80	1.11	-124.60	18.39	
10:38	4.0		6.78	786.10	12.66	1.05	-124.80	18.11	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/18/2025 10:38
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.78 pH — 786.10 Spec. Cond. — 12.66 Temp
Field Filtered: No — Filter Type:
Water Level: 12.75 feet below TOC — Drawdown: 2.07 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/18/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-5
Sample ID: 006
Date (s): 2/18/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 5 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/18/2025 9:48
Static Water Level: 14.98 feet below TOC
Total Depth: 31.27 feet below TOC
Water Column: 16.29 feet

Purging Activities

Purged By: JC — Purge Date: 2/18/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 16.29 ft. x 0.022 = 0.36 L x 3 Vol. = 1.08 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:49	0.0	286	purge start time						
9:55	1.7	↓	6.91	658.60	11.72	4.61	64.20	19.89	
9:58	2.6		6.87	656.90	11.63	3.84	71.90	12.78	
10:01	3.4		6.84	658.50	11.78	3.02	76.70	7.32	
10:04	4.3		6.83	660.70	11.77	2.58	80.10	4.36	
10:07	5.1		6.83	661.30	11.79	2.38	82.50	3.23	
10:10	6.0		6.83	662.20	11.89	2.21	84.40	2.68	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/18/2025 10:10
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.83 pH — 662.20 Spec. Cond. — 11.89 Temp
Field Filtered: No — Filter Type:
Water Level: 18.70 feet below TOC — Drawdown: 3.72 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/18/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-6
Sample ID: 007
Date (s): 2/18/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 8 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	No

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/18/2025 10:56
Static Water Level: 8.56 feet below TOC
Total Depth: 39.62 feet below TOC
Water Column: 31.06 feet

Purging Activities

Purged By: JC — Purge Date: 2/18/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 31.06 ft. x 0.022 = 0.68 L x 3 Vol. = 2.04 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.50 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:56	0.0	208	purge start time						
11:02	1.3	↓	7.20	614.50	9.77	3.90	-73.00	36.81	
11:05	1.9		7.22	615.40	10.12	4.55	-70.70	31.77	
11:08	2.5		7.25	613.60	10.57	4.83	-68.90	25.13	
11:11	3.1		7.25	613.60	10.67	5.01	-67.80	19.54	
11:14	3.8		7.24	613.70	10.75	4.95	-68.90	18.49	
11:17	4.4		7.26	615.30	10.92	5.14	-67.70	14.87	
11:20	5.0		7.26	614.70	10.79	5.17	-68.30	11.14	
11:23	5.6		7.24	615.30	10.85	5.06	-69.90	10.77	
11:26	6.3		7.21	617.30	10.88	4.72	-72.10	9.47	
11:29	6.9		7.21	617.20	10.92	4.60	-73.00	7.96	
11:32	7.5		7.21	617.10	11.11	4.60	-73.40	7.85	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/18/2025 11:32
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.21 pH — 617.10 Spec. Cond. — 11.11 Temp
Field Filtered: No — Filter Type:
Water Level: 16.97 feet below TOC — Drawdown: 8.41 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/18/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-7
Sample ID: 008
Date (s): 2/20/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 9 °F Wind Direction: ☐ N ☐ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 11:15
Static Water Level: 11.92 feet below TOC
Total Depth: 42.52 feet below TOC
Water Column: 30.60 feet

Purging Activities

Purged By: BG Purge Date: 2/20/2025
Purge Method: Bladder Pump Well Diameter: 2"
Purge Volume Calculation (L): 30.6 ft. x 0.022 = 0.67 L x 3 Vol. = 2.01 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:15	0.0	222	purge start time						
11:30	3.3	↓	7.26	872.00	9.78	2.36	-136.10	111.37	
11:33	4.0		7.27	871.80	9.54	2.24	-132.20	42.04	
11:36	4.7		7.29	866.10	8.93	2.21	-127.20	33.54	
11:39	5.3		7.28	856.30	11.88	2.19	-122.30	54.03	
11:42	6.0		7.38	794.90	11.96	2.95	-94.10	49.55	

Sampling Activities

Sampled By: BG Sample Date/Time: 2/20/2025 11:42
Sample Method: Low Flow Sample Equipment: Bladder Pump
Sample Parameters: 7.38 pH 794.90 Spec. Cond. 11.96 Temp
Field Filtered: No Filter Type:
Water Level: 12.31 feet below TOC Drawdown: 0.39 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Brett Gillihan Date: 2/20/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-8
Project Location:	Springfield, IL	**Sample ID:**	009
W.O. Number (s):	25020749	**Date (s):**	2/19/2025

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.

Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 14 °F Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/19/2025 12:06

Static Water Level: 5.51 feet below TOC

Total Depth: 39.60 feet below TOC

Water Column: 34.09 feet

Purging Activities

Purged By: JC Purge Date: 2/19/2025

Purge Method: Peristaltic Pump Well Diameter: 2"

Purge Volume Calculation (L): 34.09 ft. x 0.022 = 0.75 L x 3 Vol. = 2.25 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 4.50 L

Physical appearance of purge water: Clear Odor: None Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:08	0.0	250	purge start time						
12:14	1.5	↓	6.93	838.20	9.24	1.92	-76.40	18.65	
12:17	2.3		6.90	847.00	9.34	1.32	-92.70	12.70	
12:20	3.0		6.90	847.90	9.43	1.11	-101.10	12.19	
12:23	3.8		6.89	848.00	9.30	1.01	-106.00	10.08	
12:26	4.5		6.89	850.10	9.55	0.94	-109.30	8.25	

Sampling Activities

Sampled By: JC Sample Date/Time: 2/19/2025 12:26

Sample Method: Low Flow Sample Equipment: Peristaltic Pump

Sample Parameters: 6.89 pH 850.10 Spec. Cond. 9.55 Temp

Field Filtered: No Filter Type:

Water Level: 5.77 feet below TOC Drawdown: 0.26 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp **Date:** 2/19/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-9
Sample ID: 010
Date (s): 2/20/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 15 °F Wind Direction: ☐ N ☐ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 11:57
Static Water Level: 13.29 feet below TOC
Total Depth: 39.60 feet below TOC
Water Column: 26.31 feet

Purging Activities

Purged By: BG Purge Date: 2/20/2025
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 26.31 ft. x 0.022 = 0.58 L x 3 Vol. = 1.74 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Cloudy Odor: None Color: lt brown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:57	0.0	263	purge start time						
12:04	1.8	↓	6.98	1,096.40	10.34	3.25	-90.70	168.56	
12:07	2.6		6.98	1,098.40	12.29	2.69	-90.80	120.20	
12:10	3.4		7.01	1,091.40	12.02	2.39	-89.30	91.39	
12:13	4.2		7.02	1,092.20	11.18	2.21	-89.00	71.61	
12:16	5.0		7.02	1,081.10	11.21	2.08	-89.50	53.93	

Sampling Activities

Sampled By: DC Sample Date/Time: 2/20/2025 12:16
Sample Method: Low Flow Sample Equipment: Submersible Pump
Sample Parameters: 7.02 pH 1,081.10 Spec. Cond. 11.21 Temp
Field Filtered: No Filter Type:
Water Level: 13.91 feet below TOC Drawdown: 0.62 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Brett Gillihan **Date:** 2/20/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-10
Project Location:	Springfield, IL	**Sample ID:**	011
W.O. Number (s):	25020749	**Date (s):**	2/19/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 14 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/19/2025 12:36

Static Water Level: 4.04 feet below TOC

Total Depth: 38.07 feet below TOC

Water Column: 34.03 feet

Purging Activities

Purged By: JC — Purge Date: 2/19/2025

Purge Method: Peristaltic Pump — Well Diameter: 2"

Purge Volume Calculation (L): 34.03 ft. x 0.022 = 0.75 L x 3 Vol. = 2.25 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 4.00 L

Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:37	0.0	250	purge start time						
12:41	1.0	↓	6.68	1,079.40	9.00	2.66	-72.40	68.13	
12:44	1.8		6.66	1,083.70	9.47	1.66	-79.70	21.50	
12:47	2.5		6.66	1,088.80	9.83	1.43	-83.50	11.10	
12:50	3.3		6.67	1,088.00	9.66	1.32	-85.50	7.80	
12:53	4.0		6.67	1,088.50	9.73	1.26	-86.70	6.46	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/19/2025 12:53

Sample Method: Low Flow — Sample Equipment: Peristaltic Pump

Sample Parameters: 6.67 pH — 1,088.50 Spec. Cond. — 9.73 Temp

Field Filtered: No — Filter Type:

Water Level: 4.29 feet below TOC — Drawdown: 0.25 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/19/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-11
Sample ID: 012
Date (s): 2/20/2025

Field Team Members

Name: Tracy Carroll — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 7 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ EW ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 11:26
Static Water Level: 15.24 feet below TOC
Total Depth: 22.95 feet below TOC
Water Column: 7.71 feet

Purging Activities

Purged By: TC — Purge Date: 2/20/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 7.71 ft. x 0.022 = 0.17 L x 3 Vol. = 0.51 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.00 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:38	0.0	167	purge start time						
11:41	0.5	↓	6.45	724.10	9.45	3.35	78.00	29.66	
11:44	1.0		6.42	707.90	8.95	2.93	75.80	28.00	
11:47	1.5		6.41	709.10	8.94	2.60	70.70	21.52	
11:50	2.0		6.40	707.90	9.17	2.26	54.60	19.19	
11:53	2.5		6.40	707.90	9.51	1.98	32.40	18.77	
11:56	3.0		6.40	706.50	9.41	1.74	16.20	13.71	

Sampling Activities

Sampled By: DC — Sample Date/Time: 2/20/2025 11:56
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.40 pH — 706.50 Spec. Cond. — 9.41 Temp
Field Filtered: No — Filter Type:
Water Level: 15.93 feet below TOC — Drawdown: 0.69 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: — **Date:** 2/20/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-12
Sample ID: 013
Date (s): 2/20/2025

Field Team Members

Name: Tracy Carroll — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 11 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ EW ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 12:44
Static Water Level: 18.08 feet below TOC
Total Depth: 30.40 feet below TOC
Water Column: 12.32 feet

Purging Activities

Purged By: TC — Purge Date: 2/20/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 12.32 ft. x 0.022 = 0.27 L x 3 Vol. = 0.81 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:45	0.0	190	purge start time						
12:57	2.3	↓	6.57	1,024.90	10.79	1.91	-52.60	15.33	
13:00	2.9		6.56	1,024.50	10.74	1.70	-53.80	12.53	
13:03	3.4		6.55	1,022.70	10.66	1.60	-54.60	10.49	
13:06	4.0		6.55	1,022.00	10.72	1.53	-55.20	8.58	

Sampling Activities

Sampled By: DC — Sample Date/Time: 2/20/2025 13:06
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.55 pH — 1,022.00 Spec. Cond. — 10.72 Temp
Field Filtered: No — Filter Type:
Water Level: 19.31 feet below TOC — Drawdown: 1.23 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: [signature] **Date:** 2/20/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-13
Sample ID: 014
Date (s): 2/20/2025

Field Team Members

Name: Tracy Carroll — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 11 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ EW ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 13:14
Static Water Level: 18.44 feet below TOC
Total Depth: 31.00 feet below TOC
Water Column: 12.56 feet

Purging Activities

Purged By: TC — Purge Date: 2/20/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 12.56 ft. x 0.022 = 0.28 L x 3 Vol. = 0.84 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:15	0.0	192	purge start time						
13:29	2.7	↓	6.70	519.20	10.47	2.60	-90.70	38.40	
13:32	3.3		6.70	521.30	10.48	2.46	-91.60	19.92	
13:35	3.8		6.69	521.70	10.58	2.33	-93.50	11.64	
13:38	4.4		6.69	525.80	10.62	2.24	-93.80	23.94	
13:41	5.0		6.69	527.20	10.40	2.20	-94.70	6.69	

Sampling Activities

Sampled By: DC — Sample Date/Time: 2/20/2025 13:41
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.69 pH — 527.20 Spec. Cond. — 10.40 Temp
Field Filtered: No — Filter Type:
Water Level: 19.71 feet below TOC — Drawdown: 1.27 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: — **Date:** 2/20/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: AP-14
Sample ID: 015
Date (s):

Field Team Members

Name: _____ Affiliation: _____
Name: _____ Affiliation: _____

Weather Conditions

Temp: _____ °F Wind Direction: ☐ N ☐ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☐ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad _____
Casing _____
Protective Casing _____
Reference Mark/Identification _____

Locks	Yes	No
Protective Casing		
Well		

Groundwater Level Measurements

Date/Time Measured: _____
Static Water Level: _____ feet below TOC
Total Depth: _____ feet below TOC
Water Column: _____ feet

Purging Activities

Purged By: _____ Purge Date: _____
Purge Method: _____ Well Diameter: _____
Purge Volume Calculation (L): _____
Actual Purge Volume (L): _____
Physical appearance of purge water: _____ Odor: _____ Color: _____

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other

Sampling Activities

Sampled By: _____ Sample Date/Time: _____
Sample Method: _____ Sample Equipment: _____
Sample Parameters: _____ pH _____ Spec. Cond. _____ Temp
Field Filtered: _____ Filter Type: _____
Water Level: _____ feet below TOC Drawdown: _____ feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Well/tubing frozen in place. Unable to sample

Form Completed By: _____ **Date:** _____

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: T-1
Sample ID: 016
Date (s): 2/20/2025

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 11 °F Wind Direction: ☐ N ☐ S ☐ E ☐ EW ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 13:50
Static Water Level: 13.84 feet below TOC
Total Depth: 22.95 feet below TOC
Water Column: 9.11 feet

Purging Activities

Purged By: TC Purge Date: 2/20/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 9.11 ft. x 0.022 = 0.2 L x 3 Vol. = 0.6 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:50	0.0	261	purge start time						
14:01	2.9	↓	6.58	932.50	10.07	3.87	-29.90	19.38	
14:04	3.7		6.58	942.60	10.06	3.84	-26.10	16.97	
14:07	4.4		6.59	948.40	10.12	3.86	-22.90	18.85	
14:10	5.2		6.59	951.80	10.16	3.76	-19.60	13.32	
14:13	6.0		6.59	954.80	10.33	3.89	-16.60	11.88	

Sampling Activities

Sampled By: DC Sample Date/Time: 2/20/2025 14:13
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.59 pH 954.80 Spec. Cond. 10.33 Temp
Field Filtered: No Filter Type:
Water Level: 14.61 feet below TOC Drawdown: 0.77 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Date: 2/20/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: T-2
Sample ID: 017
Date (s): 2/20/2025

Field Team Members

Name: Tracy Carroll — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 11 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 12:10
Static Water Level: 25.65 feet below TOC
Total Depth: 34.44 feet below TOC
Water Column: 8.79 feet

Purging Activities

Purged By: TC — Purge Date: 2/20/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 8.79 ft. x 0.022 = 0.19 L x 3 Vol. = 0.57 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:10	0.0	250	purge start time						
12:15	1.3	↓	6.53	1,306.30	9.67	1.31	-71.60	14.98	
12:18	2.0		6.52	1,299.60	9.79	1.05	-76.50	15.15	
12:21	2.8		6.52	1,297.10	9.93	0.93	-78.10	43.90	
12:24	3.5		6.52	1,297.50	9.95	0.87	-79.70	28.51	
12:27	4.3		6.53	1,297.50	9.86	0.84	-82.50	8.44	
12:30	5.0		6.53	1,294.10	9.98	0.82	-85.80	10.51	

Sampling Activities

Sampled By: DC — Sample Date/Time: 2/20/2025 12:30
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.53 pH — 1,294.10 Spec. Cond. — 9.98 Temp
Field Filtered: No — Filter Type:
Water Level: 27.50 feet below TOC — Drawdown: 1.85 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: [signature] **Date:** 2/20/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: T-4
Sample ID: 018
Date (s): 2/19/2025

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 15 °F Wind Direction: ☑ N ☐ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/19/2025 13:25
Static Water Level: 18.41 feet below TOC
Total Depth: 27.42 feet below TOC
Water Column: 9.01 feet

Purging Activities

Purged By: TC Purge Date: 2/19/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 9.01 ft. x 0.022 = 0.2 L x 3 Vol. = 0.6 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Cloudy Odor: None Color: Grey

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:25	0.0	143	purge start time						
13:48	3.3	↓	6.71	522.80	9.70	1.42	36.90	100.42	
13:51	3.7		6.68	520.60	9.64	1.33	38.80	62.94	
13:54	4.1		6.66	520.40	9.95	1.25	40.30	76.61	
13:57	4.6		6.65	522.30	9.55	1.21	41.80	47.50	
14:00	5.0		6.64	519.80	9.65	1.15	42.60	55.80	

Sampling Activities

Sampled By: DC Sample Date/Time: 2/19/2025 14:00
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.64 pH 519.80 Spec. Cond. 9.65 Temp
Field Filtered: No Filter Type:
Water Level: 19.57 feet below TOC Drawdown: 1.16 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Date: 2/19/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: T-5
Sample ID: 019
Date (s): 2/19/2025

Field Team Members

Name: Tracy Carroll — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 15 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/19/2025 11:50
Static Water Level: 7.99 feet below TOC
Total Depth: 22.34 feet below TOC
Water Column: 14.35 feet

Purging Activities

Purged By: TC — Purge Date: 2/19/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 14.35 ft. x 0.022 = 0.32 L x 3 Vol. = 0.96 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:56	0.0	152	purge start time						
12:17	3.2	↓	6.72	445.60	5.51	4.71	84.60	7.01	
12:20	3.6		6.72	445.40	5.59	4.67	86.90	5.23	
12:23	4.1		6.72	445.80	6.04	4.65	89.10	4.46	
12:26	4.5		6.72	446.60	6.15	4.66	91.10	4.27	
12:29	5.0		6.72	447.50	6.19	4.67	92.90	3.67	

Sampling Activities

Sampled By: DC — Sample Date/Time: 2/19/2025 12:29
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.72 pH — 447.50 Spec. Cond. — 6.19 Temp
Field Filtered: No — Filter Type:
Water Level: 9.83 feet below TOC — Drawdown: 1.84 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: _____ **Date:** 2/19/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25020749
Monitoring Point: T-6
Sample ID: 020
Date (s): 2/19/2025

Field Team Members

Name: Tracy Carroll — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 15 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/19/2025 12:40
Static Water Level: 9.80 feet below TOC
Total Depth: 43.62 feet below TOC
Water Column: 33.82 feet

Purging Activities

Purged By: TC — Purge Date: 2/19/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 33.82 ft. x 0.022 = 0.74 L x 3 Vol. = 2.22 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:40	0.0	225	purge start time						
12:51	2.5	↓	7.29	661.20	7.51	6.82	111.90	68.41	
12:54	3.2		7.30	660.80	7.44	6.90	110.80	47.35	
12:57	3.8		7.30	661.10	7.66	7.00	109.60	36.79	
13:00	4.5		7.30	661.00	7.72	6.98	108.60	28.73	

Sampling Activities

Sampled By: DC — Sample Date/Time: 2/19/2025 13:00
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 7.30 pH — 661.00 Spec. Cond. — 7.72 Temp
Field Filtered: No — Filter Type:
Water Level: 10.50 feet below TOC — Drawdown: 0.70 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: — **Date:** 2/19/2025

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25020749
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 1Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 50115 Technician(s): justin colp Date: 2/18/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230619c	4.00	2/18/25 9:30
7.0 Buffer	wc240913b	7.00	2/18/25 9:26
10.0 Buffer	wc240625b	10.00	2/18/25 9:34
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/18/25 9:42

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.5	2/18/25 9:42
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	2/18/25 9:44	17.5	7.02	1,410	0.51		
CCV-1-JC	CCV	2/18/25 13:20	18.5	7.06	1,423	0.57		

Comments:

Field Meter ID: Pine 50115 Technician(s): justn colp Date: 2/19/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230619c	4.00	2/19/25 10:31
7.0 Buffer	wc240913b	7.00	2/19/25 10:28
10.0 Buffer	wc240625b	10.00	2/19/25 10:36
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/19/25 10:47

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.49	2/19/25 10:53
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-JC	LCS	2/19/25 10:55	9.1	7.01	1,411	0.47		
CCV-2-JC	CCV	2/19/25 14:29	11.1	7.03	1,417	0.56		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25020749
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 1Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 50115 Technician(s): justin colp Date: 2/20/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230619c	4.00	2/20/25 8:56
7.0 Buffer	wc240913b	7.00	2/20/25 8:51
10.0 Buffer	wc240625b	10.00	2/20/25 9:00
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/20/25 9:06

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.5	2/20/25 9:06
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-JC	LCS	2/20/25 9:08	9.3	6.99	1,415	0.5		
CCV-3-JC	CCV	2/20/25 13:42	10.4	7.02	1,426	0.54		

Comments:

Field Meter ID: Pine 50115 Technician(s): justin colp Date: 2/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230619c	4.00	2/21/25 8:41
7.0 Buffer	wc240913b	7.00	2/21/25 8:37
10.0 Buffer	wc240625b	10.00	2/21/25 8:45
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/21/25 8:53

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.6	2/21/25 8:53
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4-JC	LCS	2/21/25 8:55	9.4	7.02	1,413	0.62		
CCV-4-JC	CCV	2/21/25 10:30	9.7	7.02	1,418	0.61		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25020749
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 1Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210756 Technician(s): Tracy Carroll Date: 2/19/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230619C	4.01	2/19/25 11:14
7.0 Buffer	WC240913B	7.00	2/19/25 11:11
10.0 Buffer	WC240625B	10.00	2/19/25 11:19
LCS/CCV (7.0 Buffer)	WC240913C		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/19/25 11:05

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-TC	LCS	2/19/25 11:21	0.3	7.06	1,413			
CCV-1-TC	CCV	2/19/25 14:27	13.7	7.08	1,321			

Comments:

Field Meter ID: Pine 210756 Technician(s): Tracy Carroll Date: 2/20/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230619C	4.00	2/20/25 9:55
7.0 Buffer	WC240913B	7.00	2/20/25 9:49
10.0 Buffer	WC240625B	10.00	2/20/25 10:12
LCS/CCV (7.0 Buffer)	WC240913C		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/20/25 10:13

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-TC	LCS	2/20/25 10:25	0.6	7.09	1,417			
CCV-2-TC	CCV	2/20/25 14:35	0.8	7.09	1,423			

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25020749
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 1Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210756 Technician(s): Tracy Carroll Date: 2/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230619C	4.01	2/21/25 9:29
7.0 Buffer	WC240913B	7.00	2/21/25 9:21
10.0 Buffer	WC240625B	10.00	2/21/25 9:33
LCS/CCV (7.0 Buffer)	WC240913C		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/21/25 9:41

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-TC	LCS	2/21/25 9:44	0.2	7.05	1,415			
CCV-3-TC	CCV	2/21/25 10:46	0.2	7.06	1,404			

Comments:

Alliance Technical Group - Akron
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Website: http://www.settek.com

March 28, 2025

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 25020749

Dear Shelly Hennessy:

Order No.: 25021959

Alliance Technical Group - Akron received 19 sample(s) on 2/27/2025 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **25021959**
Date: **3/28/2025**

CLIENT: TEKLAB Inc,
Project: 25020749

This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Alliance Technical Group Work Order Number assigned to this report.

Alliance Technical Group holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Alliance Technical Group and that of the customer. It cannot be reproduced in any form without the consent of Alliance Technical Group or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Alliance Technical Group is not responsible for use or interpretation of the data included herein.

All results for solid samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Alliance TECHNICAL GROUP

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Qualifiers and Acronyms

WO#: **25021959**
Date: **3/28/2025**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **25021959**
28-Mar-25

CLIENT: TEKLAB Inc,
Project: 25020749

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
25021959-001	25020749-001B		2/18/2025 12:00:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-002	25020749-002B		2/18/2025 12:38:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-003	25020749-003B		2/18/2025 1:15:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-004	25020749-004B		2/19/2025 11:54:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-005	25020749-005B		2/18/2025 10:38:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-006	25020749-006B		2/18/2025 10:10:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-007	25020749-007B		2/18/2025 11:32:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-008	25020749-008B		2/20/2025 11:42:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-009	25020749-009B		2/19/2025 12:26:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-010	25020749-010B		2/20/2025 12:16:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-011	25020749-011B		2/19/2025 12:53:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-012	25020749-012B		2/20/2025 11:56:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-013	25020749-013B		2/20/2025 1:06:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-014	25020749-014B		2/20/2025 1:41:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-015	25020749-016B		2/20/2025 2:13:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-016	25020749-017B		2/20/2025 12:30:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-017	25020749-018B		2/19/2025 2:00:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-018	25020749-019B		2/19/2025 12:29:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25021959-019	25020749-020B		2/19/2025 1:00:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water

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DATES REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
25021959-001A	25020749-001B	2/18/2025 12:00:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-002A	25020749-002B	2/18/2025 12:38:00 PM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-003A	25020749-003B	2/18/2025 1:15:00 PM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-004A	25020749-004B	2/19/2025 11:54:00 AM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-005A	25020749-005B	2/18/2025 10:38:00 AM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-006A	25020749-006B	2/18/2025 10:10:00 AM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-007A	25020749-007B	2/18/2025 11:32:00 AM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-008A	25020749-008B	2/20/2025 11:42:00 AM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-009A	25020749-009B	2/19/2025 12:26:00 PM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-010A	25020749-010B	2/20/2025 12:16:00 PM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-011A	25020749-011B	2/19/2025 12:53:00 PM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-012A	25020749-012B	2/20/2025 11:56:00 AM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM

Original

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TEL: (330) 253-8211 FAX: (330) 253-4489
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DATES REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
25021959-012A	25020749-012B	2/20/2025 11:56:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-013A	25020749-013B	2/20/2025 1:06:00 PM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-014A	25020749-014B	2/20/2025 1:41:00 PM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25021959-015A	25020749-016B	2/20/2025 2:13:00 PM		Radium-226 (EPA 903.0)		3/5/2025 10:47:15 AM	3/26/2025 9:39:00 AM
				Radium-228 (EPA 904.0)		3/5/2025 10:47:15 AM	3/25/2025 2:10:00 PM
25021959-016A	25020749-017B	2/20/2025 12:30:00 PM		Radium-226 (EPA 903.0)		3/5/2025 10:47:15 AM	3/26/2025 9:39:00 AM
				Radium-228 (EPA 904.0)		3/5/2025 10:47:15 AM	3/25/2025 2:10:00 PM
25021959-017A	25020749-018B	2/19/2025 2:00:00 PM		Radium-226 (EPA 903.0)		3/5/2025 10:47:15 AM	3/26/2025 9:39:00 AM
				Radium-228 (EPA 904.0)		3/5/2025 10:47:15 AM	3/25/2025 2:10:00 PM
25021959-018A	25020749-019B	2/19/2025 12:29:00 PM		Radium-226 (EPA 903.0)		3/5/2025 10:47:15 AM	3/26/2025 9:39:00 AM
				Radium-228 (EPA 904.0)		3/5/2025 10:47:15 AM	3/25/2025 2:10:00 PM
25021959-019A	25020749-020B	2/19/2025 1:00:00 PM		Radium-226 (EPA 903.0)		3/5/2025 10:47:15 AM	3/26/2025 9:39:00 AM
				Radium-228 (EPA 904.0)		3/5/2025 10:47:15 AM	3/25/2025 2:10:00 PM

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/18/2025 12:00:00 PM
Project: 25020749
Lab ID: 25021959-001
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-001B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.30		pCi/L	± 0.110	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.30		pCi/L	± 0.440	1	3/26/2025 3:34:00 PM
Yield	0.780					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/18/2025 12:38:00 PM
Project: 25020749
Lab ID: 25021959-002
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-002B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.20		pCi/L	± 0.220	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.20		pCi/L	± 0.380	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/18/2025 1:15:00 PM
Project: 25020749
Lab ID: 25021959-003
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-003B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.30		pCi/L	± 0.100	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.30		pCi/L	± 0.380	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/19/2025 11:54:00 AM
Project: 25020749
Lab ID: 25021959-004
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-004B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.30		pCi/L	± 0.110	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.30		pCi/L	± 0.490	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/18/2025 10:38:00 AM
Project: 25020749
Lab ID: 25021959-005
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-005B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.40		pCi/L	± 0.150	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.40		pCi/L	± 0.410	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/18/2025 10:10:00 AM
Project: 25020749
Lab ID: 25021959-006
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-006B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.40		pCi/L	± 0.110	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.40		pCi/L	± 0.410	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

Alliance Technical Group - Akron
3310 Win St.
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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/18/2025 11:32:00 AM
Project: 25020749
Lab ID: 25021959-007
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-007B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.30		pCi/L	± 0.110	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.30		pCi/L	± 0.680	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 11:42:00 AM
Project: 25020749
Lab ID: 25021959-008
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-008B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.40		pCi/L	± 0.130	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.40		pCi/L	± 0.380	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/19/2025 12:26:00 PM
Project: 25020749
Lab ID: 25021959-009
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-009B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.40		pCi/L	± 0.220	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.40		pCi/L	± 0.570	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 12:16:00 PM
Project: 25020749
Lab ID: 25021959-010
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-010B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.30		pCi/L	± 0.220	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.30		pCi/L	± 0.580	1	3/26/2025 3:34:00 PM
Yield	0.910					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/19/2025 12:53:00 PM
Project: 25020749
Lab ID: 25021959-011
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-011B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.40		pCi/L	± 0.170	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.40		pCi/L	± 0.570	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 11:56:00 AM
Project: 25020749
Lab ID: 25021959-012
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-012B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.50		pCi/L	± 0.140	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.50		pCi/L	± 0.540	1	3/26/2025 3:34:00 PM
Yield	0.780					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 1:06:00 PM
Project: 25020749
Lab ID: 25021959-013
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-013B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.40		pCi/L	± 0.130	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.40		pCi/L	± 0.470	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 1:41:00 PM
Project: 25020749
Lab ID: 25021959-014
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-014B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.50		pCi/L	± 0.160	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.50		pCi/L	± 0.580	1	3/26/2025 3:34:00 PM
Yield	1.00					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 2:13:00 PM
Project: 25020749
Lab ID: 25021959-015
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-016B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.110	1	3/26/2025 9:39:00 AM
Yield	1.00					1	3/26/2025 9:39:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.420	1	3/25/2025 2:10:00 PM
Yield	1.00					1	3/25/2025 2:10:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 12:30:00 PM
Project: 25020749
Lab ID: 25021959-016
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-017B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.180	1	3/26/2025 9:39:00 AM
Yield	1.00					1	3/26/2025 9:39:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.430	1	3/25/2025 2:10:00 PM
Yield	1.00					1	3/25/2025 2:10:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,

Collection Date: 2/19/2025 2:00:00 PM

Project: 25020749

Lab ID: 25021959-017

Matrix: NON-POTABLE WATER

Client Sample ID: 25020749-018B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	1.04	1.00		pCi/L	± 0.250	1	3/26/2025 9:39:00 AM
Yield	1.00					1	3/26/2025 9:39:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	1.56	1.00		pCi/L	± 0.500	1	3/25/2025 2:10:00 PM
Yield	1.00					1	3/25/2025 2:10:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/19/2025 12:29:00 PM
Project: 25020749
Lab ID: 25021959-018
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-019B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.120	1	3/26/2025 9:39:00 AM
Yield	1.00					1	3/26/2025 9:39:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.490	1	3/25/2025 2:10:00 PM
Yield	1.00					1	3/25/2025 2:10:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

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WO#: **25021959**

Date Reported: **3/28/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/19/2025 1:00:00 PM
Project: 25020749
Lab ID: 25021959-019
Matrix: NON-POTABLE WATER
Client Sample ID: 25020749-020B

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.140	1	3/26/2025 9:39:00 AM
Yield	1.00					1	3/26/2025 9:39:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.380	1	3/25/2025 2:10:00 PM
Yield	1.00					1	3/25/2025 2:10:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749 **BatchID:** **82663**

Sample ID: **MB-82663** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-82663** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	6.47	1.00	5.000	0	129	50	130				QLR
Yield	0.580			0	0						

Sample ID: **LCSD-82663** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.45	1.00	5.000	0	89.0	50	130	6.470	37.0	20	R
Yield	1.00			0	0			0.5800	53.2		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
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QC SUMMARY REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749 **BatchID:** **82663**

Sample ID: **25021873-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **25021875-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			1.260	200	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749 **BatchID:** **82663**

Sample ID: **MB-82663**	SampType: **MBLK**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **3/4/2025**	RunNo: **205811**
Client ID: **BatchQC**	Batch ID: **82663**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/27/2025**	SeqNo: **5509528**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-82663**	SampType: **LCS**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **3/4/2025**	RunNo: **205811**
Client ID: **BatchQC**	Batch ID: **82663**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/27/2025**	SeqNo: **5509529**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	3.65	1.00	5.000	0	73.0	70	130				QLR

Sample ID: **LCSD-82663**	SampType: **LCSD**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **3/4/2025**	RunNo: **205811**
Client ID: **BatchQC**	Batch ID: **82663**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/27/2025**	SeqNo: **5509530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.97	1.00	5.000	0	99.4	70	130	3.650	30.6	20	R

Sample ID: **25021873-001ADUP**	SampType: **DUP**	TestCode: **Radium-226_**	Units: **pCi/L**	Prep Date: **3/4/2025**	RunNo: **205811**
Client ID: **BatchQC**	Batch ID: **82663**	TestNo: **E903.0**	**E903-904**	Analysis Date: **3/27/2025**	SeqNo: **5509535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749 **BatchID:** **82663**

Sample ID: **25021873-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205811**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E903.0** **E903-904** Analysis Date: **3/27/2025** SeqNo: **5509535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **25021875-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205811**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E903.0** **E903-904** Analysis Date: **3/27/2025** SeqNo: **5509537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749 **BatchID:** **82683**

Sample ID: **MB-82683** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205677**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E904.0** **E903-904** Analysis Date: **3/25/2025** SeqNo: **5506861**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-82683** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205677**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E904.0** **E903-904** Analysis Date: **3/25/2025** SeqNo: **5506862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.54	1.00	5.000	0	70.8	50	130				
Yield	0.900			0	0						

Sample ID: **LCSD-82683** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205677**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E904.0** **E903-904** Analysis Date: **3/25/2025** SeqNo: **5506863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.35	1.00	5.000	0	67.0	50	130	3.540	5.52	20	
Yield	1.00			0	0			0.9000	10.5		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749 **BatchID:** **82683**

Sample ID: **25030002-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205677**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E904.0** **E903-904** Analysis Date: **3/25/2025** SeqNo: **5506868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **25030004-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205677**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E904.0** **E903-904** Analysis Date: **3/25/2025** SeqNo: **5506870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance TECHNICAL GROUP
25 YEAR ANNIVERSARY
Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25021959**
28-Mar-25

Client: TEKLAB Inc,
Project: 25020749 **BatchID:** **82683**

Sample ID: **MB-82683** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-82683** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.48	1.00	5.000	0	89.6	70	130				

Sample ID: **LCSD-82683** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.61	1.00	5.000	0	92.2	70	130	4.480	2.86	20	

Sample ID: **25030002-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25021959**

28-Mar-25

Client: TEKLAB Inc,
Project: 25020749 **BatchID:** **82683**

Sample ID: **25030002-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **25030004-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Pg 1 of 2 25021959

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: Sampler: Teklab QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for combined Radium 226/228 per your routine method/s.
Method changes require Teklab authorization. Samples collected from an IL site.
Batch QC is required for all analyses requested.

Project# 25020749

Contact: Shelly Hennessy Email: shennessy@teklabinc.com
Requested Due Date: Standard TAT Billing/PO: 37997 Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228											
	25020749-001B	2/18/25 12:00	HNO3	Groundwater	✔	pH	1	CPM	30							
	25020749-002B	2/18/25 12:38	HNO3	Groundwater	✔		1		32							
	25020749-003B	2/18/25 13:15	HNO3	Groundwater	✔		1		36							
	25020749-004B	2/19/25 11:54	HNO3	Groundwater	✔		1		28							
	25020749-005B	2/18/25 10:38	HNO3	Groundwater	✔		1		40							
	25020749-006B	2/18/25 10:10	HNO3	Groundwater	✔		1		33							
	25020749-007B	2/18/25 11:32	HNO3	Groundwater	✔		1		31							
	25020749-008B	2/20/25 11:42	HNO3	Groundwater	✔		1		26							
	25020749-009B	2/19/25 12:26	HNO3	Groundwater	✔		1		23							
	25020749-010B	2/20/25 12:16	HNO3	Groundwater	✔		1		16							
	25020749-011B	2/19/25 12:53	HNO3	Groundwater	✔		1		28							

18.8-0.0=18.8, CS intact 02/25-Feder Box/codes

*Relinquished By	Date/Time	Received By	Date/Time
[signature]		[signature]	02/27/25 1130

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

Pg 2 of 2 25021959

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Teklab | QC Level: 2

Project# 25020749

Comments: **Please Issue reports and invoices via email only**
Please analyze for combined Radium 226/228 per your routine method/s.
Method changes require Teklab authorization. Samples collected from an IL site.
Batch QC is required for all analyses requested.

Contact: Shelly Hennessy | Email: shennessy@teklabinc.com
Requested Due Date: Standard TAT | Billing/PO: 37997 | Phone: (618) 344-1004 ext. 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228												
	25020749-012B	02/20/25 11:56	HNO3	Groundwater	✔	pH	1	CPM		26							
	25020749-013B	02/20/25 13:06	HNO3	Groundwater	✔		1			42							
	25020749-014B	02/20/25 13:41	HNO3	Groundwater	✔		1			30							
	25020749-016B	02/20/25 14:13	HNO3	Groundwater	✔		1			31							
	25020749-017B	02/20/25 12:30	HNO3	Groundwater	✔		1			33							
	25020749-018B	02/19/25 14:00	HNO3	Groundwater	✔		1			50							
	25020749-019B	02/19/25 12:29	HNO3	Groundwater	✔		1			26							
	25020749-020B	02/19/25 13:00	HNO3	Groundwater	✔		1			26							
			HNO3	Groundwater													
			HNO3	Groundwater													
			HNO3	Groundwater													

18.8-0.0=18.8, cs intact 02/25 - Feder Box/Cooler

*Relinquished By	Date/Time	Received By	Date/Time
			02/27/25 1130

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

Alliance Technical Group - Akron
3310 Win Street
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 25021959 RcptNo: 1

Logged by:	Spencer M. Hartwell	2/27/2025 11:30:00 AM	Spencer M. Hartwell
Completed By:	Spencer M. Hartwell	2/28/2025 3:02:15 PM	Spencer M. Hartwell
Reviewed By:	Jennifer Woolf	2/28/2025 3:11:56 PM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☑ No ☐ Not Present ☐
   No. Seal Date: 2/19/2025 Signed By:
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By

Alliance Technical Group - Akron
3310 Win Street
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 25021959 RcptNo: 1

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

April 22, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 25030754

Dear Eric Staley:

TEKLAB, INC received 1 sample on 3/18/2025 3:05:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25030754
Report Date: 22-Apr-25

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	8
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25030754

Client Project: Ash Pond Monitoring Wells **Report Date:** 22-Apr-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25030754
Client Project: Ash Pond Monitoring Wells
Report Date: 22-Apr-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25030754
Report Date: 22-Apr-25

Cooler Receipt Temp: 10.7 °C

An employee of Teklab, Inc. collected the sample(s).

Radium 226/228 analysis was performed by Alliance Technical Group. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25030754
Report Date: 22-Apr-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25030754
Client Project: Ash Pond Monitoring Wells
Report Date: 22-Apr-25
Lab ID: 25030754-001
Client Sample ID: AP-14
Matrix: GROUNDWATER
Collection Date: 03/18/2025 12:17

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	04/18/2025 0:00	R363684
Radium-228	*	0		**See Attached**	pci/L	1	04/18/2025 0:00	R363684

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25030754
Report Date: 22-Apr-25

Carrier: Daniel Crump

Received By: JMD

Completed by: Laura E Henson
On: 18-Mar-25

Reviewed by: Elizabeth A. Hurley
On: 18-Mar-25

Pages to follow: Chain of custody 1 Extra pages included 12

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	10.7
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice	☐
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐			
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.					
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑		
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑		
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐		
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑		

Any No responses must be detailed below or on the COC.

pH strip #101358. - JD/lhenson - 3/18/2025 4:07:28 PM

Additional nitric acid (102194) was needed upon arrival at the laboratory. - JD/lhenson - 3/18/2025 4:07:30 PM

Print PDF

CHAIN OF CUSTODY

Pg __ of __ Workorder # 25030754

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 10.7 °C
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: PH 101358
Added HNO3 (102194) 1/2 JD 3/18/25

Client Comments:
Resample AP14, original WO#25022048.

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Brett Gilliham

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25030754-001	AP-14	3-18-25 1217	Groundwater		2											✓	✓	
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	3-18/1505	[signature]	3/18/25 15:05

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Alliance Technical Group - Akron
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

April 22, 2025

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 25030754

Dear Shelly Hennessy:

Order No.: 25031751

Alliance Technical Group - Akron received 1 sample(s) on 3/21/2025 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Salwa Najjar

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **25031751**
Date: **4/22/2025**

CLIENT: TEKLAB Inc,
Project: 25030754

WorkOrder Narrative:
25031751: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Alliance Technical Group Work Order Number assigned to this report.

Alliance Technical Group holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Alliance Technical Group and that of the customer. It cannot be reproduced in any form without the consent of Alliance Technical Group or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Alliance Technical Group is not responsible for use or interpretation of the data included herein.

All results for solid samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Alliance Technical Group - Akro
3310 Win S
Cuyahoga Falls, Ohio 4422
TEL: (330) 253-8211 FAX: (330) 253-448
Website: http://www.settek.co

Qualifiers and Acronyms

WO#: **25031751**
Date: **4/22/2025**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Website: http://www.settek.com

Workorder Sample Summary

WO#: **25031751**

22-Apr-25

CLIENT: TEKLAB Inc,
Project: 25030754

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
25031751-001	25030754-001		3/18/2025 12:17:00 PM	3/21/2025 12:45:00 PM	Non-Potable Water

Alliance Technical Group - Akron
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Website: http://www.settek.com

DATES REPORT

WO#: **25031751**

22-Apr-25

Client: TEKLAB Inc,
Project: 25030754

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
25031751-001A	25030754-001	3/18/2025 12:17:00 PM	Non-Potable Water	Radium-226 (EPA 903.0)		4/14/2025 4:00:36 PM	4/21/2025 10:58:00 AM
				Radium-228 (EPA 904.0)		4/14/2025 4:00:36 PM	4/18/2025 2:20:00 PM

Original

Alliance Technical Group - Akron
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **25031751**

Date Reported: **4/22/2025**

CLIENT: TEKLAB Inc,
Collection Date: 3/18/2025 12:17:00 PM
Project: 25030754
Lab ID: 25031751-001
Matrix: NON-POTABLE WATER
Client Sample ID: 25030754-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.0600	1	4/21/2025 10:58:00 AM
Yield	1.00					1	4/21/2025 10:58:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.400	1	4/18/2025 2:20:00 PM
Yield	0.980					1	4/18/2025 2:20:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

Original

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25031751**

22-Apr-25

Client: TEKLAB Inc,
Project: 25030754 **BatchID:** **83646**

Sample ID: **MB-83646**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **4/14/2025**	RunNo: **207342**
Client ID: **BatchQC**	Batch ID: **83646**	TestNo: **E904.0**	**E903-904**	Analysis Date: **4/18/2025**	SeqNo: **5548239**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-83646**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **4/14/2025**	RunNo: **207342**
Client ID: **BatchQC**	Batch ID: **83646**	TestNo: **E904.0**	**E903-904**	Analysis Date: **4/18/2025**	SeqNo: **5548240**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.42	1.00	5.000	0	68.4	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-83646**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **4/14/2025**	RunNo: **207342**
Client ID: **BatchQC**	Batch ID: **83646**	TestNo: **E904.0**	**E903-904**	Analysis Date: **4/18/2025**	SeqNo: **5548241**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	2.87	1.00	5.000	0	57.4	50	130	3.420	17.5	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25031751**

22-Apr-25

Client: TEKLAB Inc,
Project: 25030754 **BatchID:** **83646**

Sample ID: **25031742-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **4/14/2025** RunNo: **207342**
Client ID: **BatchQC** Batch ID: **83646** TestNo: **E904.0** **E903-904** Analysis Date: **4/18/2025** SeqNo: **5548246**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	0.800			0	0			0.9800	20.2		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

Alliance TECHNICAL GROUP

Alliance Technical Group - Akron
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Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25031751**

22-Apr-25

Client: TEKLAB Inc,
Project: 25030754 **BatchID:** **83646**

Sample ID: **MB-83646** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/14/2025** RunNo: **207393**
Client ID: **BatchQC** Batch ID: **83646** TestNo: **E903.0** **E903-904** Analysis Date: **4/21/2025** SeqNo: **5549116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-83646** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/14/2025** RunNo: **207393**
Client ID: **BatchQC** Batch ID: **83646** TestNo: **E903.0** **E903-904** Analysis Date: **4/21/2025** SeqNo: **5549117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	3.91	1.00	5.000	0	78.2	70	130				QLR

Sample ID: **LCSD-83646** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/14/2025** RunNo: **207393**
Client ID: **BatchQC** Batch ID: **83646** TestNo: **E903.0** **E903-904** Analysis Date: **4/21/2025** SeqNo: **5549118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.90	1.00	5.000	0	98.0	70	130	3.910	22.5	20	R

Sample ID: **25031742-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/14/2025** RunNo: **207393**
Client ID: **BatchQC** Batch ID: **83646** TestNo: **E903.0** **E903-904** Analysis Date: **4/21/2025** SeqNo: **5549123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25031751**

22-Apr-25

Client: TEKLAB Inc,
Project: 25030754 **BatchID:** **83646**

Sample ID: **25031742-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/14/2025** RunNo: **207393**
Client ID: **BatchQC** Batch ID: **83646** TestNo: **E903.0** **E903-904** Analysis Date: **4/21/2025** SeqNo: **5549123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **25031743-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **4/14/2025** RunNo: **207393**
Client ID: **BatchQC** Batch ID: **83646** TestNo: **E903.0** **E903-904** Analysis Date: **4/21/2025** SeqNo: **5549125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	W	Sample container temperature is out of limit as specified at testcode		

Original

Pg ___ of ___

TEKLAB, INC. Chain of Custody

25031751

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc 18.2-0.0=
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: 18.2 Sampler: teklab employee QC Level: 2

Fedex, cooler CS intact 3/19/25

Project# 25030754

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228.
Method changes require Teklab authorization. Samples collected from an IL site.
Batch QC is required for all analyses requested.

Contact: Shelly Hennessy Email: shennessy@teklabinc.com
Requested Due Date: Standard TAT Billing/PO: 38180 Phone: (618) 344-1004 ex 36

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Ra226/228		CPM				PH					
	25030754-001	3/18/25 12.17	HNO3	Groundwater	✔		24, 34				1, 1					
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Aqueous												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												
			HNO3	Groundwater												

*Relinquished By	Date/Time	Received By	Date/Time
			3/21/25, 1245

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 25031751 RcptNo: 1

Logged by:	Tegan A. Richards	3/21/2025 12:45:00 PM	Tegan Richards
Completed By:	Tegan A. Richards	3/22/2025 4:31:16 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	3/24/2025 12:44:54 PM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☐ No ☑ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☑ No ☐ Not Present ☐
   No. Seal Date: 3/13/2025 Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:
    relinquish time & date not included

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	18.2	Good	Yes		3/19/2025	

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

March 31, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 25020750

Dear Eric Staley:

TEKLAB, INC received 12 samples on 2/21/2025 12:22:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25020750
Report Date: 31-Mar-25

This reporting package includes the following:

Cover Letter	1
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Receiving Check List	19
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25020750

Client Project: FGDS Landfill **Report Date:** 31-Mar-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750

Client Project: FGDS Landfill
Report Date: 31-Mar-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25

Cooler Receipt Temp: 9.9 °C

An employee of Teklab, Inc. collected the sample(s).

Radium 226/228 analysis was performed by Alliance Technical Group. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2025	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 02/21/2025 10:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.53**	ft	1	02/21/2025 10:20	R360884
Depth to water	*	-5.00		**4.09**	ft	1	02/21/2025 10:20	R360884
Depth to water from measuring point	*	0		**6.89**	ft	1	02/21/2025 10:20	R360884
Elevation of groundwater surface	*	0		**539.91**	ft	1	02/21/2025 10:20	R360884
Measuring Point Elevation	*	0		**546.80**	ft	1	02/21/2025 10:20	R360884
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	02/21/2025 10:20	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.1**	NTU	1	02/21/2025 10:20	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**49.0**	°F	1	02/21/2025 10:20	R360884
SW-846 9040B								
pH, Field	*	1.00		**7.07**		1	02/21/2025 10:20	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**680**	µmhos/cm @25C	1	02/21/2025 10:20	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**940**	mg/L	1	02/24/2025 14:54	R360789
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 21:22	R360629
Chloride	NELAP	5.00		**98.4**	mg/L	10	02/21/2025 21:22	R360629
Sulfate	NELAP	10.0		**254**	mg/L	10	02/21/2025 21:22	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0086**	mg/L	1	02/24/2025 10:03	235106
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 10:03	235106
Boron	NELAP	0.0200		**0.125**	mg/L	1	02/24/2025 10:03	235106
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 10:03	235106
Calcium	NELAP	0.100	S	**159**	mg/L	1	02/24/2025 10:03	235106
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:03	235106
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:03	235106
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 10:03	235106
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 10:03	235106
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 14:57	235106
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 14:57	235106
Lithium	*	0.0030		**0.0135**	mg/L	5	02/25/2025 11:22	235106
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2025 11:22	235106
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 14:57	235106
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/25/2025 10:03	235158
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-002
Client Sample ID: G110
Matrix: GROUNDWATER
Collection Date: 02/19/2025 13:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.05**	ft	1	02/19/2025 13:25	R360884
Depth to water	*	-5.00		**21.79**	ft	1	02/19/2025 13:25	R360884
Depth to water from measuring point	*	0		**24.40**	ft	1	02/19/2025 13:25	R360884
Elevation of groundwater surface	*	0		**532.80**	ft	1	02/19/2025 13:25	R360884
Measuring Point Elevation	*	0		**557.20**	ft	1	02/19/2025 13:25	R360884
Measuring Point Height Above Land Surface	*	0		**2.61**	ft	1	02/19/2025 13:25	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.2**	NTU	1	02/19/2025 13:25	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**52.2**	°F	1	02/19/2025 13:25	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.80**		1	02/19/2025 13:25	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**693**	µmhos/cm @25C	1	02/19/2025 13:25	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**465**	mg/L	1.25	02/20/2025 11:41	R360650
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/20/2025 12:01	R360529
Chloride	NELAP	5.00		**5.69**	mg/L	10	02/20/2025 12:01	R360529
Sulfate	NELAP	10.0		**ND**	mg/L	10	02/20/2025 12:01	R360529
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.164**	mg/L	1	02/20/2025 16:47	235016
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 16:47	235016
Boron	NELAP	0.0200		**0.0857**	mg/L	1	02/20/2025 16:47	235016
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 16:47	235016
Calcium	NELAP	0.100		**101**	mg/L	1	02/24/2025 11:09	235016
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:47	235016
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 16:47	235016
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 16:47	235016
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 16:47	235016
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/21/2025 16:32	235016
Arsenic	NELAP	0.0010		**0.0044**	mg/L	5	02/21/2025 16:32	235016
Lithium	*	0.0030		**< 0.0030**	mg/L	5	02/20/2025 15:22	235016
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/21/2025 16:32	235016
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 15:22	235016
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/20/2025 11:03	235028
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-003
Client Sample ID: R111
Matrix: GROUNDWATER
Collection Date: 02/20/2025 11:41

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**498.25**	ft	1	02/20/2025 11:41	R360884
Depth to water	*	-5.00		**25.04**	ft	1	02/20/2025 11:41	R360884
Depth to water from measuring point	*	0		**25.04**	ft	1	02/20/2025 11:41	R360884
Elevation of groundwater surface	*	0		**528.96**	ft	1	02/20/2025 11:41	R360884
Measuring Point Elevation	*	0		**554.00**	ft	1	02/20/2025 11:41	R360884
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	02/20/2025 11:41	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.8**	NTU	1	02/20/2025 11:41	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**46.8**	°F	1	02/20/2025 11:41	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.86**		1	02/20/2025 11:41	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1090**	µmhos/cm @25C	1	02/20/2025 11:41	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	33		**725**	mg/L	1.67	02/21/2025 14:57	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 13:59	R360629
Chloride	NELAP	5.00		**169**	mg/L	10	02/21/2025 13:59	R360629
Sulfate	NELAP	10.0		**24.7**	mg/L	10	02/21/2025 13:59	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.586**	mg/L	1	02/24/2025 14:47	235068
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 14:47	235068
Boron	NELAP	0.0200		**3.09**	mg/L	1	02/24/2025 14:47	235068
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 14:47	235068
Calcium	NELAP	0.100		**148**	mg/L	1	02/24/2025 14:47	235068
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:47	235068
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 14:47	235068
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 14:47	235068
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 14:47	235068
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:52	235068
Arsenic	NELAP	0.0010		**0.0156**	mg/L	5	02/25/2025 10:43	235068
Lithium	*	0.0030		**0.0055**	mg/L	5	02/25/2025 10:43	235068
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:52	235068
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 11:52	235068
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:37	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/25/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-004
Client Sample ID: G112
Matrix: GROUNDWATER
Collection Date: 02/20/2025 12:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.99**	ft	1	02/20/2025 12:55	R360884
Depth to water	*	-5.00		**26.31**	ft	1	02/20/2025 12:55	R360884
Depth to water from measuring point	*	0		**28.49**	ft	1	02/20/2025 12:55	R360884
Elevation of groundwater surface	*	0		**526.31**	ft	1	02/20/2025 12:55	R360884
Measuring Point Elevation	*	0		**554.80**	ft	1	02/20/2025 12:55	R360884
Measuring Point Height Above Land Surface	*	0		**2.18**	ft	1	02/20/2025 12:55	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.8**	NTU	1	02/20/2025 12:55	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**47.6**	°F	1	02/20/2025 12:55	R360884
SW-846 9040B								
pH, Field	*	1.00		**7.07**		1	02/20/2025 12:55	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1360**	µmhos/cm @25C	1	02/20/2025 12:55	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	33		**1360**	mg/L	1.67	02/21/2025 14:57	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 14:11	R360629
Chloride	NELAP	5.00		**192**	mg/L	10	02/21/2025 14:11	R360629
Sulfate	NELAP	10.0		**227**	mg/L	10	02/21/2025 14:11	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.453**	mg/L	1	02/24/2025 11:11	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:11	235055
Boron	NELAP	0.0200		**0.459**	mg/L	1	02/24/2025 11:11	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:11	235055
Calcium	NELAP	0.100		**223**	mg/L	1	02/24/2025 11:11	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:11	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:11	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:11	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:11	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:07	235055
Arsenic	NELAP	0.0010		**0.0010**	mg/L	5	02/25/2025 11:00	235055
Lithium	*	0.0030		**0.0322**	mg/L	5	02/24/2025 10:07	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:07	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 11:00	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:39	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-005
Client Sample ID: G113
Matrix: GROUNDWATER
Collection Date: 02/21/2025 9:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**524.85**	ft	1	02/21/2025 9:42	R360884
Depth to water	*	-5.00		**2.51**	ft	1	02/21/2025 9:42	R360884
Depth to water from measuring point	*	0		**5.01**	ft	1	02/21/2025 9:42	R360884
Elevation of groundwater surface	*	0		**532.69**	ft	1	02/21/2025 9:42	R360884
Measuring Point Elevation	*	0		**537.70**	ft	1	02/21/2025 9:42	R360884
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	02/21/2025 9:42	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**68**	NTU	1	02/21/2025 9:42	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**41.0**	°F	1	02/21/2025 9:42	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.40**		1	02/21/2025 9:42	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1690**	µmhos/cm @25C	1	02/21/2025 9:42	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1390**	mg/L	1	02/24/2025 14:56	R360789
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 21:34	R360629
Chloride	NELAP	5.00		**59.2**	mg/L	10	02/21/2025 21:34	R360629
Sulfate	NELAP	10.0		**151**	mg/L	10	02/21/2025 21:34	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.330**	mg/L	1	02/24/2025 10:05	235106
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 10:05	235106
Boron	NELAP	0.0200		**0.968**	mg/L	1	02/24/2025 10:05	235106
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 10:05	235106
Calcium	NELAP	0.100		**337**	mg/L	1	02/24/2025 10:05	235106
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:05	235106
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:05	235106
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 10:05	235106
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 10:05	235106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 13:20	235106
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 13:20	235106
Lithium	*	0.0030		**0.0031**	mg/L	5	02/25/2025 10:48	235106
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2025 10:48	235106
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 13:20	235106
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/25/2025 10:05	235158
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-006
Client Sample ID: G120
Matrix: GROUNDWATER
Collection Date: 02/21/2025 9:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**502.73**	ft	1	02/21/2025 9:36	R360884
Depth to water	*	-5.00		**15.89**	ft	1	02/21/2025 9:36	R360884
Depth to water from measuring point	*	0		**15.89**	ft	1	02/21/2025 9:36	R360884
Elevation of groundwater surface	*	0		**537.21**	ft	1	02/21/2025 9:36	R360884
Measuring Point Elevation	*	0		**553.10**	ft	1	02/21/2025 9:36	R360884
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	02/21/2025 9:36	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**17**	NTU	1	02/21/2025 9:36	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.8**	°F	1	02/21/2025 9:36	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.66**		1	02/21/2025 9:36	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1910**	µmhos/cm @25C	1	02/21/2025 9:36	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1400**	mg/L	2.5	02/24/2025 14:57	R360789
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 21:46	R360629
Chloride	NELAP	5.00		**35.2**	mg/L	10	02/21/2025 21:46	R360629
Sulfate	NELAP	10.0		**548**	mg/L	10	02/21/2025 21:46	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.708**	mg/L	1	02/24/2025 10:06	235106
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 10:06	235106
Boron	NELAP	0.0200		**7.50**	mg/L	1	02/24/2025 10:06	235106
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 10:06	235106
Calcium	NELAP	0.100		**249**	mg/L	1	02/24/2025 10:06	235106
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:06	235106
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 10:06	235106
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 10:06	235106
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 10:06	235106
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 14:17	235106
Arsenic	NELAP	0.0010		**0.0113**	mg/L	5	02/24/2025 14:17	235106
Lithium	*	0.0030		**0.0076**	mg/L	5	02/25/2025 10:54	235106
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/25/2025 10:54	235106
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/24/2025 14:17	235106
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/25/2025 10:07	235158
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-007
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 02/20/2025 13:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	02/20/2025 13:25	R360884
Depth to water	*	-5.00		**26.38**	ft	1	02/20/2025 13:25	R360884
Depth to water from measuring point	*	0		**28.25**	ft	1	02/20/2025 13:25	R360884
Elevation of groundwater surface	*	0		**527.35**	ft	1	02/20/2025 13:25	R360884
Measuring Point Elevation	*	0		**555.60**	ft	1	02/20/2025 13:25	R360884
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	02/20/2025 13:25	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**30**	NTU	1	02/20/2025 13:25	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.8**	°F	1	02/20/2025 13:25	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.95**		1	02/20/2025 13:25	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1570**	µmhos/cm @25C	1	02/20/2025 13:25	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	200		**1240**	mg/L	10	02/21/2025 14:58	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 14:22	R360629
Chloride	NELAP	5.00		**28.0**	mg/L	10	02/21/2025 14:22	R360629
Sulfate	NELAP	10.0		**314**	mg/L	10	02/21/2025 14:22	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.560**	mg/L	1	02/24/2025 11:12	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:12	235055
Boron	NELAP	0.0200		**3.54**	mg/L	1	02/24/2025 11:12	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:12	235055
Calcium	NELAP	0.100		**169**	mg/L	1	02/24/2025 11:12	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:12	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:12	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:12	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:12	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:13	235055
Arsenic	NELAP	0.0010		**0.0169**	mg/L	5	02/25/2025 11:05	235055
Lithium	*	0.0030		**0.0080**	mg/L	5	02/24/2025 10:13	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:13	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 11:05	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:41	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-008
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 02/20/2025 13:39

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**505.11**	ft	1	02/20/2025 13:39	R360884
Depth to water	*	-5.00		**27.98**	ft	1	02/20/2025 13:39	R360884
Depth to water from measuring point	*	0		**29.72**	ft	1	02/20/2025 13:39	R360884
Elevation of groundwater surface	*	0		**524.68**	ft	1	02/20/2025 13:39	R360884
Measuring Point Elevation	*	0		**554.40**	ft	1	02/20/2025 13:39	R360884
Measuring Point Height Above Land Surface	*	0		**1.74**	ft	1	02/20/2025 13:39	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**14**	NTU	1	02/20/2025 13:39	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**50.2**	°F	1	02/20/2025 13:39	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.75**		1	02/20/2025 13:39	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1420**	µmhos/cm @25C	1	02/20/2025 13:39	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**1320**	mg/L	1.25	02/21/2025 14:59	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 15:09	R360629
Chloride	NELAP	5.00		**35.0**	mg/L	10	02/21/2025 15:09	R360629
Sulfate	NELAP	10.0		**510**	mg/L	10	02/21/2025 15:09	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.220**	mg/L	1	02/24/2025 11:13	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:13	235055
Boron	NELAP	0.0200		**10.3**	mg/L	1	02/24/2025 11:13	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:13	235055
Calcium	NELAP	0.100		**220**	mg/L	1	02/24/2025 11:13	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:13	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:13	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:13	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:13	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:18	235055
Arsenic	NELAP	0.0010		**0.0010**	mg/L	5	02/25/2025 11:11	235055
Lithium	*	0.0030		**0.0091**	mg/L	5	02/24/2025 10:18	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:18	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 11:11	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:44	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 02/20/2025 12:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	02/20/2025 12:21	R360884
Depth to water	*	-5.00		**10.70**	ft	1	02/20/2025 12:21	R360884
Depth to water from measuring point	*	0		**13.45**	ft	1	02/20/2025 12:21	R360884
Elevation of groundwater surface	*	0		**542.15**	ft	1	02/20/2025 12:21	R360884
Measuring Point Elevation	*	0		**555.60**	ft	1	02/20/2025 12:21	R360884
Measuring Point Height Above Land Surface	*	0		**2.75**	ft	1	02/20/2025 12:21	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.4**	NTU	1	02/20/2025 12:21	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**48.2**	°F	1	02/20/2025 12:21	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	02/20/2025 12:21	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1310**	µmhos/cm @25C	1	02/20/2025 12:21	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1110**	mg/L	2.5	02/21/2025 14:59	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 15:21	R360629
Chloride	NELAP	5.00		**35.4**	mg/L	10	02/21/2025 15:21	R360629
Sulfate	NELAP	10.0		**374**	mg/L	10	02/21/2025 15:21	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.486**	mg/L	1	02/24/2025 11:14	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:14	235055
Boron	NELAP	0.0200		**8.79**	mg/L	1	02/24/2025 11:14	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:14	235055
Calcium	NELAP	0.100		**186**	mg/L	1	02/24/2025 11:14	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:14	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:14	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:14	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:14	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:24	235055
Arsenic	NELAP	0.0010		**0.146**	mg/L	5	02/25/2025 11:17	235055
Lithium	*	0.0030		**0.0108**	mg/L	5	02/24/2025 10:24	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:24	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 11:17	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020	S	**< 0.00020**	mg/L	1	02/21/2025 14:46	235075
Matrix spike did not recover within control limits due to matrix interference. Verified by bench spike.								
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-010
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 02/20/2025 10:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	02/20/2025 10:18	R360884
Depth to water	*	-5.00		**1.23**	ft	1	02/20/2025 10:18	R360884
Depth to water from measuring point	*	0		**4.53**	ft	1	02/20/2025 10:18	R360884
Elevation of groundwater surface	*	0		**525.45**	ft	1	02/20/2025 10:18	R360884
Measuring Point Elevation	*	0		**529.98**	ft	1	02/20/2025 10:18	R360884
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	02/20/2025 10:18	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**18**	NTU	1	02/20/2025 10:18	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**41.9**	°F	1	02/20/2025 10:18	R360884
SW-846 9040B								
pH, Field	*	1.00		**7.05**		1	02/20/2025 10:18	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**764**	µmhos/cm @25C	1	02/20/2025 10:18	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**588**	mg/L	1	02/21/2025 15:00	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 15:32	R360629
Chloride	NELAP	5.00		**19.5**	mg/L	10	02/21/2025 15:32	R360629
Sulfate	NELAP	10.0		**53.7**	mg/L	10	02/21/2025 15:32	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.283**	mg/L	1	02/24/2025 11:19	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:19	235055
Boron	NELAP	0.0200		**1.48**	mg/L	1	02/24/2025 11:19	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:19	235055
Calcium	NELAP	0.100		**111**	mg/L	1	02/24/2025 11:19	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:19	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:19	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:19	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:19	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:02	235055
Arsenic	NELAP	0.0010		**0.0017**	mg/L	5	02/25/2025 12:25	235055
Lithium	*	0.0030		**0.0051**	mg/L	5	02/25/2025 12:25	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:02	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 12:25	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:58	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-011
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 02/18/2025 12:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	02/18/2025 12:00	R360884
Depth to water	*	-5.00		**6.86**	ft	1	02/18/2025 12:00	R360884
Depth to water from measuring point	*	0		**9.56**	ft	1	02/18/2025 12:00	R360884
Elevation of groundwater surface	*	0		**529.94**	ft	1	02/18/2025 12:00	R360884
Measuring Point Elevation	*	0		**539.50**	ft	1	02/18/2025 12:00	R360884
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	02/18/2025 12:00	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**21**	NTU	1	02/18/2025 12:00	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**53.5**	°F	1	02/18/2025 12:00	R360884
SW-846 9040B								
pH, Field	*	1.00		**7.10**		1	02/18/2025 12:00	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**623**	µmhos/cm @25C	1	02/18/2025 12:00	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**372**	mg/L	1.25	02/19/2025 10:55	R360584
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/19/2025 0:00	R360503
Chloride	NELAP	5.00		**25.4**	mg/L	10	02/19/2025 0:00	R360503
Sulfate	NELAP	10.0		**ND**	mg/L	10	02/19/2025 0:00	R360503
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.136**	mg/L	1	02/20/2025 17:08	234945
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/20/2025 17:08	234945
Boron	NELAP	0.0200		**0.126**	mg/L	1	02/20/2025 17:08	234945
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/20/2025 17:08	234945
Calcium	NELAP	0.100		**64.5**	mg/L	1	02/24/2025 11:25	234945
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:08	234945
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/20/2025 17:08	234945
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/20/2025 17:08	234945
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/20/2025 17:08	234945
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:19	234945
Arsenic	NELAP	0.0010		**0.0961**	mg/L	5	02/20/2025 11:19	234945
Lithium	*	0.0030		**0.0047**	mg/L	5	02/24/2025 8:08	234945
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/20/2025 11:19	234945
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/20/2025 11:19	234945
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/19/2025 11:09	234976
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/26/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25020750
Client Project: FGDS Landfill
Report Date: 31-Mar-25
Lab ID: 25020750-012
Client Sample ID: P07D
Matrix: GROUNDWATER
Collection Date: 02/20/2025 11:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	02/20/2025 11:12	R360884
Depth to water	*	-5.00		**1.49**	ft	1	02/20/2025 11:12	R360884
Depth to water from measuring point	*	0		**4.49**	ft	1	02/20/2025 11:12	R360884
Elevation of groundwater surface	*	0		**523.76**	ft	1	02/20/2025 11:12	R360884
Measuring Point Elevation	*	0		**528.25**	ft	1	02/20/2025 11:12	R360884
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	02/20/2025 11:12	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**40**	NTU	1	02/20/2025 11:12	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**46.8**	°F	1	02/20/2025 11:12	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.78**		1	02/20/2025 11:12	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1250**	µmhos/cm @25C	1	02/20/2025 11:12	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**990**	mg/L	2.5	02/21/2025 15:01	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 15:44	R360629
Chloride	NELAP	5.00		**31.4**	mg/L	10	02/21/2025 15:44	R360629
Sulfate	NELAP	10.0		**287**	mg/L	10	02/21/2025 15:44	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.913**	mg/L	1	02/24/2025 11:20	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:20	235055
Boron	NELAP	0.0200		**5.26**	mg/L	1	02/24/2025 11:20	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:20	235055
Calcium	NELAP	0.100		**179**	mg/L	1	02/24/2025 11:20	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:20	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:20	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:20	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:20	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:07	235055
Arsenic	NELAP	0.0010		**0.0276**	mg/L	5	02/25/2025 12:31	235055
Lithium	*	0.0030		**0.0081**	mg/L	5	02/25/2025 12:31	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:07	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 12:31	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 15:00	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25020750
Report Date: 31-Mar-25

Carrier: Justin Colp

Received By: AMD

Completed by: Amber Dilallo
On: 18-Feb-25

Reviewed by: Ellie Hopkins
On: 21-Feb-25

Pages to follow: Chain of custody 5 Extra pages included 49

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 9.9
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

Samples were received on 2/18/25 at 1500 on ice [9.9, 11.5C - LTG#5]. pH strip #101358. - amberdilallo - 2/18/2025 3:33:57 PM

Samples were received on 2/19/25 at 15.50 on ice [temp10.1C - LTG#9]. pH#101358 -EK/ lhenson - 2/19/2025 4:09:47 PM

Samples were received on 2/20/25 at 15.55 on ice [temp5.7C, 5.9C - LTG#9]. pH#101358. Added nitric acid (102194) to G121 and AW-1. - lhenson - 2/20/2025 4:39:14 PM

Samples were received on 12/21/25 at 12.22 on ice [temp5.5C - LTG#9]. pH#101358/98858. Added nitric acid (102194) to G113 and G120. - EK/lhenson - 2/21/2025 1:04:17 PM

Print PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25020750

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 9.9 - 11.5°C #5
Preserved in: [ ] LAB [X] FIELD
LAB NOTES: 101358 DM 2/18/25

FOR LAB USE ONLY

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event.

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25020750-001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3	2-18-25 1700	Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
J. Colp	2-18-25 1500	Union Quall	2/18/25 1500

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 250207S0

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [x] ICE [ ] BLUE ICE [ ] NO ICE 10.1 °C #9
Preserved in: [ ] LAB [x] FIELD
FOR LAB USE ONLY
LAB NOTES: pH√ 101358 Exp 2/19/2025

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [x] No
Are these samples known to be hazardous? [ ] Yes [x] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [x] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event.

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Gdp

RESULTS REQUESTED
[x] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
250207S0-001	R101		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	G110	2-19-25 / 1325	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	R111		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	G113		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	G120		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AW-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	2-19 / 1550		2/19/25 15:50

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25020750

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 5.7/5.9 °C #9
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: Added HNO3(102194) to G121 2 liter and AW-1 2 liter. PH V101358 EK 2/20/2025

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event.

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Culp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED														
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity										
25020750-001	R101		Groundwater	1	2								✔	✔	✔	✔	✔	✔										
002	G110		Groundwater	1	2								✔	✔	✔	✔	✔	✔										
003	R111	2-20-25 / 1141	Groundwater	1	2								✔	✔	✔	✔	✔	✔										
004	G112	2-20-25 / 1255	Groundwater	1	2								✔	✔	✔	✔	✔	✔										
005	G113		Groundwater	1	2								✔	✔	✔	✔	✔	✔										
006	G120		Groundwater	1	2								✔	✔	✔	✔	✔	✔										
007	G121	2-20-25 / 1325	Groundwater	1	2								✔	✔	✔	✔	✔	✔										
008	G122	2-20-25 / 1334	Groundwater	1	2								✔	✔	✔	✔	✔	✔										
009	AW-1	2-20-25 / 1221	Groundwater	1	2								✔	✔	✔	✔	✔	✔										
010	AW-2	2-20-25 / 1018	Groundwater	1	2								✔	✔	✔	✔	✔	✔										
011	RW-3		Groundwater	0	0								✔	✔	✔	✔	✔	✔										

Relinquished By	Date/Time	Received By	Date/Time
	2-20 / 1555		2/20/25 1555

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 250207150

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Culp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
250207150 on	P07D	2-20-25 / 1112	Groundwater	1	2								✔	✔	✔	✔	✔	✔
			Groundwater															
			Groundwater															
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Relinquished By	Date/Time	Received By	Date/Time
	2-20 / 1555		2/20/25 1555

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25020750

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [x] ICE [ ] BLUE ICE [ ] NO ICE 5.5 °C #9
Preserved in: [x] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: Added HNO3 (102194) to G113 and G120. PH V98858. 101358 EC 2/21/2025

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [x] No
Are these samples known to be hazardous? [ ] Yes [x] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [x] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring 4Q2023-3Q2025
RW-3 report data from Ash Pond sampling event.

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
[x] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED													
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity									
25020750-001	R101	2-21-25 / 1020	Groundwater	1	2								✓	✓	✓	✓	✓	✓									
002	G110		Groundwater	1	2								✓	✓	✓	✓	✓	✓									
003	R111		Groundwater	1	2								✓	✓	✓	✓	✓	✓									
004	G112		Groundwater	1	2								✓	✓	✓	✓	✓	✓									
005	G113	2-21-25 / 0942	Groundwater	1	2								✓	✓	✓	✓	✓	✓									
006	G120	2-21-25 / 0936	Groundwater	1	2								✓	✓	✓	✓	✓	✓									
007	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓									
008	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓									
009	AW-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓									
010	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓									
011	RW-3		Groundwater	0	0								✓	✓	✓	✓	✓	✓									

Relinquished By	Date/Time	Received By	Date/Time
Tracy Carrell	2/21/25 1222	Emily Kosakoski	2/21/2025 1222

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Field Data Sheet

Project Name: FGDS LF
Project Location: Springfield, IL
W.O. Number (s): 25020750
Monitoring Point: R101
Sample ID: 001
Date (s): 2/21/2025

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 15 °F Wind Direction: ☐ N ☐ S ☑ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/21/2025 9:52
Static Water Level: 6.89 feet below TOC
Total Depth: 35.27 feet below TOC
Water Column: 28.38 feet

Purging Activities

Purged By: TC Purge Date: 2/21/2025
Purge Method: Peristaltic Pump Well Diameter: 4"
Purge Volume Calculation (L): 28.38 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 8.00 L
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:54	0.0	308	purge start time						
10:02	2.5	↓	7.01	681.10	9.04	7.11	68.90	5.04	
10:05	3.4		7.03	681.10	8.94	6.96	69.60	6.98	
10:08	4.3		7.04	680.60	9.10	6.78	70.30	5.30	
10:11	5.2		7.05	680.30	9.12	6.57	71.10	3.96	
10:14	6.2		7.06	681.50	9.11	6.44	71.80	3.31	
10:17	7.1		7.07	681.00	8.82	6.31	72.70	3.08	
10:20	8.0		7.07	679.80	9.47	6.27	73.10	3.06	

Sampling Activities

Sampled By: TC Sample Date/Time: 2/21/2025 10:20
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 7.07 pH 679.80 Spec. Cond. 9.47 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 10.02 feet below TOC Drawdown: 3.13 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Tracy Carroll **Date:** 2/21/2025

Field Data Sheet

Project Name:	FGDS LF	**Monitoring Point:**	G110
Project Location:	Springfield, IL	**Sample ID:**	002
W.O. Number (s):	25020750	**Date (s):**	2/19/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 16 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/19/2025 13:10

Static Water Level: 24.40 feet below TOC

Total Depth: 57.15 feet below TOC

Water Column: 32.75 feet

Purging Activities

Purged By: JC — Purge Date: 2/19/2025

Purge Method: Peristaltic Pump — Well Diameter: 2"

Purge Volume Calculation (L): 32.75 ft. x 0.022 = 0.72 L x 3 Vol. = 2.16 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 4.00 L

Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:10	0.0	267	purge start time						
13:16	1.6	↓	6.81	695.30	11.06	1.69	-80.60	2.57	
13:19	2.4		6.81	694.80	11.20	1.54	-84.90	2.32	
13:22	3.2		6.80	694.80	11.05	1.41	-87.40	2.86	
13:25	4.0		6.80	693.10	11.20	1.33	-89.00	4.16	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/19/2025 13:25

Sample Method: Low Flow — Sample Equipment: Peristaltic Pump

Sample Parameters: 6.80 pH — 693.10 Spec. Cond. — 11.20 Temp

Field Filtered: Yes — Filter Type: Inline Disposable

Water Level: 24.48 feet below TOC — Drawdown: 0.08 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/19/2025

Field Data Sheet

Project Name:	FGDS LF	**Monitoring Point:**	R111
Project Location:	Springfield, IL	**Sample ID:**	003
W.O. Number (s):	25020750	**Date (s):**	2/20/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 11 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 11:26

Static Water Level: 25.04 feet below TOC

Total Depth: 55.75 feet below TOC

Water Column: 30.71 feet

Purging Activities

Purged By: JC — Purge Date: 2/20/2025

Purge Method: Peristaltic Pump — Well Diameter: 2"

Purge Volume Calculation (L): 30.71 ft. x 0.022 = 0.68 L x 3 Vol. = 2.04 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 3.00 L

Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:27	0.0	214	purge start time						
11:32	1.1	↓	6.94	851.90	8.56	1.64	-103.20	6.33	
11:35	1.7		6.92	806.60	8.51	1.39	-107.50	4.95	
11:38	2.4		6.89	895.30	8.40	1.29	-109.10	3.74	
11:41	3.0		6.86	1,087.10	8.21	1.23	-109.20	3.75	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/20/2025 11:41

Sample Method: Low Flow — Sample Equipment: Peristaltic Pump

Sample Parameters: 6.86 pH — 1,087.10 Spec. Cond. — 8.21 Temp

Field Filtered: Yes — Filter Type: Inline Disposable

Water Level: 25.18 feet below TOC — Drawdown: 0.14 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/20/2025

Field Data Sheet

Project Name:	FGDS LF	**Monitoring Point:**	G112
Project Location:	Springfield, IL	**Sample ID:**	004
W.O. Number (s):	25020750	**Date (s):**	2/20/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 17 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 12:38

Static Water Level: 28.49 feet below TOC

Total Depth: 58.81 feet below TOC

Water Column: 30.32 feet

Purging Activities

Purged By: JC — Purge Date: 2/20/2025

Purge Method: Peristaltic Pump — Well Diameter: 2"

Purge Volume Calculation (L): 30.32 ft. x 0.022 = 0.67 L x 3 Vol. = 2.01 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 3.00 L

Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:40	0.0	200	purge start time						
12:46	1.2	↓	7.06	1,328.20	8.92	2.09	-120.20	4.12	
12:49	1.8		7.06	1,336.20	8.54	2.39	-124.20	3.97	
12:52	2.4		7.07	1,342.30	8.55	2.47	-124.60	4.26	
12:55	3.0		7.07	1,363.10	8.65	2.50	-123.60	3.81	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/20/2025 12:55

Sample Method: Low Flow — Sample Equipment: Peristaltic Pump

Sample Parameters: 7.07 pH — 1,363.10 Spec. Cond. — 8.65 Temp

Field Filtered: Yes — Filter Type: Inline Disposable

Water Level: 28.49 feet below TOC — Drawdown: 0.00 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/20/2025

Field Data Sheet

Project Name: FGDS LF
Project Location: Springfield, IL
W.O. Number (s): 25020750
Monitoring Point: G113
Sample ID: 005
Date (s): 2/21/2025

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 15 °F Wind Direction: ☐ N ☐ S ☑ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/21/2025 9:11
Static Water Level: 5.01 feet below TOC
Total Depth: 12.85 feet below TOC
Water Column: 7.84 feet

Purging Activities

Purged By: JC Purge Date: 2/21/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 7.84 ft. x 0.022 = 0.17 L x 3 Vol. = 0.51 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 2.50 L
Physical appearance of purge water: Cloudy Odor: None Color: lt brown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:27	0.0	167	purge start time						
9:30	0.5	↓	6.55	1,694.40	5.46	2.95	-105.30	84.13	
9:33	1.0		6.47	1,683.60	4.66	1.88	-96.90	82.59	
9:36	1.5		6.43	1,681.50	4.84	1.65	-98.10	59.92	
9:39	2.0		6.41	1,680.30	5.12	1.48	-100.40	59.73	
9:42	2.5		6.40	1,688.90	5.02	1.32	-102.50	68.40	

Sampling Activities

Sampled By: JC Sample Date/Time: 2/21/2025 9:42
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.40 pH 1,688.90 Spec. Cond. 5.02 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 7.45 feet below TOC Drawdown: 2.44 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp **Date:** 2/21/2025

Field Data Sheet

Project Name:	FGDS LF	**Monitoring Point:**	G120
Project Location:	Springfield, IL	**Sample ID:**	006
W.O. Number (s):	25020750	**Date (s):**	2/21/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.

Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 15 °F Wind Direction: ☐ N ☐ S ☑ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

			Yes	No
Well Pad	Good	**Locks**		
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/21/2025 9:15

Static Water Level: 15.89 feet below TOC

Total Depth: 50.37 feet below TOC

Water Column: 34.48 feet

Purging Activities

Purged By: BG Purge Date: 2/21/2025

Purge Method: Submersible Pump Well Diameter: 2"

Purge Volume Calculation (L): 34.48 ft. x 0.022 = 0.76 L x 3 Vol. = 2.28 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 6.00 L

Physical appearance of purge water: Slightly cloudy Odor: Moderate Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:15	0.0	286	purge start time						
9:24	2.6	↓	6.68	1,927.00	11.01	3.56	-117.50	72.51	
9:27	3.4		6.66	1,924.20	13.36	2.96	-123.80	21.63	
9:30	4.3		6.66	1,923.00	13.29	2.61	-127.10	12.70	
9:33	5.1		6.66	1,921.80	13.29	2.37	-128.90	13.74	
9:36	6.0		6.66	1,914.80	13.23	2.20	-130.40	16.78	

Sampling Activities

Sampled By: BG Sample Date/Time: 2/21/2025 9:36

Sample Method: Low Flow Sample Equipment: Submersible Pump

Sample Parameters: 6.66 pH 1,914.80 Spec. Cond. 13.23 Temp

Field Filtered: Yes Filter Type: Inline Disposable

Water Level: 16.34 feet below TOC Drawdown: 0.45 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Brett Gillihan **Date:** 2/21/2025

Field Data Sheet

Project Name: FGDS LF
Project Location: Springfield, IL
W.O. Number (s): 25020750
Monitoring Point: G121
Sample ID: 007
Date (s): 2/20/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 17 °F Wind Direction: ☐ N ☐ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/21/2025 13:01
Static Water Level: 28.25 feet below TOC
Total Depth: 58.56 feet below TOC
Water Column: 30.31 feet

Purging Activities

Purged By: BG Purge Date: 2/20/2025
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 30.31 ft. x 0.022 = 0.67 L x 3 Vol. = 2.01 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 10.00 L
Physical appearance of purge water: Cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:01	0.0	417	purge start time						
13:13	5.0	↓	6.95	1,563.90	12.00	3.36	-117.40	41.75	
13:16	6.3		6.95	1,579.30	12.12	2.80	-121.70	27.75	
13:19	7.5		6.95	1,565.20	12.25	2.47	-123.30	33.21	
13:22	8.8		6.95	1,564.30	12.48	2.19	-126.30	30.81	
13:25	10.0		6.95	1,565.50	12.64	1.97	-128.70	30.48	

Sampling Activities

Sampled By: BG Sample Date/Time: 2/20/2025 13:25
Sample Method: Low Flow Sample Equipment: Submersible Pump
Sample Parameters: 6.95 pH 1,565.50 Spec. Cond. 12.64 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 29.31 feet below TOC Drawdown: 1.06 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Brett Gillihan **Date:** 2/20/2025

Field Data Sheet

Project Name: FGDS LF
Project Location: Springfield, IL
W.O. Number (s): 25020750
Monitoring Point: G122
Sample ID: 008
Date (s): 2/20/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 18 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 13:21
Static Water Level: 29.72 feet below TOC
Total Depth: 49.29 feet below TOC
Water Column: 19.57 feet

Purging Activities

Purged By: JC — Purge Date: 2/20/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 19.57 ft. x 0.022 = 0.43 L x 3 Vol. = 1.29 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:21	0.0	222	purge start time						
13:24	0.7	↓	6.95	1,403.30	11.69	3.44	-26.40	13.20	
13:27	1.3		6.84	1,426.70	10.26	2.18	-15.00	13.16	
13:30	2.0		6.80	1,417.30	10.09	1.92	-9.40	12.82	
13:33	2.7		6.78	1,421.70	10.05	1.78	-6.40	12.78	
13:36	3.3		6.76	1,419.90	10.15	1.56	-4.50	13.40	
13:39	4.0		6.75	1,424.40	10.11	1.48	-3.20	14.15	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/20/2025 13:39
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.75 pH — 1,424.40 Spec. Cond. — 10.11 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 29.76 feet below TOC — Drawdown: 0.04 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/20/2025

Field Data Sheet

Project Name: FGDS LF
Project Location: Springfield, IL
W.O. Number (s): 25020750
Monitoring Point: AW-1
Sample ID: 009
Date (s): 2/20/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 15 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 12:06
Static Water Level: 13.45 feet below TOC
Total Depth: 54.81 feet below TOC
Water Column: 41.36 feet

Purging Activities

Purged By: JC — Purge Date: 2/20/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 41.36 ft. x 0.022 = 0.91 L x 3 Vol. = 2.73 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:07	0.0	214	purge start time						
12:15	1.7	↓	6.66	1,309.30	8.60	5.87	-75.60	9.62	
12:18	2.4		6.65	1,312.30	8.97	6.03	-77.20	8.26	
12:21	3.0		6.64	1,313.90	9.02	6.19	-78.20	8.45	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/20/2025 12:21
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.64 pH — 1,313.90 Spec. Cond. — 9.02 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 15.57 feet below TOC — Drawdown: 2.12 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By:  **Date:** 2/20/2025

Field Data Sheet

Project Name: FGDS LF
Project Location: Springfield, IL
W.O. Number (s): 25020750
Monitoring Point: AW-2
Sample ID: 010
Date (s): 2/20/2025

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 6 °F Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 9:42
Static Water Level: 4.53 feet below TOC
Total Depth: 32.64 feet below TOC
Water Column: 28.11 feet

Purging Activities

Purged By: JC Purge Date: 2/20/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 28.11 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear Odor: None Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:53	0.0	240	purge start time						
9:57	1.0	↓	7.08	771.10	5.54	2.16	47.20	37.34	
10:00	1.7		7.05	764.70	4.92	1.87	35.40	40.57	
10:03	2.4		7.05	763.70	5.38	1.63	18.90	30.93	
10:06	3.1		7.05	764.50	5.25	1.51	7.50	25.69	
10:09	3.8		7.05	765.40	5.92	1.38	4.20	26.14	
10:12	4.6		7.05	767.40	5.19	1.34	1.30	17.26	
10:15	5.3		7.05	766.70	5.52	1.29	0.40	13.58	
10:18	6.0		7.05	763.60	5.52	1.27	-0.10	17.95	

Sampling Activities

Sampled By: JC Sample Date/Time: 2/20/2025 10:18
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 7.05 pH 763.60 Spec. Cond. 5.52 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 5.49 feet below TOC Drawdown: 0.96 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp **Date:** 2/20/2025

Field Data Sheet

Project Name: FGDS LF
Project Location: Springfield, IL
W.O. Number (s): 25020750
Monitoring Point: RW-3
Sample ID: 011
Date (s): 2/18/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 8 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	No

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/18/2025 11:44
Static Water Level: 9.56 feet below TOC
Total Depth: 44.01 feet below TOC
Water Column: 34.45 feet

Purging Activities

Purged By: JC — Purge Date: 2/18/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 34.45 ft. x 0.022 = 0.76 L x 3 Vol. = 2.28 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: ltbrown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:45	0.0	333	purge start time						
11:48	1.0	↓	7.08	616.30	11.66	1.23	-125.20	41.78	
11:51	2.0		7.08	629.50	11.89	0.70	-143.50	48.63	
11:54	3.0		7.09	631.70	11.94	0.58	-151.00	29.58	
11:57	4.0		7.10	629.70	11.94	0.54	-154.20	25.24	
12:00	5.0		7.10	622.80	11.96	0.54	-154.20	20.73	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/18/2025 12:00
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.10 pH — 622.80 Spec. Cond. — 11.96 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 15.15 feet below TOC — Drawdown: 5.59 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/18/2025

Field Data Sheet

Project Name:	FGDS LF	**Monitoring Point:**	P07D
Project Location:	Springfield, IL	**Sample ID:**	012
W.O. Number (s):	25020750	**Date (s):**	2/20/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 7 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ EW ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 2/20/2025 10:31

Static Water Level: 4.49 feet below TOC

Total Depth: 32.54 feet below TOC

Water Column: 28.05 feet

Purging Activities

Purged By: JC — Purge Date: 2/20/2025

Purge Method: Peristaltic Pump — Well Diameter: 2"

Purge Volume Calculation (L): 28.05 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 7.00 L

Physical appearance of purge water: Slightly cloudy — Odor: None — Color: ltbrown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:34	0.0	184	purge start time						
11:00	4.8	↓	6.77	1,251.80	8.06	1.22	-106.10	63.75	
11:03	5.3		6.78	1,248.00	7.78	1.21	-109.50	55.28	
11:06	5.9		6.77	1,250.70	7.60	1.08	-111.70	46.90	
11:09	6.4		6.77	1,251.50	8.27	1.01	-113.80	40.37	
11:12	7.0		6.78	1,252.30	8.21	0.99	-115.20	40.04	

Sampling Activities

Sampled By: JC — Sample Date/Time: 2/20/2025 11:12

Sample Method: Low Flow — Sample Equipment: Bladder Pump

Sample Parameters: 7.10 pH — 622.80 Spec. Cond. — 11.96 Temp

Field Filtered: No — Filter Type:

Water Level: 4.55 feet below TOC — Drawdown: 0.06 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 50115

Form Completed By: Justin Colp — **Date:** 2/20/2025

Site Samping Event: FGDS Landfill
LIMS Workorder: 25020750
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 1Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 50115 Technician(s): justin colp Date: 2/18/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230619c	4.00	2/18/25 9:30
7.0 Buffer	wc240913b	7.00	2/18/25 9:26
10.0 Buffer	wc240625b	10.00	2/18/25 9:34
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/18/25 9:42

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.5	2/18/25 9:42
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	2/18/25 9:44	17.5	7.02	1,410	0.51		
CCV-1-JC	CCV	2/18/25 13:20	18.5	7.06	1,423	0.57		

Comments:

Field Meter ID: Pine 50115 Technician(s): justn colp Date: 2/19/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230619c	4.00	2/19/25 10:31
7.0 Buffer	wc240913b	7.00	2/19/25 10:28
10.0 Buffer	wc240625b	10.00	2/19/25 10:36
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/19/25 10:47

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.49	2/19/25 10:53
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-JC	LCS	2/19/25 10:55	9.1	7.01	1,411	0.47		
CCV-2-JC	CCV	2/19/25 14:29	11.1	7.03	1,417	0.56		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25020750
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 1Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 50115 Technician(s): justin colp Date: 2/20/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230619c	4.00	2/20/25 8:56
7.0 Buffer	wc240913b	7.00	2/20/25 8:51
10.0 Buffer	wc240625b	10.00	2/20/25 9:00
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/20/25 9:06

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.5	2/20/25 9:06
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-JC	LCS	2/20/25 9:08	9.3	6.99	1,415	0.5		
CCV-3-JC	CCV	2/20/25 13:42	10.4	7.02	1,426	0.54		

Comments:

Field Meter ID: Pine 50115 Technician(s): justin colp Date: 2/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc230619c	4.00	2/21/25 8:41
7.0 Buffer	wc240913b	7.00	2/21/25 8:37
10.0 Buffer	wc240625b	10.00	2/21/25 8:45
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/21/25 8:53

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.6	2/21/25 8:53
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4-JC	LCS	2/21/25 8:55	9.4	7.02	1,413	0.62		
CCV-4-JC	CCV	2/21/25 10:30	9.7	7.02	1,418	0.61		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25020750
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 1Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210756 Technician(s): Tracy Carroll Date: 2/19/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230619C	4.01	2/19/25 11:14
7.0 Buffer	WC240913B	7.00	2/19/25 11:11
10.0 Buffer	WC240625B	10.00	2/19/25 11:19
LCS/CCV (7.0 Buffer)	WC240913C		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/19/25 11:05

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-TC	LCS	2/19/25 11:21	0.3	7.06	1,413			
CCV-1-TC	CCV	2/19/25 14:27	13.7	7.08	1,321			

Comments:

Field Meter ID: Pine 210756 Technician(s): Tracy Carroll Date: 2/20/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230619C	4.00	2/20/25 9:55
7.0 Buffer	WC240913B	7.00	2/20/25 9:49
10.0 Buffer	WC240625B	10.00	2/20/25 10:12
LCS/CCV (7.0 Buffer)	WC240913C		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/20/25 10:13

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-TC	LCS	2/20/25 10:25	0.6	7.09	1,417			
CCV-2-TC	CCV	2/20/25 14:35	0.8	7.09	1,423			

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25020750
Technician(s): DC, JC, TC, BG, PY

Field Calibration Log(s)
CWLP- 1Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210756 Technician(s): Tracy Carroll Date: 2/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC230619C	4.01	2/21/25 9:29
7.0 Buffer	WC240913B	7.00	2/21/25 9:21
10.0 Buffer	WC240625B	10.00	2/21/25 9:33
LCS/CCV (7.0 Buffer)	WC240913C		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	102040	1412	2/21/25 9:41

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1		
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-TC	LCS	2/21/25 9:44	0.2	7.05	1,415			
CCV-3-TC	CCV	2/21/25 10:46	0.2	7.06	1,404			

Comments:

Alliance Technical Group - Akron
3310 Win St.
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Website: http://www.settek.com

March 31, 2025

Shelly Hennessy
TEKLAB Inc,
5445 Horseshoe lake Road
Collinsville, IL 62234
TEL:
FAX:

RE: 25020750

Dear Shelly Hennessy:

Order No.: 25030052

Alliance Technical Group - Akron received 12 sample(s) on 2/27/2025 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: **25030052**
Date: **3/31/2025**

CLIENT: TEKLAB Inc,
Project: 25020750

WorkOrder Narrative:
25030052: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Alliance Technical Group Work Order Number assigned to this report.

Alliance Technical Group holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Alliance Technical Group and that of the customer. It cannot be reproduced in any form without the consent of Alliance Technical Group or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Alliance Technical Group is not responsible for use or interpretation of the data included herein.

All results for solid samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence QC Notes:
LCS/LCSD-82663 Radium-228_DW(904.0): LCS/LCSD exhibited a high RPD, individually each LCS/LCSD meets the required criteria.

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Qualifiers and Acronyms

WO#: **25030052**
Date: **3/31/2025**

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*****	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	**RL**	Reporting Limit
QC	Quality Control	**MDL**	Method Detection Limit
MB	Method Blank	**LOD**	Level of Detection
LCS	Laboratory Control Sample	**LOQ**	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	**PQL**	Practical Quantitation Limit
QCS	Quality Control Sample	**CRQL**	Contract Required Quantitation Limit
DUP	Duplicate	**PL**	Permit Limit
MS	Matrix Spike	**RegLvl**	Regulatory Limit
MSD	Matrix Spike Duplicate	**MCL**	Maximum Contamination Limit
RPD	Relative Percent Different	**MinCL**	Minimum Compound Limit
ICV	Initial Calibration Verification	**RA**	Reanalysis
ICB	Initial Calibration Blank	**RE**	Reextraction
CCV	Continuing Calibration Verification	**TIC**	Tentatively Identified Compound
CCB	Continuing Calibration Blank	**RT**	Retention Time
RLC	Reporting Limit Check	**CF**	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

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Workorder Sample Summary

WO#: **25030052**

31-Mar-25

CLIENT: TEKLAB Inc,
Project: 25020750

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
25030052-001	25020750-001		2/21/2025 10:20:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-002	25020750-002		2/19/2025 1:25:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-003	25020750-003		2/20/2025 11:41:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-004	25020750-004		2/20/2025 12:55:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-005	25020750-005		2/21/2025 9:42:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-006	25020750-006		2/21/2025 9:36:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-007	25020750-007		2/20/2025 1:25:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-008	25020750-008		2/20/2025 1:39:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-009	25020750-009		2/20/2025 12:21:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-010	25020750-010		2/20/2025 10:18:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-011	25020750-011		2/18/2025 12:00:00 PM	2/27/2025 11:30:00 AM	Non-Potable Water
25030052-012	25020750-012		2/20/2025 11:12:00 AM	2/27/2025 11:30:00 AM	Non-Potable Water

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DATES REPORT

WO#: **25030052**

31-Mar-25

Client: TEKLAB Inc,
Project: 25020750

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
25030052-001A	25020750-001	2/21/2025 10:20:00 AM	Non-Potable Water	Radium-226 (EPA 903.0)		3/5/2025 10:47:15 AM	3/26/2025 9:39:00 AM
				Radium-228 (EPA 904.0)		3/5/2025 10:47:15 AM	3/25/2025 2:10:00 PM
25030052-002A	25020750-002	2/19/2025 1:25:00 PM		Radium-226 (EPA 903.0)		3/5/2025 10:47:15 AM	3/26/2025 9:39:00 AM
				Radium-228 (EPA 904.0)		3/5/2025 10:47:15 AM	3/25/2025 2:10:00 PM
25030052-003A	25020750-003	2/20/2025 11:41:00 AM		Radium-226 (EPA 903.0)		3/5/2025 10:47:15 AM	3/26/2025 9:39:00 AM
				Radium-228 (EPA 904.0)		3/5/2025 10:47:15 AM	3/25/2025 2:10:00 PM
25030052-004A	25020750-004	2/20/2025 12:55:00 PM		Radium-226 (EPA 903.0)		3/8/2025 1:30:00 PM	3/23/2025 1:04:00 PM
				Radium-228 (EPA 904.0)		3/8/2025 1:30:00 PM	3/21/2025 2:04:00 PM
25030052-005A	25020750-005	2/21/2025 9:42:00 AM		Radium-226 (EPA 903.0)		3/8/2025 1:30:00 PM	3/23/2025 1:04:00 PM
				Radium-228 (EPA 904.0)		3/8/2025 1:30:00 PM	3/21/2025 2:04:00 PM
25030052-006A	25020750-006	2/21/2025 9:36:00 AM		Radium-226 (EPA 903.0)		3/8/2025 1:30:00 PM	3/23/2025 1:04:00 PM
				Radium-228 (EPA 904.0)		3/8/2025 1:30:00 PM	3/21/2025 2:04:00 PM
25030052-007A	25020750-007	2/20/2025 1:25:00 PM		Radium-226 (EPA 903.0)		3/8/2025 1:30:00 PM	3/23/2025 1:04:00 PM
				Radium-228 (EPA 904.0)		3/8/2025 1:30:00 PM	3/21/2025 2:04:00 PM
25030052-008A	25020750-008	2/20/2025 1:39:00 PM		Radium-226 (EPA 903.0)		3/8/2025 1:30:00 PM	3/23/2025 1:04:00 PM
				Radium-228 (EPA 904.0)		3/8/2025 1:30:00 PM	3/21/2025 2:04:00 PM
25030052-009A	25020750-009	2/20/2025 12:21:00 PM		Radium-226 (EPA 903.0)		3/8/2025 1:30:00 PM	3/23/2025 1:04:00 PM
				Radium-228 (EPA 904.0)		3/8/2025 1:30:00 PM	3/21/2025 2:04:00 PM
25030052-010A	25020750-010	2/20/2025 10:18:00 AM		Radium-226 (EPA 903.0)		3/8/2025 1:30:00 PM	3/23/2025 1:04:00 PM
				Radium-228 (EPA 904.0)		3/8/2025 1:30:00 PM	3/21/2025 2:04:00 PM
25030052-011A	25020750-011	2/18/2025 12:00:00 PM		Radium-226 (EPA 903.0)		3/4/2025 11:20:02 AM	3/27/2025 10:25:00 AM
				Radium-228 (EPA 904.0)		3/4/2025 11:20:02 AM	3/26/2025 3:34:00 PM
25030052-012A	25020750-012	2/20/2025 11:12:00 AM		Radium-226 (EPA 903.0)		3/8/2025 1:30:00 PM	3/23/2025 1:04:00 PM

Original

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DATES REPORT

WO#: **25030052**

31-Mar-25

Client: TEKLAB Inc,
Project: 25020750

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
25030052-012A	25020750-012	2/20/2025 11:12:00 AM	Non-Potable Water	Radium-228 (EPA 904.0)		3/8/2025 1:30:00 PM	3/21/2025 2:04:00 PM

Original

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/21/2025 10:20:00 AM
Project: 25020750
Lab ID: 25030052-001
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-001

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.100	1	3/26/2025 9:39:00 AM
Yield	1.00					1	3/26/2025 9:39:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.380	1	3/25/2025 2:10:00 PM
Yield	1.00					1	3/25/2025 2:10:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Project: 25020750
Lab ID: 25030052-002
Client Sample ID: 25020750-002

Collection Date: 2/19/2025 1:25:00 PM
Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.160	1	3/26/2025 9:39:00 AM
Yield	1.00					1	3/26/2025 9:39:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.380	1	3/25/2025 2:10:00 PM
Yield	1.00					1	3/25/2025 2:10:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Project: 25020750
Lab ID: 25030052-003
Client Sample ID: 25020750-003

Collection Date: 2/20/2025 11:41:00 AM
Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.210	1	3/26/2025 9:39:00 AM
Yield	1.00					1	3/26/2025 9:39:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.530	1	3/25/2025 2:10:00 PM
Yield	1.00					1	3/25/2025 2:10:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 12:55:00 PM
Project: 25020750
Lab ID: 25030052-004
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-004

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.180	1	3/23/2025 1:04:00 PM
Yield	1.00					1	3/23/2025 1:04:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.350	1	3/21/2025 2:04:00 PM
Yield	1.00					1	3/21/2025 2:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/21/2025 9:42:00 AM
Project: 25020750
Lab ID: 25030052-005
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-005

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.160	1	3/23/2025 1:04:00 PM
Yield	0.990					1	3/23/2025 1:04:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.460	1	3/21/2025 2:04:00 PM
Yield	0.920					1	3/21/2025 2:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/21/2025 9:36:00 AM
Project: 25020750
Lab ID: 25030052-006
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-006

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	2.75	1.00		pCi/L	± 0.360	1	3/23/2025 1:04:00 PM
Yield	1.00					1	3/23/2025 1:04:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.470	1	3/21/2025 2:04:00 PM
Yield	1.00					1	3/21/2025 2:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 1:25:00 PM
Project: 25020750
Lab ID: 25030052-007
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-007

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	1.97	1.00		pCi/L	± 0.300	1	3/23/2025 1:04:00 PM
Yield	1.00					1	3/23/2025 1:04:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.460	1	3/21/2025 2:04:00 PM
Yield	1.00					1	3/21/2025 2:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

Original

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 1:39:00 PM
Project: 25020750
Lab ID: 25030052-008
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-008

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.0800	1	3/23/2025 1:04:00 PM
Yield	1.00					1	3/23/2025 1:04:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.280	1	3/21/2025 2:04:00 PM
Yield	1.00					1	3/21/2025 2:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Project: 25020750
Lab ID: 25030052-009
Client Sample ID: 25020750-009

Collection Date: 2/20/2025 12:21:00 PM
Matrix: NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.200	1	3/23/2025 1:04:00 PM
Yield	1.00					1	3/23/2025 1:04:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.500	1	3/21/2025 2:04:00 PM
Yield	1.00					1	3/21/2025 2:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 10:18:00 AM
Project: 25020750
Lab ID: 25030052-010
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-010

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.00		pCi/L	± 0.110	1	3/23/2025 1:04:00 PM
Yield	1.00					1	3/23/2025 1:04:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.00		pCi/L	± 0.290	1	3/21/2025 2:04:00 PM
Yield	1.00					1	3/21/2025 2:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/18/2025 12:00:00 PM
Project: 25020750
Lab ID: 25030052-011
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-011

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	ND	1.30		pCi/L	± 0.110	1	3/27/2025 10:25:00 AM
Yield	1.00					1	3/27/2025 10:25:00 AM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	ND	1.30		pCi/L	± 0.440	1	3/26/2025 3:34:00 PM
Yield	0.780					1	3/26/2025 3:34:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded
ND	Not Detected
R	RPD outside accepted recovery limits
W	Sample container temperature is out of limit as specified at testcode
M	Manual Integration used to determine area response
PL	Permit Limit
RL	Reporting Detection Limit

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Analytical Report

(consolidated)

WO#: **25030052**

Date Reported: **3/31/2025**

CLIENT: TEKLAB Inc,
Collection Date: 2/20/2025 11:12:00 AM
Project: 25020750
Lab ID: 25030052-012
Matrix: NON-POTABLE WATER
Client Sample ID: 25020750-012

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
RADIUM-226 (EPA 903.0)					**E903.0**	**E903-904**	Analyst: **HDJ**
Radium-226	1.17	1.00		pCi/L	± 0.240	1	3/23/2025 1:04:00 PM
Yield	1.00					1	3/23/2025 1:04:00 PM
RADIUM-228 (EPA 904.0)					**E904.0**	**E903-904**	Analyst: **HDJ**
Radium-228	1.32	1.00		pCi/L	± 0.500	1	3/21/2025 2:04:00 PM
Yield	1.00					1	3/21/2025 2:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode		

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QC SUMMARY REPORT

WO#: **25030052**

31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82663**

Sample ID: **MB-82663** SampType: **MBLK** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-82663** SampType: **LCS** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	6.47	1.00	5.000	0	129	50	130				QLR
Yield	0.580			0	0						

Sample ID: **LCSD-82663** SampType: **LCSD** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.45	1.00	5.000	0	89.0	50	130	6.470	37.0	20	R
Yield	1.00			0	0			0.5800	53.2		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **25030052**
31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82663**

Sample ID: **25021873-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **25021875-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205809**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E904.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5509495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			1.260	200	20	R
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25030052**
31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82663**

Sample ID: **MB-82663** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205811**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E903.0** **E903-904** Analysis Date: **3/27/2025** SeqNo: **5509528**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-82663** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205811**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E903.0** **E903-904** Analysis Date: **3/27/2025** SeqNo: **5509529**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	3.65	1.00	5.000	0	73.0	70	130				QLR

Sample ID: **LCSD-82663** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205811**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E903.0** **E903-904** Analysis Date: **3/27/2025** SeqNo: **5509530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.97	1.00	5.000	0	99.4	70	130	3.650	30.6	20	R

Sample ID: **25021873-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205811**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E903.0** **E903-904** Analysis Date: **3/27/2025** SeqNo: **5509535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **25030052**
31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82663**

Sample ID: **25021873-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205811**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E903.0** **E903-904** Analysis Date: **3/27/2025** SeqNo: **5509535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **25021875-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/4/2025** RunNo: **205811**
Client ID: **BatchQC** Batch ID: **82663** TestNo: **E903.0** **E903-904** Analysis Date: **3/27/2025** SeqNo: **5509537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **25030052**

31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82683**

Sample ID: **MB-82683**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **3/5/2025**	RunNo: **205677**
Client ID: **BatchQC**	Batch ID: **82683**	TestNo: **E904.0**	**E903-904**	Analysis Date: **3/25/2025**	SeqNo: **5506861**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-82683**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **3/5/2025**	RunNo: **205677**
Client ID: **BatchQC**	Batch ID: **82683**	TestNo: **E904.0**	**E903-904**	Analysis Date: **3/25/2025**	SeqNo: **5506862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.54	1.00	5.000	0	70.8	50	130				
Yield	0.900			0	0						

Sample ID: **LCSD-82683**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **3/5/2025**	RunNo: **205677**
Client ID: **BatchQC**	Batch ID: **82683**	TestNo: **E904.0**	**E903-904**	Analysis Date: **3/25/2025**	SeqNo: **5506863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.35	1.00	5.000	0	67.0	50	130	3.540	5.52	20	
Yield	1.00			0	0			0.9000	10.5		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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QC SUMMARY REPORT

WO#: **25030052**

31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82683**

Sample ID: **25030002-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205677**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E904.0** **E903-904** Analysis Date: **3/25/2025** SeqNo: **5506868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	R
Yield	1.00			0	0			1.000	0		

Sample ID: **25030004-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205677**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E904.0** **E903-904** Analysis Date: **3/25/2025** SeqNo: **5506870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

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25 YEAR ANNIVERSARY
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QC SUMMARY REPORT

WO#: **25030052**
31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82683**

Sample ID: **MB-82683** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-82683** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.48	1.00	5.000	0	89.6	70	130				

Sample ID: **LCSD-82683** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.61	1.00	5.000	0	92.2	70	130	4.480	2.86	20	

Sample ID: **25030002-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25030052**
31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82683**

Sample ID: **25030002-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Sample ID: **25030004-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/5/2025** RunNo: **205680**
Client ID: **BatchQC** Batch ID: **82683** TestNo: **E903.0** **E903-904** Analysis Date: **3/26/2025** SeqNo: **5506949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25030052**

31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82776**

Sample ID: **MB-82776**	SampType: **MBLK**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **3/8/2025**	RunNo: **205482**
Client ID: **BatchQC**	Batch ID: **82776**	TestNo: **E904.0**	**E903-904**	Analysis Date: **3/21/2025**	SeqNo: **5502453**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0						
Yield	1.00			0	0						

Sample ID: **LCS-82776**	SampType: **LCS**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **3/8/2025**	RunNo: **205482**
Client ID: **BatchQC**	Batch ID: **82776**	TestNo: **E904.0**	**E903-904**	Analysis Date: **3/21/2025**	SeqNo: **5502454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	3.46	1.00	5.000	0	69.2	50	130				
Yield	1.00			0	0						

Sample ID: **LCSD-82776**	SampType: **LCSD**	TestCode: **Radium-228_**	Units: **pCi/L**	Prep Date: **3/8/2025**	RunNo: **205482**
Client ID: **BatchQC**	Batch ID: **82776**	TestNo: **E904.0**	**E903-904**	Analysis Date: **3/21/2025**	SeqNo: **5502455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	4.00	1.00	5.000	0	80.0	50	130	3.460	14.5	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25030052**

31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82776**

Sample ID: **25030057-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/8/2025** RunNo: **205482**
Client ID: **BatchQC** Batch ID: **82776** TestNo: **E904.0** **E903-904** Analysis Date: **3/21/2025** SeqNo: **5502474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Sample ID: **25030059-001ADUP** SampType: **DUP** TestCode: **Radium-228_** Units: **pCi/L** Prep Date: **3/8/2025** RunNo: **205482**
Client ID: **BatchQC** Batch ID: **82776** TestNo: **E904.0** **E903-904** Analysis Date: **3/21/2025** SeqNo: **5502476**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-228	ND	1.00		0	0			0	0	20	
Yield	1.00			0	0			1.000	0		

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance TECHNICAL GROUP
25 YEAR ANNIVERSARY
Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25030052**
31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82776**

Sample ID: **MB-82776** SampType: **MBLK** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/8/2025** RunNo: **205492**
Client ID: **BatchQC** Batch ID: **82776** TestNo: **E903.0** **E903-904** Analysis Date: **3/23/2025** SeqNo: **5502642**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00									
Yield	1.00										

Sample ID: **LCS-82776** SampType: **LCS** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/8/2025** RunNo: **205492**
Client ID: **BatchQC** Batch ID: **82776** TestNo: **E903.0** **E903-904** Analysis Date: **3/23/2025** SeqNo: **5502643**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	4.72	1.00	5.000	0	94.4	70	130				

Sample ID: **LCSD-82776** SampType: **LCSD** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/8/2025** RunNo: **205492**
Client ID: **BatchQC** Batch ID: **82776** TestNo: **E903.0** **E903-904** Analysis Date: **3/23/2025** SeqNo: **5502644**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	5.29	1.00	5.000	0	106	70	130	4.720	11.4	20	

Sample ID: **25030057-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/8/2025** RunNo: **205492**
Client ID: **BatchQC** Batch ID: **82776** TestNo: **E903.0** **E903-904** Analysis Date: **3/23/2025** SeqNo: **5502658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **25030052**

31-Mar-25

Client: TEKLAB Inc,
Project: 25020750 **BatchID:** **82776**

Sample ID: **25030057-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/8/2025** RunNo: **205492**
Client ID: **BatchQC** Batch ID: **82776** TestNo: **E903.0** **E903-904** Analysis Date: **3/23/2025** SeqNo: **5502658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	R
Yield	1.00							1.000	0	0	

Sample ID: **25030059-001ADUP** SampType: **DUP** TestCode: **Radium-226_** Units: **pCi/L** Prep Date: **3/8/2025** RunNo: **205492**
Client ID: **BatchQC** Batch ID: **82776** TestNo: **E903.0** **E903-904** Analysis Date: **3/23/2025** SeqNo: **5502660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Radium-226	ND	1.00						0	0	20	
Yield	1.00							1.000	0	0	

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response	ND	Not Detected
PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
W	Sample container temperature is out of limit as specified at testcode				

Original

Pg ___ of ___

TEKLAB, INC. Chain of Custody

25030052

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: | Sampler: Client | QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 25020750

Contact: Shelly Hennessy | Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT | Billing/PO: 38001
Phone: (618) 344-1004 ext. 36

Report data from 25020749-001

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228												
	25020750-001	2/21/25 1020	HNO3	Groundwater	✔	pH	1	CPM	28								
	25020750-002	2/19/25 1325	HNO3	Groundwater	✔		1		23								
	25020750-003	2/20/25 1141	HNO3	Groundwater	✔		1		52								
	25020750-004	2/20/25 1255	HNO3	Groundwater	✔		1		46								
	25020750-005	2/21/25 0942	HNO3	Groundwater	✔		1		30								
	25020750-006	2/21/25 ~~936~~ 0930	HNO3	Groundwater	✔		1		33								
	25020750-007	2/20/25 1325	HNO3	Groundwater	✔		1		38								
	25020750-008	2/20/25 1339	HNO3	Groundwater	✔		1		22								
	25020750-009	2/20/25 1221	HNO3	Groundwater	✔		1		28								
	25020750-010	2/20/25 1018	HNO3	Groundwater	✔		1		30								
	25020750-011	2/18/25 1200	HNO3	Groundwater	✔												

18.8-0C = 18.8, cs intact 02/25 - Fedex Box/cooler

*Relinquished By	Date/Time	Received By	Date/Time
Amber Wells			02/27/25 1130

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sample information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

Pg ___ of ___

TEKLAB, INC. Chain of Custody

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Are the samples chilled? YES ☐ NO ☑ With: ☐ Ice ☐ Blue Ice Preserved in: ☐ Lab ☐ Field

Teklab Inc
5445 Horseshoe Lake Road
Collinsville, IL 62234

Cooler Temp: ____ Sampler: Client QC Level: 2

Comments: **Please Issue reports and invoices via email only**
Please analyze for Radium 226/228 per your usual methods.
Any changes to analysis/methods must be approved by Teklab, Inc. Batch QC is required.
Samples collected from an IL site.

Project# 25020750

Contact: Shelly Hennessy Email: shennessy@TekLabInc.com
Requested Due Date: Standard TAT Billing/PO: 38001 Phone: (618) 344-1004 ext.

PLEASE NOTE:

NELAP accreditation is required on the requested analytes and must be documented as such on the final report. If your laboratory does not currently hold a NELAP accreditation for the requested method and/or analytes, please contact Teklab immediately. If your laboratory loses accreditation or is suspended for any analyte/method during the life of the contract, you must contact Teklab immediately.

Lab Use	Sample ID	Sample Date/Time	Preservative	Matrix	Radium 226/228											
	25020750-012	2/20/25 1112	HNO3	Groundwater	✔	pH	1	CPM 52								
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												
			Other	Aqueous												

18.8-0.0=18.8, CS intact 02/25 - Fedex Box/cooler

*Relinquished By	Date/Time	Received By	Date/Time
[signature]		[signature]	02/27/25 1130

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization. and proprietary rights, Teklab, Inc. protects clients' confidential information as directed by local, state or federal laws. (Teklab QAM Section 9.1, TNI V1 M2 Section 4.1.5 c)

SubCocRevA
3/2/2016

Alliance Technical Group - Akron
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Sample Log-In Check List

Client Name: TEK-IL-62234-A Work Order Number: 25030052 RcptNo: 1

Logged by:	Anthony W. Britton	2/27/2025 11:30:00 AM	Anthony Britton
Completed By:	Tegan A. Richards	3/1/2025 6:16:55 PM	Tegan Richards
Reviewed By:	Jennifer Woolf	3/3/2025 11:03:50 AM	Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☑ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☑ No ☐
   Custody seals intact on shipping container/cooler? Yes ☑ No ☐ Not Present ☐
   No. Seal Date: 2/25/2025 Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☑ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Not required
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:
    Relinquish time & dare not included

Cooler Information

Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	18.8	Good	Yes		2/25/2025	

Second Quarter 2025

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

June 23, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10438
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Landfill Monitoring Wells **WorkOrder:** 25051157

Dear Eric Staley:

TEKLAB, INC received 12 samples on 5/27/2025 3:35:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 25051157
Report Date: 23-Jun-25

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	31
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25051157

Client Project: Landfill Monitoring Wells **Report Date:** 23-Jun-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 25051157
Report Date: 23-Jun-25

Cooler Receipt Temp: 5.9 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
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Accreditations

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Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 25051157
Report Date: 23-Jun-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10438	NELAP	7/31/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2026	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 05/27/2025 10:46

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**3150**	µg/L	1	05/29/2025 13:32	239684
Barium	NELAP	2.5		**232**	µg/L	1	05/29/2025 13:32	239684
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 13:32	239684
Boron	NELAP	20.0		**129**	µg/L	1	05/29/2025 13:32	239684
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 13:32	239684
Calcium	NELAP	0.100		**175**	mg/L	1	05/29/2025 13:32	239684
Chromium	NELAP	5.0		**5.4**	µg/L	1	05/29/2025 13:32	239684
Cobalt	NELAP	5.0		**8.8**	µg/L	1	05/29/2025 13:32	239684
Copper	NELAP	5.0		**10.0**	µg/L	1	05/29/2025 13:32	239684
Iron	NELAP	40.0		**6860**	µg/L	1	05/29/2025 13:32	239684
Magnesium	NELAP	0.050		**69.6**	mg/L	1	05/29/2025 13:32	239684
Manganese	NELAP	7.0		**11900**	µg/L	1	05/29/2025 13:32	239684
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 13:32	239684
Potassium	NELAP	0.100		**1.32**	mg/L	1	05/29/2025 13:32	239684
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 13:32	239684
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 13:32	239684
Sodium	NELAP	0.050		**30.1**	mg/L	1	05/29/2025 13:32	239684
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 13:32	239684
Zinc	NELAP	10.0		**20.5**	µg/L	1	05/29/2025 13:32	239684
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/30/2025 10:06	239733
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/30/2025 10:06	239733
LCS recovered outside upper control limits for As. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 15:01	239684
Arsenic	NELAP	1.0		**2.1**	µg/L	5	05/28/2025 15:01	239684
Lead	NELAP	1.0		**4.3**	µg/L	5	05/28/2025 15:01	239684
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/28/2025 15:01	239684
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/29/2025 15:21	239734
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/29/2025 15:19	239734

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-002
Client Sample ID: G110
Matrix: GROUNDWATER
Collection Date: 05/21/2025 11:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0	B	**< 25.0**	µg/L	1	05/29/2025 8:27	239494
Barium	NELAP	2.5		**179**	µg/L	1	05/29/2025 8:27	239494
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 8:27	239494
Boron	NELAP	20.0		**97.9**	µg/L	1	05/29/2025 8:27	239494
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 8:27	239494
Calcium	NELAP	0.100	B	**101**	mg/L	1	05/29/2025 8:27	239494
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:27	239494
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:27	239494
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:27	239494
Iron	NELAP	40.0	B	**5720**	µg/L	1	05/29/2025 8:27	239494
Magnesium	NELAP	0.050	B	**43.3**	mg/L	1	05/30/2025 8:26	239494
Manganese	NELAP	7.0		**73.9**	µg/L	1	05/29/2025 8:27	239494
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:27	239494
Potassium	NELAP	0.100		**1.58**	mg/L	1	05/29/2025 8:27	239494
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 8:27	239494
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 8:27	239494
Sodium	NELAP	0.050	B	**13.8**	mg/L	1	05/29/2025 8:27	239494
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 8:27	239494
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 8:27	239494
Sample results for Ca, Mg and Na exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
Sample result for Fe exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
Contamination present in the MBLK for Al. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**4.7**	µg/L	5	05/23/2025 10:41	239534
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/23/2025 10:41	239534
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 17:57	239494
Arsenic	NELAP	1.0		**4.7**	µg/L	5	05/27/2025 20:18	239494
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 17:57	239494
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/28/2025 17:57	239494
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2025 16:56	239492
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2025 16:54	239492

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-003
Client Sample ID: R111
Matrix: GROUNDWATER
Collection Date: 05/21/2025 12:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	2.5		**696**	µg/L	1	05/29/2025 8:27	239494
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 8:27	239494
Boron	NELAP	20.0		**3980**	µg/L	1	05/29/2025 8:27	239494
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 8:27	239494
Calcium	NELAP	0.100	B	**166**	mg/L	1	05/29/2025 8:27	239494
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:27	239494
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:27	239494
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:27	239494
Iron	NELAP	40.0	B	**12300**	µg/L	1	05/29/2025 8:27	239494
Magnesium	NELAP	0.050	B	**72.5**	mg/L	1	05/30/2025 8:26	239494
Manganese	NELAP	7.0		**112**	µg/L	1	05/29/2025 8:27	239494
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:27	239494
Potassium	NELAP	0.100		**1.94**	mg/L	1	05/29/2025 8:27	239494
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 8:27	239494
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 8:27	239494
Sodium	NELAP	0.050	B	**36.9**	mg/L	1	05/29/2025 8:27	239494
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 8:27	239494
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 8:27	239494
Sample results for Ca, Mg and Na exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
Sample result for Fe exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**16.1**	µg/L	5	05/23/2025 10:47	239534
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/23/2025 10:47	239534
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 18:04	239494
Arsenic	NELAP	1.0		**21.5**	µg/L	5	05/27/2025 20:24	239494
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 18:04	239494
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/28/2025 18:04	239494
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2025 17:01	239492
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2025 16:58	239492

Teklab, Inc.
Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-004
Client Sample ID: G112
Matrix: GROUNDWATER
Collection Date: 05/27/2025 12:41

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**75.1**	µg/L	1	05/29/2025 13:33	239684
Barium	NELAP	2.5		**421**	µg/L	1	05/29/2025 13:33	239684
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 13:33	239684
Boron	NELAP	20.0		**500**	µg/L	1	05/29/2025 13:33	239684
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 13:33	239684
Calcium	NELAP	0.100		**245**	mg/L	1	05/29/2025 13:33	239684
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 13:33	239684
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 13:33	239684
Copper	NELAP	5.0		**14.0**	µg/L	1	05/29/2025 13:33	239684
Iron	NELAP	40.0		**2730**	µg/L	1	05/29/2025 13:33	239684
Magnesium	NELAP	0.050		**73.8**	mg/L	1	05/29/2025 13:33	239684
Manganese	NELAP	7.0		**254**	µg/L	1	05/29/2025 13:33	239684
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 13:33	239684
Potassium	NELAP	0.100		**2.64**	mg/L	1	05/29/2025 13:33	239684
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 13:33	239684
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 13:33	239684
Sodium	NELAP	0.050		**31.7**	mg/L	1	05/29/2025 13:33	239684
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 13:33	239684
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 13:33	239684
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/30/2025 10:12	239733
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/30/2025 10:12	239733
LCS recovered outside upper control limits for As. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**1.2**	µg/L	5	05/28/2025 15:07	239684
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 15:07	239684
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 15:07	239684
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/28/2025 15:07	239684
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/29/2025 15:30	239734
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/29/2025 15:28	239734

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-005
Client Sample ID: G113
Matrix: GROUNDWATER
Collection Date: 05/27/2025 11:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**45.8**	µg/L	1	05/29/2025 13:59	239684
Barium	NELAP	2.5		**338**	µg/L	1	05/29/2025 13:59	239684
Beryllium	NELAP	0.5		**0.9**	µg/L	1	05/29/2025 13:59	239684
Boron	NELAP	20.0		**1170**	µg/L	1	05/29/2025 13:59	239684
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 13:59	239684
Calcium	NELAP	0.100		**350**	mg/L	1	05/29/2025 13:59	239684
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 13:59	239684
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 13:59	239684
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 13:59	239684
Iron	NELAP	40.0		**328**	µg/L	1	05/29/2025 13:59	239684
Magnesium	NELAP	0.050		**84.7**	mg/L	1	05/29/2025 13:59	239684
Manganese	NELAP	7.0		**12000**	µg/L	1	05/29/2025 13:59	239684
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 13:59	239684
Potassium	NELAP	0.100		**3.61**	mg/L	1	05/29/2025 13:59	239684
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 13:59	239684
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 13:59	239684
Sodium	NELAP	0.050		**24.0**	mg/L	1	05/29/2025 13:59	239684
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 13:59	239684
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 13:59	239684
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/30/2025 10:18	239733
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/30/2025 10:18	239733
LCS recovered outside upper control limits for As. Sample results are below the reporting limit. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 15:13	239684
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 15:13	239684
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 15:13	239684
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/28/2025 15:13	239684
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/29/2025 15:34	239734
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/29/2025 15:32	239734

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-006
Client Sample ID: G120
Matrix: GROUNDWATER
Collection Date: 05/21/2025 13:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	2.5		**2330**	µg/L	1	05/29/2025 8:28	239494
Beryllium	NELAP	0.5		**0.5**	µg/L	1	05/29/2025 8:28	239494
Boron	NELAP	20.0		**7620**	µg/L	1	05/29/2025 8:28	239494
Cadmium	NELAP	2.0		**2.1**	µg/L	1	05/29/2025 8:28	239494
Calcium	NELAP	0.100	BS	**258**	mg/L	1	05/29/2025 8:28	239494
Chromium	NELAP	5.0		**10.7**	µg/L	1	05/29/2025 8:28	239494
Cobalt	NELAP	5.0		**7.5**	µg/L	1	05/29/2025 8:28	239494
Copper	NELAP	5.0		**35.1**	µg/L	1	05/29/2025 8:28	239494
Iron	NELAP	40.0	B	**68000**	µg/L	1	05/29/2025 8:28	239494
Magnesium	NELAP	0.050	BS	**109**	mg/L	1	05/30/2025 8:27	239494
Manganese	NELAP	7.0		**548**	µg/L	1	05/29/2025 8:28	239494
Nickel	NELAP	5.0		**11.1**	µg/L	1	05/29/2025 8:28	239494
Potassium	NELAP	0.100		**2.58**	mg/L	1	05/29/2025 8:28	239494
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 8:28	239494
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 8:28	239494
Sodium	NELAP	0.050	B	**42.2**	mg/L	1	05/29/2025 8:28	239494
Vanadium	NELAP	10.0		**16.2**	µg/L	1	05/29/2025 8:28	239494
Zinc	NELAP	10.0		**101**	µg/L	1	05/29/2025 8:28	239494

Sample results for Ca, Mg and Na exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.
Matrix spike control limits for Ca are not applicable due to high sample/spike ratio.
Sample results for Al and Fe exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.
Matrix spike did not recover within control limits due to matrix interference. Verified by bench spike.

SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**7.7**	µg/L	5	05/23/2025 10:52	239534
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/23/2025 10:52	239534
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**1.8**	µg/L	5	05/28/2025 18:16	239494
Arsenic	NELAP	1.0		**17.4**	µg/L	5	05/27/2025 21:53	239494
Lead	NELAP	1.0		**8.2**	µg/L	5	05/28/2025 18:16	239494
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/28/2025 18:16	239494
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2025 17:15	239492
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2025 17:03	239492

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-007
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 05/22/2025 11:43

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	2.5		**631**	µg/L	1	05/29/2025 14:14	239543
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 14:14	239543
Boron	NELAP	20.0		**3950**	µg/L	1	05/29/2025 14:14	239543
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 14:14	239543
Calcium	NELAP	0.100		**197**	mg/L	1	05/29/2025 14:14	239543
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:14	239543
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:14	239543
Copper	NELAP	5.0		**12.5**	µg/L	1	05/29/2025 14:14	239543
Iron	NELAP	40.0		**23200**	µg/L	1	05/29/2025 14:14	239543
Magnesium	NELAP	0.050		**87.3**	mg/L	1	05/29/2025 14:14	239543
Manganese	NELAP	7.0		**212**	µg/L	1	05/29/2025 14:14	239543
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:14	239543
Potassium	NELAP	0.100		**3.17**	mg/L	1	05/29/2025 14:14	239543
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 14:14	239543
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 14:14	239543
Sodium	NELAP	0.050		**42.2**	mg/L	1	05/29/2025 14:14	239543
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 14:14	239543
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 14:14	239543
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**14.1**	µg/L	5	05/27/2025 13:20	239569
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 13:20	239569
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**1.0**	µg/L	5	05/27/2025 11:08	239543
Arsenic	NELAP	1.0		**15.0**	µg/L	5	05/27/2025 11:08	239543
Lead	NELAP	1.0		**2.3**	µg/L	5	05/23/2025 13:10	239543
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/23/2025 13:10	239543
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/23/2025 14:04	239545
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/23/2025 14:01	239545

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-008
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 05/22/2025 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**31.6**	µg/L	1	05/29/2025 14:15	239543
Barium	NELAP	2.5		**515**	µg/L	1	05/29/2025 14:15	239543
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 14:15	239543
Boron	NELAP	20.0		**11700**	µg/L	1	05/29/2025 14:15	239543
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 14:15	239543
Calcium	NELAP	0.100		**253**	mg/L	1	05/29/2025 14:15	239543
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:15	239543
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:15	239543
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:15	239543
Iron	NELAP	40.0		**33200**	µg/L	1	05/29/2025 14:15	239543
Magnesium	NELAP	0.050		**97.9**	mg/L	1	05/29/2025 14:15	239543
Manganese	NELAP	7.0		**1180**	µg/L	1	05/29/2025 14:15	239543
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:15	239543
Potassium	NELAP	0.100		**2.01**	mg/L	1	05/29/2025 14:15	239543
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 14:15	239543
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 14:15	239543
Sodium	NELAP	0.050		**39.6**	mg/L	1	05/29/2025 14:15	239543
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 14:15	239543
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 14:15	239543
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**3.1**	µg/L	5	05/27/2025 13:25	239569
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 13:25	239569
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 11:14	239543
Arsenic	NELAP	1.0		**2.7**	µg/L	5	05/27/2025 11:14	239543
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/23/2025 13:16	239543
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/23/2025 13:16	239543
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/23/2025 14:13	239545
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/23/2025 14:11	239545

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-009
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 05/22/2025 10:24

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	2.5		**78.1**	µg/L	1	05/29/2025 14:15	239543
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 14:15	239543
Boron	NELAP	20.0		**8790**	µg/L	1	05/29/2025 14:15	239543
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 14:15	239543
Calcium	NELAP	0.100		**202**	mg/L	1	05/29/2025 14:15	239543
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:15	239543
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:15	239543
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:15	239543
Iron	NELAP	40.0		**254**	µg/L	1	05/29/2025 14:15	239543
Magnesium	NELAP	0.050		**88.5**	mg/L	1	05/29/2025 14:15	239543
Manganese	NELAP	7.0		**50.8**	µg/L	1	05/29/2025 14:15	239543
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:15	239543
Potassium	NELAP	0.100		**2.50**	mg/L	1	05/29/2025 14:15	239543
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 14:15	239543
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 14:15	239543
Sodium	NELAP	0.050		**33.0**	mg/L	1	05/29/2025 14:15	239543
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 14:15	239543
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 14:15	239543
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 13:31	239569
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 13:31	239569
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 11:19	239543
Arsenic	NELAP	1.0		**1.5**	µg/L	5	05/27/2025 11:19	239543
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/23/2025 13:22	239543
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/23/2025 13:22	239543
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/23/2025 15:05	239545
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/23/2025 14:15	239545

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-010
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 05/22/2025 13:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	2.5		**641**	µg/L	1	05/29/2025 14:16	239543
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 14:16	239543
Boron	NELAP	20.0		**3160**	µg/L	1	05/29/2025 14:16	239543
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 14:16	239543
Calcium	NELAP	0.100		**163**	mg/L	1	05/29/2025 14:16	239543
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:16	239543
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:16	239543
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:16	239543
Iron	NELAP	40.0		**18600**	µg/L	1	05/29/2025 14:16	239543
Magnesium	NELAP	0.050		**66.7**	mg/L	1	05/29/2025 14:16	239543
Manganese	NELAP	7.0		**234**	µg/L	1	05/29/2025 14:16	239543
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 14:16	239543
Potassium	NELAP	0.100		**2.36**	mg/L	1	05/29/2025 14:16	239543
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 14:16	239543
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 14:16	239543
Sodium	NELAP	0.050		**43.9**	mg/L	1	05/29/2025 14:16	239543
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 14:16	239543
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 14:16	239543
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**15.0**	µg/L	5	05/27/2025 13:36	239569
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 13:36	239569
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 11:25	239543
Arsenic	NELAP	1.0		**16.3**	µg/L	5	05/27/2025 11:25	239543
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/23/2025 13:29	239543
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/23/2025 13:29	239543
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/23/2025 14:27	239545
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/23/2025 14:25	239545

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051157
Client Project: Landfill Monitoring Wells
Report Date: 23-Jun-25
Lab ID: 25051157-011
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 05/21/2025 10:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Aluminum	NELAP	25.0		**43.6**	µg/L	1	06/03/2025 16:25	239883
Barium	NELAP	2.5		**149**	µg/L	1	05/29/2025 8:30	239494
Beryllium	NELAP	0.5		**< 0.5**	µg/L	1	05/29/2025 8:30	239494
Boron	NELAP	20.0		**167**	µg/L	1	05/29/2025 8:30	239494
Cadmium	NELAP	2.0		**< 2.0**	µg/L	1	05/29/2025 8:30	239494
Calcium	NELAP	0.100	B	**68.0**	mg/L	1	05/29/2025 8:30	239494
Chromium	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:30	239494
Cobalt	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:30	239494
Copper	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:30	239494
Iron	NELAP	40.0	B	**3930**	µg/L	1	05/29/2025 8:30	239494
Magnesium	NELAP	0.050	B	**28.3**	mg/L	1	05/30/2025 8:18	239494
Manganese	NELAP	7.0		**90.9**	µg/L	1	05/29/2025 8:30	239494
Nickel	NELAP	5.0		**< 5.0**	µg/L	1	05/29/2025 8:30	239494
Potassium	NELAP	0.100		**1.96**	mg/L	1	05/29/2025 8:30	239494
Selenium	NELAP	40.0		**< 40.0**	µg/L	1	05/29/2025 8:30	239494
Silver	NELAP	7.0		**< 7.0**	µg/L	1	05/29/2025 8:30	239494
Sodium	NELAP	0.050	B	**51.7**	mg/L	1	05/29/2025 8:30	239494
Vanadium	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 8:30	239494
Zinc	NELAP	10.0		**< 10.0**	µg/L	1	05/29/2025 8:30	239494
Sample results for Ca, Mg and Na exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
Sample result for Fe exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (DISSOLVED)								
Arsenic	NELAP	1.0		**67.8**	µg/L	5	05/27/2025 8:08	239534
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/27/2025 8:08	239534
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 18:10	239494
Arsenic	NELAP	1.0		**84.6**	µg/L	5	05/27/2025 20:29	239494
Lead	NELAP	1.0		**< 1.0**	µg/L	5	05/28/2025 18:10	239494
Thallium	NELAP	2.0		**< 2.0**	µg/L	5	05/28/2025 18:10	239494
SW-846 7470A (DISSOLVED)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2025 17:19	239492
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.20		**< 0.20**	µg/L	1	05/22/2025 17:17	239492

Receiving Check List

Teklab, Inc. Environmental Laboratory

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Landfill Monitoring Wells

Work Order: 25051157
Report Date: 23-Jun-25

Carrier: Daniel Crump

Received By: LEH

Completed by: Laura E Henson
On: 21-May-25

Reviewed by: Ellie Hopkins
On: 27-May-25

Pages to follow: Chain of custody 5 Extra pages included 15

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 5.9
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #101358/98858. - lhenson - 5/21/2025 5:13:57 PM

Cooler #2 = 5.3C, Cooler #3 = 8.3C (LTG#9). - LH 5/21/25

Samples were received on 5/22/25 at 15.45 on ice [temp 4.5C, 7.1C - LTG#9]. pH#101358/98858. - JD/lhenson - 5/22/2025 4:36:37 PM

Samples were received on 5/27/25 at 1535 on ice [13.1/16.3C - LTG#5]. Additional Sodium Hydroxide (102642) was needed upon arrival at the laboratory for G113. pH strip #98858/101358. R101 - date and time of collection per WO #25051159. - EK/amberdilallo - 5/27/2025 4:13:46 PM

rint PDF

CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25051157

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

5.3, 8.3

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 5.9 °C 9
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: PW 101358/98858

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
Quarter 2
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2

SAMPLE COLLECTOR'S NAME
Payton Tock

RESULTS REQUESTED
[ ] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

	Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)
*	25051157-001	R101		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	002	G110	5/21/25 1123	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	003	R111	5/21/25 1222	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	004	G112		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	005	G113		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	006	G120	5/21/25 1358	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
*	007	G121		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
*	008	G122		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
*	009	AW-1		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
*	010	AW-2		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
*	011	RW-3	5-21-25 1020	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	5-21/1605		5/21/25 1605

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25051157

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarter 2
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED												
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)				
25051157-012	Duplicate		Groundwater	2	2	1	4							✔	✔	✔	✔	✔	✔	✔	✔	✔				
			Groundwater																							
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Relinquished By	Date/Time	Received By	Date/Time
[signature]	5-21 1605	[signature]	5/21/25 1605

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25051157

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

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Client: City Water, Light & Power

Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building

City/State/Zip: Springfield IL 62712

Contact: Eric Staley Phone: (217) 757-8610

Email: eric.staley@cwlp.com Fax:

Samples on: [x] ICE [ ] BLUE ICE [ ] NO ICE 4.5 °C 9

Preserved in: [ ] LAB [x] FIELD FOR LAB USE ONLY

LAB NOTES: PH 101358 98858

JD 5/22/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [x] No

Are these samples known to be hazardous? [ ] Yes [x] No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [x] Yes [ ] No Permit on file

Client Comments:

Quarter 2

*elevations, pH, conductivity, temperature

**As B Cd Cr Pb Mg Hg Zn

***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER

Landfill Monitoring Wells G1-G2

SAMPLE COLLECTOR'S NAME

Payton Tock

RESULTS REQUESTED

[ ] Standard [ ] 1-2 Day (100% Surcharge)

[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)
* 25051157 001	R101		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
002	G110		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
003	R111		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
004	G112		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
005	G113		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
006	G120		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
* 007	G121	5/22/25 1143	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
** 008	G122	5/22/25 1245	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
*** 009	AW-1	5/22/25 1024	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
**** 010	AW-2	5/22/25 1344	Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
* 011	RW-3		Groundwater	2	2	1	4						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
[signature]	5-22/1545	[signature]	5/22/25 1545

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25051157

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
Quarter 2
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

PROJECT NAME/NUMBER
Landfill Monitoring Wells G1-G2

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED												
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)				
25051157-012	Duplicate		Groundwater	2	2	1	4							✔	✔	✔	✔	✔	✔	✔	✔	✔				
			Groundwater																							
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Relinquished By	Date/Time	Received By	Date/Time
DJS	5-22/1545		5/22/25 1545

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25051157

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 13.1/16.3°C 5
Preserved in: ☑ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: Date and time collected for sample R101 from 25051159 workorder. PHV 101358 : 98858

Client Comments: Added NaOH(102642) to G113. EK 5/27/25
Quarter 2
*elevations, pH, conductivity, temperature
**As B Cd Cr Pb Mg Hg Zn
***Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Hg Ni K Se Ag Na Tl V Zn

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

PROJECT NAME/NUMBER: Landfill Monitoring Wells G1-G2

SAMPLE COLLECTOR'S NAME: Justin Colp

RESULTS REQUESTED
☐ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl SO4 TDS (D)	Metals (D)**	Cyanide	Nitrate (D)	Ammonia (D)	Metals (T)***	BOD Cl F SO4 (T)	NH3 COD TOC	Nitrate (T)
* 25051157 001	R101	5-27-25 1046	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
002	G110		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
003	R111		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
004	G112	5-27-25 1241	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
005	G113	5-27-25 1140	Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
006	G120		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
007	G121		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
008	G122		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
009	AW-1		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
010	AW-2		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
011	RW-3		Groundwater	2	2	1	4						✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
	5-27/1535	Emily Kossakowski	5/27/25 1535

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Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: R101
Sample ID: 001
Date (s): 5/27/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 62 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☑ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 10:17
Static Water Level: 6.88 feet below TOC
Total Depth: 35.27 feet below TOC
Water Column: 28.39 feet

Purging Activities

Purged By: JC — Purge Date: 5/27/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 28.39 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:18	0.0	250	purge start time						
10:25	1.7	↓	6.96	1,328.90	12.73	5.18	88.40	11.76	
10:28	2.5		6.90	1,328.50	12.68	4.72	88.50	9.21	
10:31	3.2		6.86	1,329.10	12.65	4.39	88.30	6.05	
10:34	4.0		6.83	1,329.90	12.65	4.13	88.30	6.27	
10:37	4.8		6.82	1,329.90	12.66	3.93	88.00	6.82	
10:40	5.5		6.81	1,330.10	12.65	3.77	87.70	8.03	
10:43	6.3		6.80	1,329.60	12.66	3.64	87.40	9.04	
10:46	7.0		6.79	1,330.40	12.72	3.53	87.30	10.24	

Sampling Activities

Sampled By: JC — Sample Date/Time: 5/27/2025 10:46
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.79 pH — 1,330.40 Spec. Cond. — 12.72 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 10.17 feet below TOC — Drawdown: 3.29 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Justin Colp — **Date:** 5/27/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: G110
Sample ID: 002
Date (s): 5/21/2025

Field Team Members

Name: Payton Yoch Affiliation: TekLab, Inc.
Name: Justin Colp Affiliation: TekLab, Inc.

Weather Conditions

Temp: 59 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 10:52
Static Water Level: 24.85 feet below TOC
Total Depth: 57.15 feet below TOC
Water Column: 32.30 feet

Purging Activities

Purged By: PY Purge Date: 5/21/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 32.3 ft. x 0.022 = 0.71 L x 3 Vol. = 2.13 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Clear Odor: Slight Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:48	0.0	200	purge start time						
11:11	4.6	↓	6.59	876.00	15.45	2.90	69.70	2.60	
11:14	5.2		6.60	878.70	15.48	2.75	70.70	2.12	
11:17	5.8		6.61	879.50	15.51	2.63	71.60	1.41	
11:20	6.4		6.62	879.70	15.45	2.52	72.50	1.32	
11:23	7.0		6.62	883.00	15.07	2.47	73.30	1.64	

Sampling Activities

Sampled By: PY Sample Date/Time: 5/21/2025 11:23
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.62 pH 883.00 Spec. Cond. 15.07 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 25.12 feet below TOC Drawdown: 0.27 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton K **Date:** 5/21/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: R111
Sample ID: 003
Date (s): 5/21/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 59 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 11:44
Static Water Level: 25.19 feet below TOC
Total Depth: 55.75 feet below TOC
Water Column: 30.56 feet

Purging Activities

Purged By: PY — Purge Date: 5/21/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 30.56 ft. x 0.022 = 0.67 L x 3 Vol. = 2.01 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: Moderate — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:44	0.0	132	purge start time						
12:10	3.4	↓	6.70	1,476.10	14.76	2.46	71.30	3.92	
12:13	3.8		6.70	1,480.10	14.74	2.38	68.30	3.20	
12:16	4.2		6.71	1,488.60	14.71	2.31	65.40	2.38	
12:19	4.6		6.71	1,494.20	15.06	2.25	62.20	2.21	
12:22	5.0		6.71	1,501.00	14.93	2.20	59.10	1.99	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/21/2025 12:22
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.71 pH — 1,501.00 Spec. Cond. — 14.93 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 25.31 feet below TOC — Drawdown: 0.12 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton Yoch — **Date:** 5/21/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: G112
Sample ID: 004
Date (s): 5/27/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 64 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☑ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 12:06
Static Water Level: 17.54 feet below TOC
Total Depth: 58.81 feet below TOC
Water Column: 41.27 feet

Purging Activities

Purged By: JC — Purge Date: 5/27/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 41.27 ft. x 0.022 = 0.91 L x 3 Vol. = 2.73 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:09	0.0	156	purge start time						
12:17	1.3		7.16	1,716.00	16.24	5.54	80.60	25.02	
12:20	1.7		7.14	1,719.00	16.57	4.97	82.00	26.26	
12:23	2.2		7.13	1,721.50	16.61	4.57	83.30	24.02	
12:26	2.7		7.14	1,720.20	16.59	4.26	84.30	24.31	
12:29	3.1		7.14	1,718.50	16.51	4.01	85.50	23.17	
12:32	3.6		7.14	1,718.20	16.44	3.82	86.60	23.33	
12:35	4.1		7.14	1,721.30	16.38	3.68	87.50	22.37	
12:38	4.5		7.14	1,719.10	16.19	3.56	88.60	20.67	
12:41	5.0		7.14	1,716.40	16.10	3.44	89.60	19.46	

Sampling Activities

Sampled By: JC — Sample Date/Time: 5/27/2025 12:41
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 7.14 pH — 1,716.40 Spec. Cond. — 16.10 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 29.09 feet below TOC — Drawdown: 11.55 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Justin Colp — **Date:** 5/27/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: G113
Sample ID: 005
Date (s): 5/27/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 63 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☑ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 11:16
Static Water Level: 5.80 feet below TOC
Total Depth: 12.85 feet below TOC
Water Column: 7.05 feet

Purging Activities

Purged By: JC — Purge Date: 5/27/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 7.05 ft. x 0.022 = 0.16 L x 3 Vol. = 0.48 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:17	0.0	174	purge start time						
11:22	0.9	↓	6.46	2,094.20	14.00	6.89	74.00	6.83	
11:25	1.4		6.45	2,096.40	13.99	6.60	61.50	5.71	
11:28	1.9		6.45	2,096.60	13.99	6.42	54.40	5.08	
11:31	2.4		6.44	2,094.90	13.89	6.29	50.40	4.85	
11:34	3.0		6.44	2,095.10	13.87	6.23	47.00	4.69	
11:37	3.5		6.44	2,094.10	13.84	6.19	44.80	4.20	
11:40	4.0		6.44	2,093.00	13.78	6.16	43.30	4.29	

Sampling Activities

Sampled By: JC — Sample Date/Time: 5/27/2025 11:40
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.44 pH — 2,093.00 Spec. Cond. — 13.78 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 7.23 feet below TOC — Drawdown: 1.43 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Justin Colp — **Date:** 5/27/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: G120
Sample ID: 006
Date (s): 5/21/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 61 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 13:34
Static Water Level: 16.18 feet below TOC
Total Depth: 50.37 feet below TOC
Water Column: 34.19 feet

Purging Activities

Purged By: PY — Purge Date: 5/21/2025
Purge Method: Submersible Pump — Well Diameter: 2"
Purge Volume Calculation (L): 34.19 ft. x 0.022 = 0.75 L x 3 Vol. = 2.25 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Slightly cloudy — Odor: Slight — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:25	0.0	212	purge start time						
13:43	3.8	↓	6.59	1,943.40	15.75	3.59	77.90	15.49	
13:46	4.5		6.58	1,946.40	15.82	3.31	73.60	15.45	
13:49	5.1		6.58	1,947.80	15.70	3.11	68.80	20.89	
13:52	5.7		6.57	1,946.60	15.86	2.95	63.60	18.90	
13:55	6.4		6.57	1,949.50	15.88	2.82	58.10	13.31	
13:58	7.0		6.57	1,948.40	15.95	2.71	52.50	13.58	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/21/2025 13:58
Sample Method: Low Flow — Sample Equipment: Submersible Pump
Sample Parameters: 6.57 pH — 1,948.40 Spec. Cond. — 15.95 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 16.30 feet below TOC — Drawdown: 0.12 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: [signature] **Date:** 5/21/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: G121
Sample ID: 007
Date (s): 5/22/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 57 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 10:57
Static Water Level: 27.82 feet below TOC
Total Depth: 58.56 feet below TOC
Water Column: 30.74 feet

Purging Activities

Purged By: PY — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 30.74 ft. x 0.022 = 0.68 L x 3 Vol. = 2.04 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy — Odor: Moderate — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:16	0.0	222	purge start time						
11:31	3.3	↓	6.81	1,556.30	14.05	4.51	87.60	43.15	
11:34	4.0		6.80	1,555.90	14.11	4.21	89.10	41.96	
11:37	4.7		6.79	1,555.10	14.17	3.96	90.20	31.18	
11:40	5.3		6.79	1,557.20	14.34	3.75	90.90	26.58	
11:43	6.0		6.79	1,555.80	14.37	3.60	91.20	21.79	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/22/2025 11:43
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.79 pH — 1,555.80 Spec. Cond. — 14.37 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 28.12 feet below TOC — Drawdown: 0.30 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton K — **Date:** 5/22/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: G122
Sample ID: 008
Date (s): 5/22/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 58 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 12:12
Static Water Level: 29.75 feet below TOC
Total Depth: 49.29 feet below TOC
Water Column: 19.54 feet

Purging Activities

Purged By: PY — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 19.54 ft. x 0.022 = 0.43 L x 3 Vol. = 1.29 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy — Odor: Moderate — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:19	0.0	192	purge start time						
12:33	2.7	↓	6.79	1,744.90	16.43	6.07	100.00	10.46	
12:36	3.3		6.77	1,747.10	15.80	6.06	100.80	8.54	
12:39	3.8		6.76	1,752.30	15.16	6.06	101.40	6.78	
12:42	4.4		6.75	1,756.80	14.80	6.04	101.50	6.16	
12:45	5.0		6.74	1,760.80	14.69	6.03	101.20	6.00	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/22/2025 12:45
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.74 pH — 1,760.80 Spec. Cond. — 14.69 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 29.78 feet below TOC — Drawdown: 0.03 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton K — **Date:** 5/22/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: AW-1
Sample ID: 009
Date (s): 5/22/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 57 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 9:50
Static Water Level: 13.77 feet below TOC
Total Depth: 54.81 feet below TOC
Water Column: 41.04 feet

Purging Activities

Purged By: PY — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 41.04 ft. x 0.022 = 0.9 L x 3 Vol. = 2.7 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:55	0.0	172	purge start time						
10:12	2.9	↓	6.89	1,482.50	13.66	7.29	70.00	4.06	
10:15	3.4		6.90	1,480.20	13.86	7.16	70.40	4.64	
10:18	4.0		6.92	1,478.90	14.31	7.08	70.70	4.12	
10:21	4.5		6.94	1,478.80	14.50	7.10	71.00	3.38	
10:24	5.0		6.96	1,477.40	14.65	7.19	71.50	3.55	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/22/2025 10:24
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.96 pH — 1,477.40 Spec. Cond. — 14.65 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 15.72 feet below TOC — Drawdown: 1.95 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton K — **Date:** 5/22/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: AW-2
Sample ID: 010
Date (s): 5/22/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 59 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 13:23
Static Water Level: 4.92 feet below TOC
Total Depth: 32.64 feet below TOC
Water Column: 27.72 feet

Purging Activities

Purged By: PY — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 27.72 ft. x 0.022 = 0.61 L x 3 Vol. = 1.83 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear — Odor: Slight — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:20	0.0	250	purge start time						
13:32	3.0	↓	6.92	1,111.00	13.52	4.93	91.00	8.14	
13:35	3.8		6.90	1,110.90	13.53	4.50	91.70	8.53	
13:38	4.5		6.90	1,110.60	13.55	4.17	92.00	8.27	
13:41	5.3		6.89	1,110.80	13.51	3.92	92.10	8.36	
13:44	6.0		6.89	1,110.70	13.52	3.71	91.90	9.46	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/22/2025 13:44
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.89 pH — 1,110.70 Spec. Cond. — 13.52 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 5.05 feet below TOC — Drawdown: 0.13 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton Yoch — **Date:** 5/22/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: RW-3
Sample ID: 011
Date (s): 5/21/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 57 °F — Wind Direction: ☐ N ☐ S ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 10:00
Static Water Level: 9.27 feet below TOC
Total Depth: 44.01 feet below TOC
Water Column: 34.74 feet

Purging Activities

Purged By: DC — Purge Date: 5/21/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 34.74 ft. x 0.022 = 0.76 L x 3 Vol. = 2.28 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:00	0.0	300	purge start time						
10:08	2.4	↓	7.04	649.70	12.60	0.59	-99.00	8.49	
10:11	3.3		7.04	649.10	12.61	0.55	-103.90	6.68	
10:14	4.2		7.04	648.50	12.58	0.51	-108.10	4.91	
10:17	5.1		7.03	649.20	12.59	0.48	-111.30	5.05	
10:20	6.0		7.03	649.80	12.58	0.45	-114.40	5.04	

Sampling Activities

Sampled By: DC — Sample Date/Time: 5/21/2025 10:20
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.03 pH — 649.80 Spec. Cond. — 12.58 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 9.27 feet below TOC — Drawdown: 0.00 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/21/2025

Field Data Sheet

Project Name: Landfill Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051157
Monitoring Point: Duplicate
Sample ID: 012
Date (s): 5/21/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 59 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 11:44
Static Water Level: 25.19 feet below TOC
Total Depth: 55.75 feet below TOC
Water Column: 30.56 feet

Purging Activities

Purged By: PY — Purge Date: 5/21/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 30.56 ft. x 0.022 = 0.67 L x 3 Vol. = 2.01 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: Moderate — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:44	0.0	132	purge start time						
12:10	3.4	↓	6.70	1,476.10	14.76	2.46	71.30	3.92	
12:13	3.8		6.70	1,480.10	14.74	2.38	68.30	3.20	
12:16	4.2		6.71	1,488.60	14.71	2.31	65.40	2.38	
12:19	4.6		6.71	1,494.20	15.06	2.25	62.20	2.21	
12:22	5.0		6.71	1,501.00	14.93	2.20	59.10	1.99	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/21/2025 12:22
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.71 pH — 1,501.00 Spec. Cond. — 14.93 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 25.31 feet below TOC — Drawdown: 0.12 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760
- QA/QC Sample
- Collected at R111

Form Completed By: Payton K — **Date:** 5/21/2025

Site Samping Event: Landfill Monitoring Wells
LIMS Workorder: 25051157
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 44716 Technician(s): Brett Gillihan Date: 5/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/21/25 9:19
7.0 Buffer	WC250407A	7.00	5/21/25 9:12
10.0 Buffer	WC240625A	10.00	5/21/25 9:25
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/21/25 9:31

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.23	5/21/25 9:37
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-BG	LCS	5/21/25 9:41	17	7.01	1,447	0.63		
CCV-1-BG	CCV	5/21/25 16:03	17.8	7.04	1,422	0.66		

Comments:

Site Samping Event: Landfill Monitoring Wells
LIMS Workorder: 25051157
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210760 Technician(s): justin colp Date: 5/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc250102a	4.00	5/21/25 9:19
7.0 Buffer	wc250407a	7.00	5/21/25 9:14
10.0 Buffer	wc240625a	10.00	5/21/25 9:24
LCS/CCV (7.0 Buffer)	wc240918a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/21/25 9:29

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.12	5/21/25 9:30
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	5/21/25 9:34	18.9	6.98	1,410	1.08		
CCV-1-JC	CCV	5/21/25 14:37	20	6.96	1,434	1.05		

Comments:

Field Meter ID: Pine 210760 Technician(s): Payton Yoch Date: 5/22/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/22/25 9:14
7.0 Buffer	WC250407A	7.00	5/22/25 9:09
10.0 Buffer	WC240625A	10.00	5/22/25 9:20
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/22/25 9:23

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.07	5/22/25 9:31
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-PY	LCS	5/22/25 9:38	17.3	7.05	1,412	1.07		
CCV-2-PY	CCV	5/22/25 14:14	18.5	6.98	1,415	1.08		

Comments:

Site Samping Event: Landfill Monitoring Wells
LIMS Workorder: 25051157
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210760 Technician(s): justin colp Date: 5/27/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/27/25 8:56
7.0 Buffer	WC250407A	7.00	5/27/25 8:50
10.0 Buffer	WC240625A	10.00	5/27/25 9:01
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/27/25 9:07

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.21	5/27/25 9:08
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-JC	LCS	5/27/25 9:11	19.2	6.96	1,407	1.24		
CCV-3-JC	CCV	5/27/25 14:15	21.9	7.02	1,404	1.31		

Comments:

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

July 03, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10438
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 25051159

Dear Eric Staley:

TEKLAB, INC received 5 samples on 5/27/2025 3:35:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25051159
Report Date: 03-Jul-25

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	12
Chain of Custody	Appended

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25051159

Client Project: FGDS Landfill **Report Date:** 03-Jul-25

Abbr Definition

*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051159
Client Project: FGDS Landfill
Report Date: 03-Jul-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051159
Client Project: FGDS Landfill
Report Date: 03-Jul-25

Cooler Receipt Temp: 4.5 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Alliance Technical Group. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051159
Client Project: FGDS Landfill
Report Date: 03-Jul-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10438	NELAP	7/31/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2026	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2026	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2026	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051159
Client Project: FGDS Landfill
Report Date: 03-Jul-25
Lab ID: 25051159-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 05/27/2025 10:46

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.53**	ft	1	05/27/2025 10:46	R365854
Depth to water	*	-5.00		**4.08**	ft	1	05/27/2025 10:46	R365854
Depth to water from measuring point	*	0		**6.88**	ft	1	05/27/2025 10:46	R365854
Elevation of groundwater surface	*	0		**539.92**	ft	1	05/27/2025 10:46	R365854
Measuring Point Elevation	*	0		**546.80**	ft	1	05/27/2025 10:46	R365854
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	05/27/2025 10:46	R365854
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**10**	NTU	1	05/27/2025 10:46	R365854
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.9**	°F	1	05/27/2025 10:46	R365854
SW-846 9040B								
pH, Field	*	1.00		**6.79**		1	05/27/2025 10:46	R365854
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1330**	µmhos/cm @25C	1	05/27/2025 10:46	R365854
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**902**	mg/L	1	06/02/2025 17:03	R365986
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/28/2025 12:35	R365685
Chloride	NELAP	5.00		**109**	mg/L	10	05/28/2025 12:35	R365685
Sulfate	NELAP	10.0		**272**	mg/L	10	05/28/2025 12:35	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.149**	mg/L	1	05/29/2025 19:17	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 19:17	239684
Boron	NELAP	0.0200		**0.116**	mg/L	1	06/02/2025 22:22	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 19:17	239684
Calcium	NELAP	0.100		**163**	mg/L	1	05/29/2025 19:17	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 19:17	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	06/02/2025 22:22	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 19:17	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 19:17	239684
Contamination present in the CCB for Cr. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:32	239684
Arsenic	NELAP	0.0010		**0.0011**	mg/L	5	05/28/2025 16:32	239684
Lithium	*	0.0030		**0.0194**	mg/L	5	05/28/2025 16:32	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:32	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 16:32	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 15:59	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646
Radium-228	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051159
Client Project: FGDS Landfill
Report Date: 03-Jul-25
Lab ID: 25051159-002
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 05/22/2025 11:43

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	05/22/2025 11:43	R365854
Depth to water	*	-5.00		**25.95**	ft	1	05/22/2025 11:43	R365854
Depth to water from measuring point	*	0		**27.82**	ft	1	05/22/2025 11:43	R365854
Elevation of groundwater surface	*	0		**527.78**	ft	1	05/22/2025 11:43	R365854
Measuring Point Elevation	*	0		**555.60**	ft	1	05/22/2025 11:43	R365854
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	05/22/2025 11:43	R365854
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**22**	NTU	1	05/22/2025 11:43	R365854
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.9**	°F	1	05/22/2025 11:43	R365854
SW-846 9040B								
pH, Field	*	1.00		**6.79**		1	05/22/2025 11:43	R365854
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1560**	µmhos/cm @25C	1	05/22/2025 11:43	R365854
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	100		**1210**	mg/L	5	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 19:40	R365493
Chloride	NELAP	5.00		**29.9**	mg/L	10	05/23/2025 19:40	R365493
Sulfate	NELAP	10.0		**328**	mg/L	10	05/23/2025 19:40	R365493
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.641**	mg/L	1	05/30/2025 9:23	239588
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/30/2025 9:23	239588
Boron	NELAP	0.0200		**3.93**	mg/L	1	05/30/2025 9:23	239588
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/30/2025 9:23	239588
Calcium	NELAP	0.100		**185**	mg/L	1	05/30/2025 9:23	239588
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:23	239588
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:23	239588
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/30/2025 9:23	239588
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/30/2025 9:23	239588
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 16:40	239588
Arsenic	NELAP	0.0010		**0.0180**	mg/L	5	05/27/2025 16:40	239588
Lithium	*	0.0030		**0.0070**	mg/L	5	05/27/2025 16:40	239588
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 16:40	239588
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/27/2025 16:40	239588
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/27/2025 13:17	239623
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646
Radium-228	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051159
Client Project: FGDS Landfill
Report Date: 03-Jul-25
Lab ID: 25051159-003
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 05/22/2025 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**505.11**	ft	1	05/22/2025 12:45	R365854
Depth to water	*	-5.00		**28.01**	ft	1	05/22/2025 12:45	R365854
Depth to water from measuring point	*	0		**29.75**	ft	1	05/22/2025 12:45	R365854
Elevation of groundwater surface	*	0		**524.65**	ft	1	05/22/2025 12:45	R365854
Measuring Point Elevation	*	0		**554.40**	ft	1	05/22/2025 12:45	R365854
Measuring Point Height Above Land Surface	*	0		**1.74**	ft	1	05/22/2025 12:45	R365854
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.0**	NTU	1	05/22/2025 12:45	R365854
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.4**	°F	1	05/22/2025 12:45	R365854
SW-846 9040B								
pH, Field	*	1.00		**6.74**		1	05/22/2025 12:45	R365854
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1760**	µmhos/cm @25C	1	05/22/2025 12:45	R365854
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	200		**1480**	mg/L	10	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 19:51	R365493
Chloride	NELAP	5.00		**37.4**	mg/L	10	05/23/2025 19:51	R365493
Sulfate	NELAP	10.0		**526**	mg/L	10	05/23/2025 19:51	R365493
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.456**	mg/L	1	05/30/2025 9:24	239588
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/30/2025 9:24	239588
Boron	NELAP	0.0200		**11.1**	mg/L	1	05/30/2025 9:24	239588
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/30/2025 9:24	239588
Calcium	NELAP	0.100		**230**	mg/L	1	05/30/2025 9:24	239588
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:24	239588
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:24	239588
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/30/2025 9:24	239588
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/30/2025 9:24	239588
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 16:46	239588
Arsenic	NELAP	0.0010		**0.0027**	mg/L	5	05/27/2025 16:46	239588
Lithium	*	0.0030		**0.0062**	mg/L	5	05/27/2025 16:46	239588
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 16:46	239588
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/27/2025 16:46	239588
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/27/2025 13:19	239623
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646
Radium-228	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051159
Client Project: FGDS Landfill
Report Date: 03-Jul-25
Lab ID: 25051159-004
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 05/22/2025 13:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	05/22/2025 13:44	R365854
Depth to water	*	-5.00		**1.62**	ft	1	05/22/2025 13:44	R365854
Depth to water from measuring point	*	0		**4.92**	ft	1	05/22/2025 13:44	R365854
Elevation of groundwater surface	*	0		**525.06**	ft	1	05/22/2025 13:44	R365854
Measuring Point Elevation	*	0		**529.98**	ft	1	05/22/2025 13:44	R365854
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	05/22/2025 13:44	R365854
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.5**	NTU	1	05/22/2025 13:44	R365854
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.3**	°F	1	05/22/2025 13:44	R365854
SW-846 9040B								
pH, Field	*	1.00		**6.89**		1	05/22/2025 13:44	R365854
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1110**	µmhos/cm @25C	1	05/22/2025 13:44	R365854
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	100		**810**	mg/L	5	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 20:03	R365493
Chloride	NELAP	5.00		**29.5**	mg/L	10	05/23/2025 20:03	R365493
Sulfate	NELAP	10.0		**146**	mg/L	10	05/23/2025 20:03	R365493
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.647**	mg/L	1	05/30/2025 9:30	239588
Beryllium	NELAP	0.0005		**0.0006**	mg/L	1	05/30/2025 9:30	239588
Boron	NELAP	0.0200		**3.05**	mg/L	1	05/30/2025 9:30	239588
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/30/2025 9:30	239588
Calcium	NELAP	0.100		**148**	mg/L	1	05/30/2025 9:30	239588
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:30	239588
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:30	239588
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/30/2025 9:30	239588
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/30/2025 9:30	239588
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 17:14	239588
Arsenic	NELAP	0.0010		**0.0166**	mg/L	5	05/27/2025 17:14	239588
Lithium	*	0.0030		**0.0062**	mg/L	5	05/27/2025 17:14	239588
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 17:14	239588
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/27/2025 17:14	239588
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/27/2025 13:21	239623
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646
Radium-228	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051159
Client Project: FGDS Landfill
Report Date: 03-Jul-25
Lab ID: 25051159-005
Client Sample ID: P07D
Matrix: GROUNDWATER
Collection Date: 05/27/2025 10:04

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	05/27/2025 10:04	R365854
Depth to water	*	-5.00		**2.31**	ft	1	05/27/2025 10:04	R365854
Depth to water from measuring point	*	0		**5.31**	ft	1	05/27/2025 10:04	R365854
Elevation of groundwater surface	*	0		**522.94**	ft	1	05/27/2025 10:04	R365854
Measuring Point Elevation	*	0		**528.25**	ft	1	05/27/2025 10:04	R365854
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	05/27/2025 10:04	R365854
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.2**	NTU	1	05/27/2025 10:04	R365854
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.0**	°F	1	05/27/2025 10:04	R365854
SW-846 9040B								
pH, Field	*	1.00		**6.72**		1	05/27/2025 10:04	R365854
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1540**	µmhos/cm @25C	1	05/27/2025 10:04	R365854
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1110**	mg/L	1	06/02/2025 17:03	R365986
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/28/2025 12:47	R365685
Chloride	NELAP	5.00		**33.5**	mg/L	10	05/28/2025 12:47	R365685
Sulfate	NELAP	10.0		**307**	mg/L	10	05/28/2025 12:47	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.827**	mg/L	1	05/29/2025 19:18	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 19:18	239684
Boron	NELAP	0.0200		**5.28**	mg/L	1	05/29/2025 19:18	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 19:18	239684
Calcium	NELAP	0.100		**187**	mg/L	1	05/29/2025 19:18	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 19:18	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 19:18	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 19:18	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 19:18	239684
Sample result(s) for B exceed 10 times the CCB. Data is reportable per the TNI Standard.								
Contamination present in the CCB for Cr. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:38	239684
Arsenic	NELAP	0.0010		**0.0324**	mg/L	5	05/28/2025 16:38	239684
Lithium	*	0.0030		**0.0099**	mg/L	5	05/28/2025 16:38	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:38	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 16:38	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 16:02	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646
Radium-228	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25051159
Report Date: 03-Jul-25

Carrier: Daniel Crump

Received By: JMD

Completed by: Laura E Henson
On: 23-May-25

Reviewed by: Ellie Hopkins
On: 27-May-25

Pages to follow: Chain of custody 2 Extra pages included 23

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.5
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #101358. -JD/ lhenson - 5/23/2025 11:44:59 AM

Samples were received on 5/27/25 at 1535 on ice [13.1C - LTG#5]. Additional Nitric Acid (103505) was needed upon arrival at the laboratory for P07D. pH strip #101358. - EK/amberdilallo - 5/27/2025 4:06:13 PM

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 25051159

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 4.5 °C #9
Preserved in: [ ] LAB [X] FIELD
FOR LAB USE ONLY
LAB NOTES: 101358
JD 5/23/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25051159-001	R101		Groundwater	1	3								✓	✓	✓	✓	✓	✓
002	G121	5/22/25 1143	Groundwater	1	3								✓	✓	✓	✓	✓	✓
003	G122	5/22/25 1245	Groundwater	1	3								✓	✓	✓	✓	✓	✓
004	AW-2	5/22/25 1344	Groundwater	1	3								✓	✓	✓	✓	✓	✓
005	P07D		Groundwater	1	3								✓	✓	✓	✓	✓	✓
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
	5-22/1545		5/22/25 13:45

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 25051159

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ICE ☐ BLUE ICE ☐ NO ICE 13.1 °C 5
Preserved in: ☑ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: ph✓ 101358 Added HNO3 (103505) to both 1 liter P07D samples. EK 5/27/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
* 25051159-001	R101	5-27-25 1046	Groundwater	1	2								✓	✓	✓	✓	✓	✓
* 002	G121		Groundwater	1	2								✓	✓	✓	✓	✓	✓
* 003	G122		Groundwater	1	2								✓	✓	✓	✓	✓	✓
* 004	AW-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	P07D	5-27-25 1004	Groundwater	1	2								✓	✓	✓	✓	✓	✓
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															
			Groundwater															

Relinquished By	Date/Time	Received By	Date/Time
[signature]	5-27 / 1535	Emily Kossakoski	5/27/25 @ 1535

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Field Data Sheet

Project Name:	FGDS Landfill	**Monitoring Point:**	R101
Project Location:	Springfield, IL	**Sample ID:**	001
W.O. Number (s):	25051159	**Date (s):**	5/27/2025

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.

Name: Affiliation:

Weather Conditions

Temp: 62 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☑ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 10:17

Static Water Level: 6.88 feet below TOC

Total Depth: 35.27 feet below TOC

Water Column: 28.39 feet

Purging Activities

Purged By: JC Purge Date: 5/27/2025

Purge Method: Peristaltic Pump Well Diameter: 2"

Purge Volume Calculation (L): 28.39 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 7.00 L

Physical appearance of purge water: Clear Odor: None Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:18	0.0	250	purge start time						
10:25	1.7	↓	6.96	1,328.90	12.73	5.18	88.40	11.76	
10:28	2.5		6.90	1,328.50	12.68	4.72	88.50	9.21	
10:31	3.2		6.86	1,329.10	12.65	4.39	88.30	6.05	
10:34	4.0		6.83	1,329.90	12.65	4.13	88.30	6.27	
10:37	4.8		6.82	1,329.90	12.66	3.93	88.00	6.82	
10:40	5.5		6.81	1,330.10	12.65	3.77	87.70	8.03	
10:43	6.3		6.80	1,329.60	12.66	3.64	87.40	9.04	
10:46	7.0		6.79	1,330.40	12.72	3.53	87.30	10.24	

Sampling Activities

Sampled By: JC Sample Date/Time: 5/27/2025 10:46

Sample Method: Low Flow Sample Equipment: Peristaltic Pump

Sample Parameters: 6.79 pH 1,330.40 Spec. Cond. 12.72 Temp

Field Filtered: Yes Filter Type: Inline Disposable

Water Level: 10.17 feet below TOC Drawdown: 3.29 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Justin Colp **Date:** 5/27/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25051159
Monitoring Point: G121
Sample ID: 002
Date (s): 5/22/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 57 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 10:57
Static Water Level: 27.82 feet below TOC
Total Depth: 58.56 feet below TOC
Water Column: 30.74 feet

Purging Activities

Purged By: PY — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 30.74 ft. x 0.022 = 0.68 L x 3 Vol. = 2.04 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy — Odor: Moderate — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:16	0.0	222	purge start time						
11:31	3.3	↓	6.81	1,556.30	14.05	4.51	87.60	43.15	
11:34	4.0		6.80	1,555.90	14.11	4.21	89.10	41.96	
11:37	4.7		6.79	1,555.10	14.17	3.96	90.20	31.18	
11:40	5.3		6.79	1,557.20	14.34	3.75	90.90	26.58	
11:43	6.0		6.79	1,555.80	14.37	3.60	91.20	21.79	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/22/2025 11:43
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.79 pH — 1,555.80 Spec. Cond. — 14.37 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 28.12 feet below TOC — Drawdown: 0.30 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton K — **Date:** 5/22/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25051159
Monitoring Point: G122
Sample ID: 003
Date (s): 5/22/2025

Field Team Members

Name: Payton Yoch Affiliation: TekLab, Inc.
Name: Justin Colp Affiliation: TekLab, Inc.

Weather Conditions

Temp: 58 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 12:12
Static Water Level: 29.75 feet below TOC
Total Depth: 49.29 feet below TOC
Water Column: 19.54 feet

Purging Activities

Purged By: PY Purge Date: 5/22/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 19.54 ft. x 0.022 = 0.43 L x 3 Vol. = 1.29 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy Odor: Moderate Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:19	0.0	192	purge start time						
12:33	2.7	↓	6.79	1,744.90	16.43	6.07	100.00	10.46	
12:36	3.3		6.77	1,747.10	15.80	6.06	100.80	8.54	
12:39	3.8		6.76	1,752.30	15.16	6.06	101.40	6.78	
12:42	4.4		6.75	1,756.80	14.80	6.04	101.50	6.16	
12:45	5.0		6.74	1,760.80	14.69	6.03	101.20	6.00	

Sampling Activities

Sampled By: PY Sample Date/Time: 5/22/2025 12:45
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.74 pH 1,760.80 Spec. Cond. 14.69 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 29.78 feet below TOC Drawdown: 0.03 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton K **Date:** 5/22/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25051159
Monitoring Point: AW-2
Sample ID: 004
Date (s): 5/22/2025

Field Team Members

Name: Payton Yoch Affiliation: TekLab, Inc.
Name: Justin Colp Affiliation: TekLab, Inc.

Weather Conditions

Temp: 59 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 13:23
Static Water Level: 4.92 feet below TOC
Total Depth: 32.64 feet below TOC
Water Column: 27.72 feet

Purging Activities

Purged By: PY Purge Date: 5/22/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 27.72 ft. x 0.022 = 0.61 L x 3 Vol. = 1.83 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear Odor: Slight Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:20	0.0	250	purge start time						
13:32	3.0	↓	6.92	1,111.00	13.52	4.93	91.00	8.14	
13:35	3.8		6.90	1,110.90	13.53	4.50	91.70	8.53	
13:38	4.5		6.90	1,110.60	13.55	4.17	92.00	8.27	
13:41	5.3		6.89	1,110.80	13.51	3.92	92.10	8.36	
13:44	6.0		6.89	1,110.70	13.52	3.71	91.90	9.46	

Sampling Activities

Sampled By: PY Sample Date/Time: 5/22/2025 13:44
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.89 pH 1,110.70 Spec. Cond. 13.52 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 5.05 feet below TOC Drawdown: 0.13 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton K **Date:** 5/22/2025

Field Data Sheet

Project Name:	FGDS Landfill	**Monitoring Point:**	P07D
Project Location:	Springfield, IL	**Sample ID:**	005
W.O. Number (s):	25051159	**Date (s):**	5/27/2025

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.

Name: Affiliation:

Weather Conditions

Temp: 60 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☑ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

			Yes	No
Well Pad	Good	**Locks**		
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 9:24

Static Water Level: 5.31 feet below TOC

Total Depth: 32.54 feet below TOC

Water Column: 27.23 feet

Purging Activities

Purged By: JC Purge Date: 5/27/2025

Purge Method: Peristaltic Pump Well Diameter: 2"

Purge Volume Calculation (L): 27.23 ft. x 0.022 = 0.6 L x 3 Vol. = 1.8 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 5.00 L

Physical appearance of purge water: Clear Odor: None Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:24	0.0	125	purge start time						
9:31	0.9	↓	6.74	1,512.10	13.29	6.24	84.60	141.77	
9:34	1.3		6.68	1,532.30	13.26	5.52	86.50	94.37	
9:37	1.6		6.67	1,537.60	13.25	5.00	87.50	66.78	
9:40	2.0		6.67	1,539.00	13.18	4.60	88.00	40.75	
9:43	2.4		6.68	1,538.70	13.18	4.29	88.30	31.60	
9:46	2.8		6.68	1,539.00	13.19	4.04	88.60	23.85	
9:49	3.1		6.69	1,538.00	13.18	3.83	88.90	16.62	
9:52	3.5		6.70	1,538.40	13.18	3.65	89.20	12.54	
9:55	3.9		6.71	1,538.40	13.25	3.50	89.40	11.54	
9:58	4.3		6.71	1,538.30	13.26	3.39	89.60	9.94	
10:01	4.6		6.72	1,537.50	13.34	3.28	89.80	9.82	
10:04	5.0		6.72	1,538.40	13.36	3.19	89.90	8.15	

Sampling Activities

Sampled By: JC Sample Date/Time: 5/27/2025 10:04

Sample Method: Low Flow Sample Equipment: Peristaltic Pump

Sample Parameters: 6.72 pH 1,538.40 Spec. Cond. 13.36 Temp

Field Filtered: No Filter Type:

Water Level: 5.50 feet below TOC Drawdown: 0.19 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Justin Colp **Date:** 5/27/2025

Site Samping Event: FGDS Landfill
LIMS Workorder: 25051159
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 44716 Technician(s): Brett Gillihan Date: 5/27/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/27/25 8:17
7.0 Buffer	WC25047A	7.00	5/27/25 8:10
10.0 Buffer	WC240625A	10.00	5/27/25 8:26
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1413	5/27/25 8:36

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.23	5/27/25 8:43
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-BG	LCS	5/27/25 8:48	16.9	7.05	1,443	0.42		
CCV-3-BG	CCV	5/27/25 14:12	18.6	7.03	1,464	0.54		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25051159
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210760 Technician(s): justin colp Date: 5/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc250102a	4.00	5/21/25 9:19
7.0 Buffer	wc250407a	7.00	5/21/25 9:14
10.0 Buffer	wc240625a	10.00	5/21/25 9:24
LCS/CCV (7.0 Buffer)	wc240918a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/21/25 9:29

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.12	5/21/25 9:30
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	5/21/25 9:34	18.9	6.98	1,410	1.08		
CCV-1-JC	CCV	5/21/25 14:37	20	6.96	1,434	1.05		

Comments:

Field Meter ID: Pine 210760 Technician(s): Payton Yoch Date: 5/22/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/22/25 9:14
7.0 Buffer	WC250407A	7.00	5/22/25 9:09
10.0 Buffer	WC240625A	10.00	5/22/25 9:20
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/22/25 9:23

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.07	5/22/25 9:31
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-PY	LCS	5/22/25 9:38	17.3	7.05	1,412	1.07		
CCV-2-PY	CCV	5/22/25 14:14	18.5	6.98	1,415	1.08		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25051159
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210760 Technician(s): justin colp Date: 5/27/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/27/25 8:56
7.0 Buffer	WC250407A	7.00	5/27/25 8:50
10.0 Buffer	WC240625A	10.00	5/27/25 9:01
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/27/25 9:07

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.21	5/27/25 9:08
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-JC	LCS	5/27/25 9:11	19.2	6.96	1,407	1.24		
CCV-3-JC	CCV	5/27/25 14:15	21.9	7.02	1,404	1.31		

Comments:

Field Meter ID: Pine 210760 Technician(s): justin colp Date: 5/28/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/28/25 8:47
7.0 Buffer	WC250407A	7.00	5/28/25 8:43
10.0 Buffer	WC240625A	10.00	5/28/25 8:51
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/28/25 8:57

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.12	5/28/25 8:58
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4-JC	LCS	5/28/25 9:03	20.5	6.97	1,409	1.16		
CCV-4-JC	CCV	5/28/25 12:20	20.8	6.93	1,400	1.57		

Comments:

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

June 27, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10438
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 25051158

Dear Eric Staley:

TEKLAB, INC received 22 samples on 5/28/2025 1:50:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25051158
Report Date: 27-Jun-25

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
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Accreditations	6
Laboratory Results	7
Receiving Check List	29
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25051158

Client Project: Ash Pond Monitoring Wells **Report Date:** 27-Jun-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25051158
Report Date: 27-Jun-25

Cooler Receipt Temp: 5.9 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 & -228 analysis was performed by Eurofins St. Louis. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25051158
Report Date: 27-Jun-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10438	NELAP	7/31/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2026	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2026	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2026	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 05/21/2025 10:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	05/21/2025 10:20	R365853
Depth to water	*	-5.00		**6.57**	ft	1	05/21/2025 10:20	R365853
Depth to water from measuring point	*	0		**9.27**	ft	1	05/21/2025 10:20	R365853
Elevation of groundwater surface	*	0		**530.23**	ft	1	05/21/2025 10:20	R365853
Measuring Point Elevation	*	0		**539.50**	ft	1	05/21/2025 10:20	R365853
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	05/21/2025 10:20	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**5.0**	NTU	1	05/21/2025 10:20	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.6**	°F	1	05/21/2025 10:20	R365853
SW-846 9040B								
pH, Field	*	1.00		**7.03**		1	05/21/2025 10:20	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**650**	µmhos/cm @25C	1	05/21/2025 10:20	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	50		**385**	mg/L	2.5	05/27/2025 15:58	R365834
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/22/2025 12:48	R365418
Chloride	NELAP	5.00		**25.0**	mg/L	10	05/22/2025 12:48	R365418
Sulfate	NELAP	10.0		**ND**	mg/L	10	05/22/2025 12:48	R365418
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.142**	mg/L	1	05/29/2025 8:50	239494
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 8:50	239494
Boron	NELAP	0.0200		**0.153**	mg/L	1	05/29/2025 8:50	239494
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 8:50	239494
Calcium	NELAP	0.100	B	**64.9**	mg/L	1	05/29/2025 8:50	239494
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:50	239494
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:50	239494
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 8:50	239494
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 8:50	239494
Sample result for Ca exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:05	239494
Arsenic	NELAP	0.0010		**0.0808**	mg/L	5	05/27/2025 21:20	239494
Lithium	*	0.0030		**0.0051**	mg/L	5	05/27/2025 21:20	239494
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:05	239494
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 19:05	239494
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2025 17:26	239492
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-002
Client Sample ID: AP-1
Matrix: GROUNDWATER
Collection Date: 05/28/2025 9:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**504.29**	ft	1	05/28/2025 9:56	R365853
Depth to water	*	-5.00		**7.52**	ft	1	05/28/2025 9:56	R365853
Depth to water from measuring point	*	0		**9.79**	ft	1	05/28/2025 9:56	R365853
Elevation of groundwater surface	*	0		**525.58**	ft	1	05/28/2025 9:56	R365853
Measuring Point Elevation	*	0		**535.37**	ft	1	05/28/2025 9:56	R365853
Measuring Point Height Above Land Surface	*	0		**2.27**	ft	1	05/28/2025 9:56	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.7**	NTU	1	05/28/2025 9:56	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.2**	°F	1	05/28/2025 9:56	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.42**		1	05/28/2025 9:56	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2100**	µmhos/cm @25C	1	05/28/2025 9:56	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1740**	mg/L	1	06/04/2025 8:44	R366213
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/29/2025 8:47	R365636
Chloride	NELAP	5.00		**50.1**	mg/L	10	05/29/2025 8:47	R365636
Sulfate	NELAP	10.0		**858**	mg/L	10	05/29/2025 8:47	R365636
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.262**	mg/L	1	06/03/2025 12:47	239769
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	06/03/2025 12:47	239769
Boron	NELAP	0.200		**20.8**	mg/L	10	06/04/2025 12:30	239769
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	06/03/2025 12:47	239769
Calcium	NELAP	0.100		**228**	mg/L	1	06/03/2025 12:47	239769
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2025 12:47	239769
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2025 12:47	239769
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	06/03/2025 12:47	239769
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	06/03/2025 12:47	239769
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/30/2025 13:09	239769
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	06/03/2025 0:45	239769
Lithium	*	0.0030		**0.0102**	mg/L	5	05/30/2025 13:09	239769
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/30/2025 13:09	239769
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/30/2025 13:09	239769
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/30/2025 11:47	239778
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 05/21/2025 13:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	05/21/2025 13:33	R365853
Depth to water	*	-5.00		**5.29**	ft	1	05/21/2025 13:33	R365853
Depth to water from measuring point	*	0		**7.79**	ft	1	05/21/2025 13:33	R365853
Elevation of groundwater surface	*	0		**528.31**	ft	1	05/21/2025 13:33	R365853
Measuring Point Elevation	*	0		**536.10**	ft	1	05/21/2025 13:33	R365853
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	05/21/2025 13:33	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**24**	NTU	1	05/21/2025 13:33	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.4**	°F	1	05/21/2025 13:33	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.45**		1	05/21/2025 13:33	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1180**	µmhos/cm @25C	1	05/21/2025 13:33	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1100**	mg/L	1	05/27/2025 15:58	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/22/2025 13:01	R365418
Chloride	NELAP	5.00		**36.2**	mg/L	10	05/22/2025 13:01	R365418
Sulfate	NELAP	10.0		**367**	mg/L	10	05/22/2025 13:01	R365418
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0654**	mg/L	1	05/29/2025 8:50	239494
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 8:50	239494
Boron	NELAP	0.0200		**3.12**	mg/L	1	05/29/2025 8:50	239494
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 8:50	239494
Calcium	NELAP	0.100	B	**183**	mg/L	1	05/29/2025 8:50	239494
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:50	239494
Cobalt	NELAP	0.0050		**0.0095**	mg/L	1	05/29/2025 8:50	239494
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 8:50	239494
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 8:50	239494
Sample result for Ca exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:11	239494
Arsenic	NELAP	0.0010		**0.0013**	mg/L	5	05/27/2025 21:26	239494
Lithium	*	0.0030		**0.0059**	mg/L	5	05/27/2025 21:26	239494
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:11	239494
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 19:11	239494
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2025 17:28	239492
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 05/21/2025 12:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	05/21/2025 12:56	R365853
Depth to water	*	-5.00		**5.12**	ft	1	05/21/2025 12:56	R365853
Depth to water from measuring point	*	0		**7.67**	ft	1	05/21/2025 12:56	R365853
Elevation of groundwater surface	*	0		**527.58**	ft	1	05/21/2025 12:56	R365853
Measuring Point Elevation	*	0		**535.25**	ft	1	05/21/2025 12:56	R365853
Measuring Point Height Above Land Surface	*	0		**2.55**	ft	1	05/21/2025 12:56	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.2**	NTU	1	05/21/2025 12:56	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.8**	°F	1	05/21/2025 12:56	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.53**		1	05/21/2025 12:56	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1130**	µmhos/cm @25C	1	05/21/2025 12:56	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	100		**1180**	mg/L	5	05/27/2025 15:59	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/22/2025 13:13	R365418
Chloride	NELAP	5.00		**61.7**	mg/L	10	05/22/2025 13:13	R365418
Sulfate	NELAP	10.0		**505**	mg/L	10	05/22/2025 13:13	R365418
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.106**	mg/L	1	05/29/2025 8:51	239494
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 8:51	239494
Boron	NELAP	0.0200		**12.9**	mg/L	1	05/29/2025 8:51	239494
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 8:51	239494
Calcium	NELAP	0.100	B	**171**	mg/L	1	05/29/2025 8:51	239494
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:51	239494
Cobalt	NELAP	0.0050		**0.0081**	mg/L	1	05/30/2025 8:29	239494
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 8:51	239494
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 8:51	239494
Sample result for Ca exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:17	239494
Arsenic	NELAP	0.0010		**0.0103**	mg/L	5	05/27/2025 21:31	239494
Lithium	*	0.0030		**0.0046**	mg/L	5	05/27/2025 21:31	239494
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:17	239494
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 19:17	239494
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2025 17:35	239492
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-005
Client Sample ID: AP-4
Matrix: GROUNDWATER
Collection Date: 05/28/2025 11:31

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.19**	ft	1	05/28/2025 11:31	R365853
Depth to water	*	-5.00		**7.24**	ft	1	05/28/2025 11:31	R365853
Depth to water from measuring point	*	0		**10.38**	ft	1	05/28/2025 11:31	R365853
Elevation of groundwater surface	*	0		**545.22**	ft	1	05/28/2025 11:31	R365853
Measuring Point Elevation	*	0		**555.60**	ft	1	05/28/2025 11:31	R365853
Measuring Point Height Above Land Surface	*	0		**3.14**	ft	1	05/28/2025 11:31	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**170**	NTU	1	05/28/2025 11:31	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.6**	°F	1	05/28/2025 11:31	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.69**		1	05/28/2025 11:31	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**979**	µmhos/cm @25C	1	05/28/2025 11:31	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**528**	mg/L	1	06/04/2025 8:44	R366213
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/29/2025 9:00	R365636
Chloride	NELAP	5.00		**12.1**	mg/L	10	05/29/2025 9:00	R365636
Sulfate	NELAP	10.0		**ND**	mg/L	10	05/29/2025 9:00	R365636
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.434**	mg/L	1	06/03/2025 12:48	239769
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	06/03/2025 12:48	239769
Boron	NELAP	0.0200		**0.0772**	mg/L	1	06/03/2025 12:48	239769
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	06/03/2025 12:48	239769
Calcium	NELAP	0.100		**113**	mg/L	1	06/03/2025 12:48	239769
Chromium	NELAP	0.0050		**0.0081**	mg/L	1	06/03/2025 12:48	239769
Cobalt	NELAP	0.0050		**0.0083**	mg/L	1	06/03/2025 12:48	239769
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	06/04/2025 12:31	239769
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	06/03/2025 12:48	239769
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/30/2025 13:15	239769
Arsenic	NELAP	0.0010		**0.0223**	mg/L	5	06/03/2025 0:51	239769
Lithium	*	0.0030		**0.0117**	mg/L	5	05/30/2025 13:15	239769
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/30/2025 13:15	239769
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/30/2025 13:15	239769
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/30/2025 11:49	239778
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/24/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-006
Client Sample ID: AP-5
Matrix: GROUNDWATER
Collection Date: 05/21/2025 10:31

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**552.63**	ft	1	05/21/2025 10:31	R365853
Depth to water	*	-5.00		**12.11**	ft	1	05/21/2025 10:31	R365853
Depth to water from measuring point	*	0		**14.41**	ft	1	05/21/2025 10:31	R365853
Elevation of groundwater surface	*	0		**569.49**	ft	1	05/21/2025 10:31	R365853
Measuring Point Elevation	*	0		**583.90**	ft	1	05/21/2025 10:31	R365853
Measuring Point Height Above Land Surface	*	0		**2.30**	ft	1	05/21/2025 10:31	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.3**	NTU	1	05/21/2025 10:31	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.3**	°F	1	05/21/2025 10:31	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.67**		1	05/21/2025 10:31	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**834**	µmhos/cm @25C	1	05/21/2025 10:31	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**514**	mg/L	1	05/27/2025 16:00	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/22/2025 13:26	R365418
Chloride	NELAP	5.00		**9.13**	mg/L	10	05/22/2025 13:26	R365418
Sulfate	NELAP	10.0		**63.6**	mg/L	10	05/22/2025 13:26	R365418
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0571**	mg/L	1	05/29/2025 8:52	239494
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 8:52	239494
Boron	NELAP	0.0200		**0.0521**	mg/L	1	05/29/2025 8:52	239494
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 8:52	239494
Calcium	NELAP	0.100	B	**97.6**	mg/L	1	05/29/2025 8:52	239494
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:52	239494
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:52	239494
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 8:52	239494
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 8:52	239494
Sample result for Ca exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:23	239494
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 21:37	239494
Lithium	*	0.0030		**0.0044**	mg/L	5	05/27/2025 21:37	239494
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:23	239494
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 19:23	239494
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2025 17:42	239492
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-007
Client Sample ID: AP-6
Matrix: GROUNDWATER
Collection Date: 05/21/2025 14:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**498.20**	ft	1	05/21/2025 14:16	R365853
Depth to water	*	-5.00		**5.35**	ft	1	05/21/2025 14:16	R365853
Depth to water from measuring point	*	0		**7.77**	ft	1	05/21/2025 14:16	R365853
Elevation of groundwater surface	*	0		**530.05**	ft	1	05/21/2025 14:16	R365853
Measuring Point Elevation	*	0		**537.82**	ft	1	05/21/2025 14:16	R365853
Measuring Point Height Above Land Surface	*	0		**2.42**	ft	1	05/21/2025 14:16	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.0**	NTU	1	05/21/2025 14:16	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.7**	°F	1	05/21/2025 14:16	R365853
SW-846 9040B								
pH, Field	*	1.00		**7.00**		1	05/21/2025 14:16	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**684**	µmhos/cm @25C	1	05/21/2025 14:16	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**432**	mg/L	1	05/27/2025 16:00	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**0.58**	mg/L	10	05/22/2025 13:39	R365418
Chloride	NELAP	5.00		**32.6**	mg/L	10	05/22/2025 13:39	R365418
Sulfate	NELAP	10.0		**ND**	mg/L	10	05/22/2025 13:39	R365418
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.154**	mg/L	1	05/29/2025 8:53	239494
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 8:53	239494
Boron	NELAP	0.0200		**0.407**	mg/L	1	05/29/2025 8:53	239494
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 8:53	239494
Calcium	NELAP	0.100	B	**65.1**	mg/L	1	05/29/2025 8:53	239494
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:53	239494
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:53	239494
Lead	NELAP	0.0075		**0.0230**	mg/L	1	05/29/2025 8:53	239494
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 8:53	239494
Sample result for Ca exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:29	239494
Arsenic	NELAP	0.0010		**0.0037**	mg/L	5	05/27/2025 21:42	239494
Lithium	*	0.0030		**0.0073**	mg/L	5	05/27/2025 21:42	239494
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:29	239494
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 19:29	239494
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2025 17:44	239492
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 05/27/2025 11:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	05/27/2025 11:57	R365853
Depth to water	*	-5.00		**7.98**	ft	1	05/27/2025 11:57	R365853
Depth to water from measuring point	*	0		**10.64**	ft	1	05/27/2025 11:57	R365853
Elevation of groundwater surface	*	0		**528.38**	ft	1	05/27/2025 11:57	R365853
Measuring Point Elevation	*	0		**539.02**	ft	1	05/27/2025 11:57	R365853
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	05/27/2025 11:57	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.6**	NTU	1	05/27/2025 11:57	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.4**	°F	1	05/27/2025 11:57	R365853
SW-846 9040B								
pH, Field	*	1.00		**7.14**		1	05/27/2025 11:57	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**770**	µmhos/cm @25C	1	05/27/2025 11:57	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**652**	mg/L	1	06/03/2025 6:58	R366064
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**0.55**	mg/L	10	05/28/2025 10:27	R365685
Chloride	NELAP	5.00		**81.4**	mg/L	10	05/28/2025 10:27	R365685
Sulfate	NELAP	10.0		**ND**	mg/L	10	05/28/2025 10:27	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.137**	mg/L	1	05/29/2025 14:54	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 14:54	239684
Boron	NELAP	0.0200		**0.393**	mg/L	1	05/29/2025 14:54	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 14:54	239684
Calcium	NELAP	0.100		**58.4**	mg/L	1	05/29/2025 14:54	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 14:54	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 14:54	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 14:54	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 14:54	239684
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 15:19	239684
Arsenic	NELAP	0.0010		**0.0289**	mg/L	5	05/28/2025 15:19	239684
Lithium	*	0.0030		**0.0106**	mg/L	5	05/28/2025 15:19	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 15:19	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 15:19	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 15:37	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 05/21/2025 11:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	05/21/2025 11:12	R365853
Depth to water	*	-5.00		**1.11**	ft	1	05/21/2025 11:12	R365853
Depth to water from measuring point	*	0		**4.01**	ft	1	05/21/2025 11:12	R365853
Elevation of groundwater surface	*	0		**533.19**	ft	1	05/21/2025 11:12	R365853
Measuring Point Elevation	*	0		**537.20**	ft	1	05/21/2025 11:12	R365853
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	05/21/2025 11:12	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**37**	NTU	1	05/21/2025 11:12	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.3**	°F	1	05/21/2025 11:12	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.78**		1	05/21/2025 11:12	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**876**	µmhos/cm @25C	1	05/21/2025 11:12	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	100		**580**	mg/L	5	05/27/2025 16:00	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/22/2025 13:52	R365418
Chloride	NELAP	5.00		**22.6**	mg/L	10	05/22/2025 13:52	R365418
Sulfate	NELAP	10.0		**ND**	mg/L	10	05/22/2025 13:52	R365418
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.415**	mg/L	1	05/29/2025 8:53	239494
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 8:53	239494
Boron	NELAP	0.0200		**0.963**	mg/L	1	05/29/2025 8:53	239494
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 8:53	239494
Calcium	NELAP	0.100	B	**97.7**	mg/L	1	05/29/2025 8:53	239494
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:53	239494
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:53	239494
Lead	NELAP	0.0075		**0.132**	mg/L	1	05/29/2025 8:53	239494
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 8:53	239494
Sample result for Ca exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:35	239494
Arsenic	NELAP	0.0010		**0.0446**	mg/L	5	05/27/2025 21:48	239494
Lithium	*	0.0030		**0.0072**	mg/L	5	05/27/2025 21:48	239494
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:35	239494
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 19:35	239494
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2025 17:47	239492
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-010
Client Sample ID: AP-9
Matrix: GROUNDWATER
Collection Date: 05/27/2025 10:24

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.70**	ft	1	05/27/2025 10:24	R365853
Depth to water	*	-5.00		**9.39**	ft	1	05/27/2025 10:24	R365853
Depth to water from measuring point	*	0		**12.49**	ft	1	05/27/2025 10:24	R365853
Elevation of groundwater surface	*	0		**527.81**	ft	1	05/27/2025 10:24	R365853
Measuring Point Elevation	*	0		**540.30**	ft	1	05/27/2025 10:24	R365853
Measuring Point Height Above Land Surface	*	0		**3.10**	ft	1	05/27/2025 10:24	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**45**	NTU	1	05/27/2025 10:24	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.6**	°F	1	05/27/2025 10:24	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.79**		1	05/27/2025 10:24	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**963**	µmhos/cm @25C	1	05/27/2025 10:24	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	33		**681**	mg/L	1.67	06/03/2025 6:58	R366064
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/28/2025 10:38	R365685
Chloride	NELAP	5.00		**27.0**	mg/L	10	05/28/2025 10:38	R365685
Sulfate	NELAP	10.0		**17.9**	mg/L	10	05/28/2025 10:38	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.322**	mg/L	1	05/29/2025 14:28	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 14:28	239684
Boron	NELAP	0.0200		**0.0887**	mg/L	1	05/29/2025 14:28	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 14:28	239684
Calcium	NELAP	0.100	S	**99.4**	mg/L	1	05/29/2025 14:28	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 14:28	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 14:28	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 14:28	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 14:28	239684
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 15:25	239684
Arsenic	NELAP	0.0010		**0.0014**	mg/L	5	05/28/2025 15:25	239684
Lithium	*	0.0030		**0.0064**	mg/L	5	05/28/2025 15:25	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 15:25	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 15:25	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 15:39	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-011
Client Sample ID: AP-10
Matrix: GROUNDWATER
Collection Date: 05/21/2025 12:04

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**499.43**	ft	1	05/21/2025 12:04	R365853
Depth to water	*	-5.00		**0.82**	ft	1	05/21/2025 12:04	R365853
Depth to water from measuring point	*	0		**3.92**	ft	1	05/21/2025 12:04	R365853
Elevation of groundwater surface	*	0		**533.58**	ft	1	05/21/2025 12:04	R365853
Measuring Point Elevation	*	0		**537.50**	ft	1	05/21/2025 12:04	R365853
Measuring Point Height Above Land Surface	*	0		**3.10**	ft	1	05/21/2025 12:04	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**140**	NTU	1	05/21/2025 12:04	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.2**	°F	1	05/21/2025 12:04	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.63**		1	05/21/2025 12:04	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1100**	µmhos/cm @25C	1	05/21/2025 12:04	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	100		**820**	mg/L	5	05/27/2025 16:00	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/22/2025 14:42	R365418
Chloride	NELAP	5.00		**24.6**	mg/L	10	05/22/2025 14:42	R365418
Sulfate	NELAP	10.0		**94.9**	mg/L	10	05/22/2025 14:42	R365418
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.765**	mg/L	1	05/29/2025 8:54	239494
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 8:54	239494
Boron	NELAP	0.0200		**4.50**	mg/L	1	05/29/2025 8:54	239494
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 8:54	239494
Calcium	NELAP	0.100	B	**143**	mg/L	1	05/29/2025 8:54	239494
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:54	239494
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 8:54	239494
Lead	NELAP	0.0075		**0.0621**	mg/L	1	05/29/2025 8:54	239494
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 8:54	239494
Sample result for Ca exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 20:48	239494
Arsenic	NELAP	0.0010		**0.0015**	mg/L	5	05/27/2025 22:33	239494
Lithium	*	0.0030		**0.0107**	mg/L	5	05/27/2025 22:33	239494
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 20:48	239494
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 20:48	239494
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2025 17:49	239492
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-012
Client Sample ID: AP-11
Matrix: GROUNDWATER
Collection Date: 05/22/2025 10:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**515.15**	ft	1	05/22/2025 10:55	R365853
Depth to water	*	-5.00		**9.23**	ft	1	05/22/2025 10:55	R365853
Depth to water from measuring point	*	0		**12.03**	ft	1	05/22/2025 10:55	R365853
Elevation of groundwater surface	*	0		**526.07**	ft	1	05/22/2025 10:55	R365853
Measuring Point Elevation	*	0		**538.10**	ft	1	05/22/2025 10:55	R365853
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	05/22/2025 10:55	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.9**	NTU	1	05/22/2025 10:55	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.5**	°F	1	05/22/2025 10:55	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.53**		1	05/22/2025 10:55	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1110**	µmhos/cm @25C	1	05/22/2025 10:55	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**784**	mg/L	1	05/27/2025 16:00	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 11:34	R365491
Chloride	NELAP	5.00		**129**	mg/L	10	05/23/2025 11:34	R365491
Sulfate	NELAP	10.0		**84.6**	mg/L	10	05/23/2025 11:34	R365491
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.140**	mg/L	1	05/29/2025 15:54	239543
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 15:54	239543
Boron	NELAP	0.0200		**0.273**	mg/L	1	05/29/2025 15:54	239543
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 15:54	239543
Calcium	NELAP	0.100		**160**	mg/L	1	05/29/2025 15:54	239543
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:54	239543
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:54	239543
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 15:54	239543
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 15:54	239543
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 11:30	239543
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 11:30	239543
Lithium	*	0.0030		**0.0034**	mg/L	5	05/27/2025 11:30	239543
Selenium	NELAP	0.0010		**0.0049**	mg/L	5	05/27/2025 11:30	239543
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/23/2025 13:35	239543
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/23/2025 14:29	239545
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-013
Client Sample ID: AP-12
Matrix: GROUNDWATER
Collection Date: 05/22/2025 11:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**510.30**	ft	1	05/22/2025 11:38	R365853
Depth to water	*	-5.00		**12.26**	ft	1	05/22/2025 11:38	R365853
Depth to water from measuring point	*	0		**15.16**	ft	1	05/22/2025 11:38	R365853
Elevation of groundwater surface	*	0		**525.54**	ft	1	05/22/2025 11:38	R365853
Measuring Point Elevation	*	0		**540.70**	ft	1	05/22/2025 11:38	R365853
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	05/22/2025 11:38	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**98**	NTU	1	05/22/2025 11:38	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.2**	°F	1	05/22/2025 11:38	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.50**		1	05/22/2025 11:38	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1330**	µmhos/cm @25C	1	05/22/2025 11:38	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	100		**1190**	mg/L	5	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 12:12	R365491
Chloride	NELAP	5.00		**113**	mg/L	10	05/23/2025 12:12	R365491
Sulfate	NELAP	10.0		**416**	mg/L	10	05/23/2025 12:12	R365491
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0575**	mg/L	1	05/29/2025 15:55	239543
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 15:55	239543
Boron	NELAP	0.0200		**0.0205**	mg/L	1	05/29/2025 15:55	239543
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 15:55	239543
Calcium	NELAP	0.100		**204**	mg/L	1	05/29/2025 15:55	239543
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:55	239543
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:55	239543
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 15:55	239543
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 15:55	239543
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 11:36	239543
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 11:36	239543
Lithium	*	0.0030		**0.0056**	mg/L	5	05/27/2025 11:36	239543
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 11:36	239543
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/23/2025 13:41	239543
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/23/2025 14:31	239545
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-014
Client Sample ID: AP-13
Matrix: GROUNDWATER
Collection Date: 05/22/2025 13:07

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.00**	ft	1	05/22/2025 13:07	R365853
Depth to water	*	-5.00		**11.33**	ft	1	05/22/2025 13:07	R365853
Depth to water from measuring point	*	0		**14.73**	ft	1	05/22/2025 13:07	R365853
Elevation of groundwater surface	*	0		**527.27**	ft	1	05/22/2025 13:07	R365853
Measuring Point Elevation	*	0		**542.00**	ft	1	05/22/2025 13:07	R365853
Measuring Point Height Above Land Surface	*	0		**3.40**	ft	1	05/22/2025 13:07	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**25**	NTU	1	05/22/2025 13:07	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.6**	°F	1	05/22/2025 13:07	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.68**		1	05/22/2025 13:07	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**755**	µmhos/cm @25C	1	05/22/2025 13:07	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	50		**595**	mg/L	2.5	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 13:03	R365491
Chloride	NELAP	5.00		**24.7**	mg/L	10	05/23/2025 13:03	R365491
Sulfate	NELAP	10.0		**124**	mg/L	10	05/23/2025 13:03	R365491
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.127**	mg/L	1	05/29/2025 15:56	239543
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 15:56	239543
Boron	NELAP	0.0200		**0.0276**	mg/L	1	05/29/2025 15:56	239543
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 15:56	239543
Calcium	NELAP	0.100		**114**	mg/L	1	05/29/2025 15:56	239543
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:56	239543
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:56	239543
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 15:56	239543
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 15:56	239543
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:09	239543
Arsenic	NELAP	0.0010		**0.0032**	mg/L	5	05/27/2025 12:09	239543
Lithium	*	0.0030		**0.0107**	mg/L	5	05/27/2025 12:09	239543
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:09	239543
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/23/2025 13:47	239543
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/23/2025 14:38	239545
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-015
Client Sample ID: AP-14
Matrix: GROUNDWATER
Collection Date: 05/27/2025 13:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**508.40**	ft	1	05/27/2025 13:44	R365853
Depth to water	*	-5.00		**-0.08**	ft	1	05/27/2025 13:44	R365853
Depth to water from measuring point	*	0		**2.72**	ft	1	05/27/2025 13:44	R365853
Elevation of groundwater surface	*	0		**536.88**	ft	1	05/27/2025 13:44	R365853
Measuring Point Elevation	*	0		**539.60**	ft	1	05/27/2025 13:44	R365853
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	05/27/2025 13:44	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.2**	NTU	1	05/27/2025 13:44	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.8**	°F	1	05/27/2025 13:44	R365853
SW-846 9040B								
pH, Field	*	1.00		**7.02**		1	05/27/2025 13:44	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2020**	µmhos/cm @25C	1	05/27/2025 13:44	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	33		**1620**	mg/L	1.67	06/03/2025 6:58	R366064
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/28/2025 11:25	R365685
Chloride	NELAP	5.00		**105**	mg/L	10	05/28/2025 11:25	R365685
Sulfate	NELAP	10.0		**909**	mg/L	10	05/28/2025 11:25	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0384**	mg/L	1	05/29/2025 14:55	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 14:55	239684
Boron	NELAP	0.200		**21.7**	mg/L	10	06/02/2025 22:21	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 14:55	239684
Calcium	NELAP	0.100		**276**	mg/L	1	05/29/2025 14:55	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 14:55	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 14:55	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 14:55	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 14:55	239684
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:08	239684
Arsenic	NELAP	0.0010		**0.0017**	mg/L	5	05/28/2025 16:08	239684
Lithium	*	0.0030		**0.0073**	mg/L	5	05/28/2025 16:08	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:08	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 16:08	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 15:46	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-016
Client Sample ID: T-1
Matrix: GROUNDWATER
Collection Date: 05/22/2025 13:50

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**512.70**	ft	1	05/22/2025 13:50	R365853
Depth to water	*	-5.00		**10.53**	ft	1	05/22/2025 13:50	R365853
Depth to water from measuring point	*	0		**10.86**	ft	1	05/22/2025 13:50	R365853
Elevation of groundwater surface	*	0		**524.79**	ft	1	05/22/2025 13:50	R365853
Measuring Point Elevation	*	0		**535.65**	ft	1	05/22/2025 13:50	R365853
Measuring Point Height Above Land Surface	*	0		**0.33**	ft	1	05/22/2025 13:50	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**24**	NTU	1	05/22/2025 13:50	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.1**	°F	1	05/22/2025 13:50	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.58**		1	05/22/2025 13:50	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1280**	µmhos/cm @25C	1	05/22/2025 13:50	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**962**	mg/L	1	05/27/2025 16:01	R365834
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 13:16	R365491
Chloride	NELAP	5.00		**232**	mg/L	10	05/23/2025 13:16	R365491
Sulfate	NELAP	10.0		**148**	mg/L	10	05/23/2025 13:16	R365491
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0586**	mg/L	1	05/29/2025 15:56	239543
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 15:56	239543
Boron	NELAP	0.0200		**0.163**	mg/L	1	05/29/2025 15:56	239543
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 15:56	239543
Calcium	NELAP	0.100		**165**	mg/L	1	05/29/2025 15:56	239543
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:56	239543
Cobalt	NELAP	0.0050		**0.0055**	mg/L	1	05/29/2025 15:56	239543
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 15:56	239543
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 15:56	239543
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:14	239543
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:14	239543
Lithium	*	0.0030		**0.0142**	mg/L	5	05/27/2025 12:14	239543
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:14	239543
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/23/2025 14:17	239543
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/23/2025 14:40	239545
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-017
Client Sample ID: T-2
Matrix: GROUNDWATER
Collection Date: 05/22/2025 12:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**515.18**	ft	1	05/22/2025 12:19	R365853
Depth to water	*	-5.00		**21.43**	ft	1	05/22/2025 12:19	R365853
Depth to water from measuring point	*	0		**23.83**	ft	1	05/22/2025 12:19	R365853
Elevation of groundwater surface	*	0		**525.79**	ft	1	05/22/2025 12:19	R365853
Measuring Point Elevation	*	0		**549.62**	ft	1	05/22/2025 12:19	R365853
Measuring Point Height Above Land Surface	*	0		**2.40**	ft	1	05/22/2025 12:19	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**17**	NTU	1	05/22/2025 12:19	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.1**	°F	1	05/22/2025 12:19	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.55**		1	05/22/2025 12:19	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1740**	µmhos/cm @25C	1	05/22/2025 12:19	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	50		**1550**	mg/L	2.5	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 13:28	R365491
Chloride	NELAP	5.00		**522**	mg/L	10	05/23/2025 13:28	R365491
Sulfate	NELAP	10.0		**143**	mg/L	10	05/23/2025 13:28	R365491
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.226**	mg/L	1	05/29/2025 16:02	239543
Beryllium	NELAP	0.0005		**0.0005**	mg/L	1	05/29/2025 16:02	239543
Boron	NELAP	0.0200		**0.0507**	mg/L	1	05/29/2025 16:02	239543
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 16:02	239543
Calcium	NELAP	0.100		**231**	mg/L	1	05/29/2025 16:02	239543
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 16:02	239543
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	06/03/2025 10:13	239543
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 16:02	239543
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 16:02	239543
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:20	239543
Arsenic	NELAP	0.0010		**0.0056**	mg/L	5	05/27/2025 12:20	239543
Lithium	*	0.0030		**0.0320**	mg/L	5	05/27/2025 12:20	239543
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:20	239543
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/23/2025 14:23	239543
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/23/2025 14:43	239545
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

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Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-018
Client Sample ID: T-4
Matrix: GROUNDWATER
Collection Date: 05/27/2025 11:04

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**521.52**	ft	1	05/27/2025 11:04	R365853
Depth to water	*	-5.00		**13.26**	ft	1	05/27/2025 11:04	R365853
Depth to water from measuring point	*	0		**15.64**	ft	1	05/27/2025 11:04	R365853
Elevation of groundwater surface	*	0		**533.30**	ft	1	05/27/2025 11:04	R365853
Measuring Point Elevation	*	0		**548.94**	ft	1	05/27/2025 11:04	R365853
Measuring Point Height Above Land Surface	*	0		**2.38**	ft	1	05/27/2025 11:04	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**23**	NTU	1	05/27/2025 11:04	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.2**	°F	1	05/27/2025 11:04	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.63**		1	05/27/2025 11:04	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**641**	µmhos/cm @25C	1	05/27/2025 11:04	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	33		**478**	mg/L	1.67	06/03/2025 6:59	R366064
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/28/2025 11:37	R365685
Chloride	NELAP	5.00		**ND**	mg/L	10	05/28/2025 11:37	R365685
Sulfate	NELAP	10.0		**101**	mg/L	10	05/28/2025 11:37	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0345**	mg/L	1	05/29/2025 14:56	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 14:56	239684
Boron	NELAP	0.0200		**0.0577**	mg/L	1	05/29/2025 14:56	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 14:56	239684
Calcium	NELAP	0.100		**72.8**	mg/L	1	05/29/2025 14:56	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 14:56	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 14:56	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 14:56	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 14:56	239684
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:14	239684
Arsenic	NELAP	0.0010		**0.0039**	mg/L	5	05/28/2025 16:14	239684
Lithium	*	0.0030		**0.0158**	mg/L	5	05/28/2025 16:14	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:14	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 16:14	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 15:48	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-019
Client Sample ID: T-5
Matrix: GROUNDWATER
Collection Date: 05/27/2025 13:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**518.32**	ft	1	05/27/2025 13:23	R365853
Depth to water	*	-5.00		**6.06**	ft	1	05/27/2025 13:23	R365853
Depth to water from measuring point	*	0		**8.57**	ft	1	05/27/2025 13:23	R365853
Elevation of groundwater surface	*	0		**532.09**	ft	1	05/27/2025 13:23	R365853
Measuring Point Elevation	*	0		**540.66**	ft	1	05/27/2025 13:23	R365853
Measuring Point Height Above Land Surface	*	0		**2.51**	ft	1	05/27/2025 13:23	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.9**	NTU	1	05/27/2025 13:23	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.7**	°F	1	05/27/2025 13:23	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.77**		1	05/27/2025 13:23	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**536**	µmhos/cm @25C	1	05/27/2025 13:23	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**428**	mg/L	1	06/03/2025 6:59	R366064
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/28/2025 11:48	R365685
Chloride	NELAP	5.00		**ND**	mg/L	10	05/28/2025 11:48	R365685
Sulfate	NELAP	10.0		**35.4**	mg/L	10	05/28/2025 11:48	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0567**	mg/L	1	05/29/2025 15:17	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 15:17	239684
Boron	NELAP	0.0200		**0.0671**	mg/L	1	05/29/2025 15:17	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 15:17	239684
Calcium	NELAP	0.100		**72.4**	mg/L	1	05/29/2025 15:17	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:17	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:17	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 15:17	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 15:17	239684
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:20	239684
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:20	239684
Lithium	*	0.0030		**0.0089**	mg/L	5	05/28/2025 16:20	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:20	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 16:20	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 15:55	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-020
Client Sample ID: T-6
Matrix: GROUNDWATER
Collection Date: 05/27/2025 12:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**494.70**	ft	1	05/27/2025 12:38	R365853
Depth to water	*	-5.00		**6.47**	ft	1	05/27/2025 12:38	R365853
Depth to water from measuring point	*	0		**8.83**	ft	1	05/27/2025 12:38	R365853
Elevation of groundwater surface	*	0		**529.49**	ft	1	05/27/2025 12:38	R365853
Measuring Point Elevation	*	0		**538.32**	ft	1	05/27/2025 12:38	R365853
Measuring Point Height Above Land Surface	*	0		**2.36**	ft	1	05/27/2025 12:38	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.8**	NTU	1	05/27/2025 12:38	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.8**	°F	1	05/27/2025 12:38	R365853
SW-846 9040B								
pH, Field	*	1.00		**7.00**		1	05/27/2025 12:38	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**860**	µmhos/cm @25C	1	05/27/2025 12:38	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	50		**570**	mg/L	2.5	06/03/2025 6:59	R366064
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/28/2025 12:23	R365685
Chloride	NELAP	5.00		**20.8**	mg/L	10	05/28/2025 12:23	R365685
Sulfate	NELAP	10.0		**ND**	mg/L	10	05/28/2025 12:23	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.279**	mg/L	1	05/29/2025 15:18	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 15:18	239684
Boron	NELAP	0.0200		**0.200**	mg/L	1	05/29/2025 15:18	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 15:18	239684
Calcium	NELAP	0.100		**92.2**	mg/L	1	05/29/2025 15:18	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:18	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 15:18	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 15:18	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 15:18	239684
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:26	239684
Arsenic	NELAP	0.0010		**0.0195**	mg/L	5	05/28/2025 16:26	239684
Lithium	*	0.0030		**0.0138**	mg/L	5	05/28/2025 16:26	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:26	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 16:26	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 15:57	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-021
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 05/22/2025 10:24

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	05/22/2025 10:24	R365853
Depth to water	*	-5.00		**11.02**	ft	1	05/22/2025 10:24	R365853
Depth to water from measuring point	*	0		**13.77**	ft	1	05/22/2025 10:24	R365853
Elevation of groundwater surface	*	0		**541.83**	ft	1	05/22/2025 10:24	R365853
Measuring Point Elevation	*	0		**555.60**	ft	1	05/22/2025 10:24	R365853
Measuring Point Height Above Land Surface	*	0		**2.75**	ft	1	05/22/2025 10:24	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.6**	NTU	1	05/22/2025 10:24	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.4**	°F	1	05/22/2025 10:24	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.96**		1	05/22/2025 10:24	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1480**	µmhos/cm @25C	1	05/22/2025 10:24	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1190**	mg/L	1	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 14:06	R365491
Chloride	NELAP	5.00		**36.8**	mg/L	10	05/23/2025 14:06	R365491
Sulfate	NELAP	10.0		**388**	mg/L	10	05/23/2025 14:06	R365491
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0790**	mg/L	1	05/29/2025 16:03	239543
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 16:03	239543
Boron	NELAP	0.0200		**8.75**	mg/L	1	05/29/2025 16:03	239543
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 16:03	239543
Calcium	NELAP	0.100	S	**203**	mg/L	1	05/29/2025 16:03	239543
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 16:03	239543
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 16:03	239543
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 16:03	239543
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 16:03	239543
Matrix spike control limits are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:41	239543
Arsenic	NELAP	0.0010		**0.0016**	mg/L	5	05/27/2025 12:41	239543
Lithium	*	0.0030		**0.0101**	mg/L	5	05/27/2025 12:41	239543
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 12:41	239543
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/23/2025 14:48	239543
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/23/2025 14:45	239545
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25051158
Client Project: Ash Pond Monitoring Wells
Report Date: 27-Jun-25
Lab ID: 25051158-022
Client Sample ID: G120
Matrix: GROUNDWATER
Collection Date: 05/21/2025 13:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**502.73**	ft	1	05/21/2025 13:58	R365853
Depth to water	*	-5.00		**16.18**	ft	1	05/21/2025 13:58	R365853
Depth to water from measuring point	*	0		**16.18**	ft	1	05/21/2025 13:58	R365853
Elevation of groundwater surface	*	0		**536.92**	ft	1	05/21/2025 13:58	R365853
Measuring Point Elevation	*	0		**553.10**	ft	1	05/21/2025 13:58	R365853
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	05/21/2025 13:58	R365853
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**14**	NTU	1	05/21/2025 13:58	R365853
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.7**	°F	1	05/21/2025 13:58	R365853
SW-846 9040B								
pH, Field	*	1.00		**6.57**		1	05/21/2025 13:58	R365853
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1950**	µmhos/cm @25C	1	05/21/2025 13:58	R365853
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	200		**1340**	mg/L	10	05/27/2025 15:59	R365834
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/22/2025 14:55	R365418
Chloride	NELAP	5.00		**35.5**	mg/L	10	05/22/2025 14:55	R365418
Sulfate	NELAP	10.0		**562**	mg/L	10	05/22/2025 14:55	R365418
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.842**	mg/L	1	05/29/2025 9:00	239494
Beryllium	NELAP	0.0005		**0.0009**	mg/L	1	05/29/2025 9:00	239494
Boron	NELAP	0.0200		**8.02**	mg/L	1	05/29/2025 9:00	239494
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 9:00	239494
Calcium	NELAP	0.100	B	**256**	mg/L	1	05/29/2025 9:00	239494
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 9:00	239494
Cobalt	NELAP	0.0050		**0.0058**	mg/L	1	05/29/2025 9:00	239494
Lead	NELAP	0.0075		**0.0301**	mg/L	1	05/29/2025 9:00	239494
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 9:00	239494
Sample result for Ca exceeds 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:41	239494
Arsenic	NELAP	0.0010		**0.0114**	mg/L	5	05/27/2025 22:38	239494
Lithium	*	0.0030		**0.0084**	mg/L	5	05/27/2025 22:38	239494
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 19:41	239494
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 19:41	239494
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2025 17:51	239492
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317
Radium-228	*	0		**See Attached**	pci/L	1	06/25/2025 0:00	R367317

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25051158
Report Date: 27-Jun-25

Carrier: Daniel Crump

Received By: JMD

Completed by: On: 21-May-25 — Laura E Henson

Reviewed by: On: 28-May-25 — Elizabeth A. Hurley

Pages to follow: Chain of custody 7 Extra pages included 53

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 5.9
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #101358. - EK/lhenson - 5/21/2025 5:22:34 PM

Additional nitric acid (103505) was needed in AP5, AP-10 and G120 upon arrival at the laboratory. - EK/lhenson - 5/21/2025 5:22:40 PM

Cooler #2 = 5.3C, Cooler #3 = 8.3C (LTG#9). EK/LH 5/21/25

Samples were received on 5/22/25 at 15:45 on ice [temp4.5C, 7.1C - LTG#9]. pH# 101358. Additional nitric acid (103505) was needed in AW-1 upon arrival at the laboratory. -JD/ lhenson - 5/22/2025 4:29:35 PM

Samples were received on 5/27/25 at 1535 on ice [16.3C - LTG#5]. pH strip #101358. - JD/amberdilallo - 5/27/2025 4:03:59 PM

Samples were received on 5/28/25 at 13:50 on ice [5.5C - LTG#9]. pH# 101358. Addional nitric acid (103505) was needed in AP-4 upon arrival at the laboratory. - JD/lhenson - 5/28/2025 4:38:37 PM

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25051158

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

8.3

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 5 | 5.3 °C 9
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES: Add HNO3 (103505) 1 liter bottles for 1 AP5, 2 AP-10, and 2 G120. PC 5/21/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Daniel Crum

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCl	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25051158 001	RW-3	5-21-25 1020	Groundwater	1	2								✔	✔	✔	✔	✔	✔
002	AP-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	AP-2	5-21-25 1333	Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	AP-3	5-21-25 1256	Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	AP-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	AP-5	5/21/25 1031	Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	AP-6	5-21-25 1416	Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	AP-7		Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AP-8	5-21-25 1112	Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AP-9		Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	AP-10	5-21-25 1204	Groundwater	1	2Y								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
	5-21 / 1605	Emily Kassakosta	5/21/25 @ 1605

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25051158

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 5.9/5.3 °C 8.3 9
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Daniel Crump

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25051158 012	AP-11		Groundwater	1	3								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14		Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
* 021	AW-1		Groundwater	1	3								✓	✓	✓	✓	✓	✓
* 022	9120	5/21/25 1358	Groundwater	1	3								✓	✓	✓	✓	✓	✓

HNO3 preserved 5/15/25

Relinquished By	Date/Time	Received By	Date/Time
[illegible]	5-21/1605	Emily Kessakoski	5/21/25 @ 1605

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25051158

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

7.1

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 4.5 °C 9
Preserved in: ☐ LAB ☒ FIELD FOR LAB USE ONLY
LAB NOTES: PH 101358 ~~98858~~
Added HNO3 ~~1/2~~ ~~AW~~ TE JD 5/22/25 1/2 - AW-1 JD 5/22/25
(103505)

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25051158 001	RW-3		Groundwater	1	~~2~~ 3								✔	✔	✔	✔	✔	✔
002	AP-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
003	AP-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
004	AP-3		Groundwater	1	2								✔	✔	✔	✔	✔	✔
005	AP-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔
006	AP-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔
007	AP-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔
008	AP-7		Groundwater	1	2								✔	✔	✔	✔	✔	✔
009	AP-8		Groundwater	1	2								✔	✔	✔	✔	✔	✔
010	AP-9		Groundwater	1	2								✔	✔	✔	✔	✔	✔
011	AP-10	~~BT 12-04~~	Groundwater	1	2								✔	✔	✔	✔	✔	✔

TE SAW 5/15/25

Relinquished By	Date/Time	Received By	Date/Time
[signature]	5-22/1845	[signature]	5/22/25 1548

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25051158

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers									INDICATE ANALYSIS REQUESTED												
				UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity								
					~~23~~	5/15/25																			
25051158 012	AP-11	5-22-25 1055	Groundwater	1	~~3~~ 2								✔	✔	✔	✔	✔	✔							
013	AP-12	5-22-25 1135	Groundwater	1	2								✔	✔	✔	✔	✔	✔							
014	AP-13	5-22-25 1307	Groundwater	1	2								✔	✔	✔	✔	✔	✔							
015	AP-14		Groundwater	1	2								✔	✔	✔	✔	✔	✔							
016	T-1	5-22-25 1350	Groundwater	1	2								✔	✔	✔	✔	✔	✔							
017	T-2	5-22-25 1219	Groundwater	1	2								✔	✔	✔	✔	✔	✔							
018	T-4		Groundwater	1	2								✔	✔	✔	✔	✔	✔							
019	T-5		Groundwater	1	2								✔	✔	✔	✔	✔	✔							
020	T-6		Groundwater	1	2								✔	✔	✔	✔	✔	✔							
** 021	AW-1	5/22/25 1024	Groundwater	1	3								✔	✔	✔	✔	✔	✔							
** 022	G120		Groundwater	1	3								✔	✔	✔	✔	✔	✔							

Relinquished By	Date/Time	Received By	Date/Time
DLS	5-22/1545	[signature]	5/22/25 15:45

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25051158

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 16.3 °C 5
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: PH 101358
JD 5/27/25

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

PROJECT NAME/NUMBER: Ash Pond Monitoring Wells
SAMPLE COLLECTOR'S NAME: Brett Gillihan

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25051158 001	RW-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
002	AP-1		Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4		Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7	5-27-25 1157	Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9	5-27-25 1024	Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2Y								✓	✓	✓	✓	✓	✓

HNO3 (T) pH 5/15/25

Relinquished By	Date/Time	Received By	Date/Time
	5-27/1535		5/29/25 15:35

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25051158

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Brett Gillihan

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25051158 012	AP-11		Groundwater	1	~~3~~								✔	✔	✔	✔	✔	✔
013	AP-12		Groundwater	1	2								✔	✔	✔	✔	✔	✔
014	AP-13		Groundwater	1	2								✔	✔	✔	✔	✔	✔
015	AP-14	5-27-25 1344	Groundwater	1	2								✔	✔	✔	✔	✔	✔
016	T-1		Groundwater	1	2								✔	✔	✔	✔	✔	✔
017	T-2		Groundwater	1	2								✔	✔	✔	✔	✔	✔
018	T-4	5-27-25 1104	Groundwater	1	2								✔	✔	✔	✔	✔	✔
019	T-5	5-27-25 1325	Groundwater	1	2								✔	✔	✔	✔	✔	✔
020	T-6	5-27-25 1238	Groundwater	1	2								✔	✔	✔	✔	✔	✔
** 021	AW-1		Groundwater	1	3								✓	✓	✓	✓	✓	✓
** 022	9120		Groundwater	1	3								✓	✓	✓	✓	✓	✓

5/15/25

Relinquished By	Date/Time	Received By	Date/Time
	5-27-25 1535		5/27/25 15:35

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25051158

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 5.5 °C 9
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: Added HNO3 (103505) 2/2 AP-4 Liters PHV101358 JD 2/28/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Cole

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25051158 001	RW-3		Groundwater	1	~~2~~ 3								✓	✓	✓	✓	✓	✓
002	AP-1	5-28-25 956	Groundwater	1	2								✓	✓	✓	✓	✓	✓
003	AP-2		Groundwater	1	2								✓	✓	✓	✓	✓	✓
004	AP-3		Groundwater	1	2								✓	✓	✓	✓	✓	✓
005	AP-4	5-28-25 1131	Groundwater	1	2								✓	✓	✓	✓	✓	✓
006	AP-5		Groundwater	1	2								✓	✓	✓	✓	✓	✓
007	AP-6		Groundwater	1	2								✓	✓	✓	✓	✓	✓
008	AP-7		Groundwater	1	2								✓	✓	✓	✓	✓	✓
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓
010	AP-9		Groundwater	1	2								✓	✓	✓	✓	✓	✓
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓

TE SAH 5/15/25

Courier

Relinquished By	Date/Time	Received By	Date/Time
[signature]	5-28/1350	[signature]	5/28/25 1350

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: RW-3
Sample ID: 001
Date (s): 5/21/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 57 °F — Wind Direction: ☐ N ☐ S ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 10:00
Static Water Level: 9.27 feet below TOC
Total Depth: 44.01 feet below TOC
Water Column: 34.74 feet

Purging Activities

Purged By: DC — Purge Date: 5/21/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 34.74 ft. x 0.022 = 0.76 L x 3 Vol. = 2.28 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:00	0.0	300	purge start time						
10:08	2.4	↓	7.04	649.70	12.60	0.59	-99.00	8.49	
10:11	3.3		7.04	649.10	12.61	0.55	-103.90	6.68	
10:14	4.2		7.04	648.50	12.58	0.51	-108.10	4.91	
10:17	5.1		7.03	649.20	12.59	0.48	-111.30	5.05	
10:20	6.0		7.03	649.80	12.58	0.45	-114.40	5.04	

Sampling Activities

Sampled By: DC — Sample Date/Time: 5/21/2025 10:20
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.03 pH — 649.80 Spec. Cond. — 12.58 Temp
Field Filtered: No — Filter Type:
Water Level: 9.27 feet below TOC — Drawdown: 0.00 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/21/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-1
Sample ID: 002
Date (s): 5/28/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 59 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☐ None ☑ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/28/2025 9:19
Static Water Level: 9.79 feet below TOC
Total Depth: 31.08 feet below TOC
Water Column: 21.29 feet

Purging Activities

Purged By: JC — Purge Date: 5/28/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 21.29 ft. x 0.022 = 0.47 L x 3 Vol. = 1.41 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 8.00 L
Physical appearance of purge water: Clear — Odor: Slight — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:20	0.0	222	purge start time						
9:26	1.3	↓	6.57	1,846.80	14.01	6.18	86.00	50.33	
9:29	2.0		6.44	1,922.20	14.03	5.37	88.70	39.69	
9:32	2.7		6.40	1,969.40	14.06	4.80	89.00	36.83	
9:35	3.3		6.39	2,000.20	14.01	4.39	88.60	33.74	
9:38	4.0		6.39	2,046.10	14.01	4.06	88.30	26.01	
9:41	4.7		6.39	2,068.70	14.01	3.81	87.80	23.84	
9:44	5.3		6.40	2,082.70	14.08	3.59	87.30	23.90	
9:47	6.0		6.41	2,091.30	14.05	3.41	86.80	16.86	
9:50	6.7		6.41	2,094.80	14.03	3.26	86.40	13.60	
9:53	7.3		6.42	2,096.20	14.02	3.13	85.90	9.55	
9:56	8.0		6.42	2,095.90	14.02	3.01	85.40	9.71	

Sampling Activities

Sampled By: JC — Sample Date/Time: 5/28/2025 9:56
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.42 pH — 2,095.90 Spec. Cond. — 14.02 Temp
Field Filtered: No — Filter Type:
Water Level: 10.20 feet below TOC — Drawdown: 0.41 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Justin Colp — **Date:** 5/28/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-2
Sample ID: 003
Date (s): 5/21/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 61 °F — Wind Direction: ☐ N ☐ S ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 13:07
Static Water Level: 7.79 feet below TOC
Total Depth: 21.33 feet below TOC
Water Column: 13.54 feet

Purging Activities

Purged By: DC — Purge Date: 5/21/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 13.54 ft. x 0.022 = 0.3 L x 3 Vol. = 0.9 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:07	0.0	231	purge start time						
13:21	3.2	↓	6.45	1,177.50	13.41	0.38	8.80	70.62	
13:24	3.9		6.44	1,179.20	13.58	0.35	8.70	52.86	
13:27	4.6		6.44	1,184.60	13.87	0.32	8.80	40.66	
13:30	5.3		6.45	1,182.50	13.43	0.30	9.10	31.33	
13:33	6.0		6.45	1,180.90	13.58	0.29	9.20	24.47	

Sampling Activities

Sampled By: DC — Sample Date/Time: 5/21/2025 13:33
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.45 pH — 1,180.90 Spec. Cond. — 13.58 Temp
Field Filtered: No — Filter Type:
Water Level: 7.80 feet below TOC — Drawdown: 0.01 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/21/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-3
Sample ID: 004
Date (s): 5/21/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 60 °F — Wind Direction: ☐ N ☐ S ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 12:30
Static Water Level: 7.67 feet below TOC
Total Depth: 20.80 feet below TOC
Water Column: 13.13 feet

Purging Activities

Purged By: DC — Purge Date: 5/21/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 13.13 ft. x 0.022 = 0.29 L x 3 Vol. = 0.87 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:30	0.0	231	purge start time						
12:44	3.2	↓	6.53	1,119.40	13.56	0.31	-53.20	26.92	
12:47	3.9		6.52	1,118.10	13.50	0.28	-55.50	18.11	
12:50	4.6		6.52	1,123.10	13.61	0.26	-57.30	13.70	
12:53	5.3		6.52	1,126.10	13.47	0.25	-58.50	10.62	
12:56	6.0		6.53	1,126.40	13.25	0.23	-59.30	9.17	

Sampling Activities

Sampled By: DC — Sample Date/Time: 5/21/2025 12:56
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.53 pH — 1,126.40 Spec. Cond. — 13.25 Temp
Field Filtered: No — Filter Type:
Water Level: 7.85 feet below TOC — Drawdown: 0.18 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/21/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-4
Sample ID: 005
Date (s): 5/28/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 62 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/28/2025 10:54
Static Water Level: 10.38 feet below TOC
Total Depth: 60.41 feet below TOC
Water Column: 50.03 feet

Purging Activities

Purged By: JC — Purge Date: 5/28/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 50.03 ft. x 0.022 = 1.1 L x 3 Vol. = 3.3 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Cloudy — Odor: None — Color: greyish

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:55	0.0	194	purge start time						
11:04	1.8	↓	6.73	964.00	15.95	4.59	68.80	140.86	
11:07	2.3		6.71	968.70	15.99	4.08	68.80	195.05	
11:10	2.9		6.70	972.90	15.97	3.70	68.40	212.04	
11:13	3.5		6.69	975.00	15.91	3.41	67.70	229.67	
11:16	4.1		6.69	976.10	15.99	3.17	66.70	232.48	
11:19	4.7		6.69	976.70	16.07	2.98	65.40	217.94	
11:22	5.3		6.69	977.50	16.13	2.82	64.00	212.96	
11:25	5.8		6.68	977.90	16.26	2.69	62.30	196.53	
11:28	6.4		6.69	978.90	16.35	2.58	60.60	168.32	
11:31	7.0		6.69	978.70	16.43	2.48	58.70	170.33	

Sampling Activities

Sampled By: JC — Sample Date/Time: 5/28/2025 11:31
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.69 pH — 978.70 Spec. Cond. — 16.43 Temp
Field Filtered: No — Filter Type:
Water Level: 10.53 feet below TOC — Drawdown: 0.15 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Justin Colp — **Date:** 5/28/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-5
Sample ID: 006
Date (s): 5/21/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 57 °F — Wind Direction: ☐ N ☐ S ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 9:43
Static Water Level: 14.41 feet below TOC
Total Depth: 31.27 feet below TOC
Water Column: 16.86 feet

Purging Activities

Purged By: JC — Purge Date: 5/21/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 16.86 ft. x 0.022 = 0.37 L x 3 Vol. = 1.11 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 8.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:47	0.0	182	purge start time						
10:19	5.8	↓	6.65	835.40	12.91	3.23	41.90	1.79	
10:22	6.4		6.65	834.90	12.90	3.15	41.30	1.80	
10:25	6.9		6.66	834.60	12.93	3.08	40.80	2.00	
10:28	7.5		6.66	834.30	12.95	3.01	40.40	2.10	
10:31	8.0		6.67	834.20	12.95	2.95	40.00	2.33	

Sampling Activities

Sampled By: JC — Sample Date/Time: 5/21/2025 10:31
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.67 pH — 834.20 Spec. Cond. — 12.95 Temp
Field Filtered: No — Filter Type:
Water Level: 15.69 feet below TOC — Drawdown: 1.28 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Justin Colp — **Date:** 5/21/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-6
Sample ID: 007
Date (s): 5/21/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 62 °F — Wind Direction: ☐ N ☐ S ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 13:52
Static Water Level: 7.77 feet below TOC
Total Depth: 39.62 feet below TOC
Water Column: 31.85 feet

Purging Activities

Purged By: DC — Purge Date: 5/21/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 31.85 ft. x 0.022 = 0.7 L x 3 Vol. = 2.1 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:52	0.0	250	purge start time						
14:04	3.0	↓	7.08	648.70	12.84	1.40	62.10	8.84	
14:07	3.8		7.07	648.20	12.75	1.31	60.00	7.25	
14:10	4.5		7.01	648.70	12.78	1.26	61.60	5.84	
14:13	5.3		6.99	648.30	12.69	1.23	61.10	5.62	
14:16	6.0		7.00	648.50	12.62	1.25	60.20	4.05	

Sampling Activities

Sampled By: BG — Sample Date/Time: 5/21/2025 14:16
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.00 pH — 648.50 Spec. Cond. — 12.62 Temp
Field Filtered: No — Filter Type:
Water Level: 7.79 feet below TOC — Drawdown: 0.02 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/21/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-7
Sample ID: 008
Date (s): 5/27/2025

Field Team Members

Name: Brett Gillihan — Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 64 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 11:27
Static Water Level: 10.64 feet below TOC
Total Depth: 42.52 feet below TOC
Water Column: 31.88 feet

Purging Activities

Purged By: JR — Purge Date: 5/27/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 31.88 ft. x 0.022 = 0.7 L x 3 Vol. = 2.1 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:27	0.0	167	purge start time						
11:44	2.8	↓	7.13	730.50	12.22	0.65	-9.80	7.65	
11:47	3.3		7.12	736.70	12.30	0.60	-24.40	7.03	
11:50	3.8		7.11	746.90	12.37	0.57	-36.40	10.65	
11:53	4.3		7.13	759.20	12.49	0.54	-45.70	6.33	
11:56	4.8		7.14	769.70	12.47	0.51	-52.90	4.56	

Sampling Activities

Sampled By: JR — Sample Date/Time: 5/27/2025 11:57
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 7.14 pH — 769.70 Spec. Cond. — 12.47 Temp
Field Filtered: No — Filter Type:
Water Level: 10.69 feet below TOC — Drawdown: 0.05 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/27/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-8
Sample ID: 009
Date (s): 5/21/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 59 °F — Wind Direction: ☐ N ☐ S ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 10:45
Static Water Level: 4.01 feet below TOC
Total Depth: 39.60 feet below TOC
Water Column: 35.59 feet

Purging Activities

Purged By: DC — Purge Date: 5/21/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 35.59 ft. x 0.022 = 0.78 L x 3 Vol. = 2.34 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:45	0.0	222	purge start time						
11:00	3.3	↓	6.78	878.60	13.40	1.19	-98.10	85.01	
11:03	4.0		6.78	876.10	13.37	1.08	-99.50	67.14	
11:06	4.7		6.78	876.00	13.43	1.03	-100.70	53.27	
11:09	5.3		6.78	875.20	13.54	1.02	-101.40	48.89	
11:12	6.0		6.78	876.20	13.52	0.96	-102.10	37.12	

Sampling Activities

Sampled By: BG — Sample Date/Time: 5/21/2025 11:12
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.78 pH — 876.20 Spec. Cond. — 13.52 Temp
Field Filtered: No — Filter Type:
Water Level: 4.32 feet below TOC — Drawdown: 0.31 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/21/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-9
Sample ID: 010
Date (s): 5/27/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez Affiliation: TekLab, Inc.

Weather Conditions

Temp: 61 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☑ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 9:31
Static Water Level: 12.49 feet below TOC
Total Depth: 39.60 feet below TOC
Water Column: 27.11 feet

Purging Activities

Purged By: BG Purge Date: 5/27/2025
Purge Method: Submersible Pump Well Diameter: 2"
Purge Volume Calculation (L): 27.11 ft. x 0.022 = 0.6 L x 3 Vol. = 1.8 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:31	0.0	94	purge start time						
10:12	3.9	↓	6.77	982.90	13.57	2.08	265.00	47.03	
10:15	4.2		6.78	975.30	13.76	2.10	262.90	41.45	
10:18	4.4		6.78	973.40	13.70	1.96	258.40	41.67	
10:21	4.7		6.78	966.30	13.72	1.80	250.10	43.68	
10:24	5.0		6.79	963.40	13.68	1.71	239.20	45.24	

Sampling Activities

Sampled By: BG Sample Date/Time: 5/27/2025 10:24
Sample Method: Low Flow Sample Equipment: Submersible Pump
Sample Parameters: 6.79 pH 963.40 Spec. Cond. 13.68 Temp
Field Filtered: No Filter Type:
Water Level: 12.62 feet below TOC Drawdown: 0.13 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan **Date:** 5/27/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-10
Sample ID: 011
Date (s): 5/21/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 59 °F — Wind Direction: ☐ N ☐ S ☑ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 11:35
Static Water Level: 3.92 feet below TOC
Total Depth: 38.07 feet below TOC
Water Column: 34.15 feet

Purging Activities

Purged By: DC — Purge Date: 5/21/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 34.15 ft. x 0.022 = 0.75 L x 3 Vol. = 2.25 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Cloudy — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:35	0.0	207	purge start time						
11:52	3.5	↓	6.62	1,101.10	13.82	0.91	-82.30	55.50	
11:55	4.1		6.62	1,099.50	13.83	0.86	-84.10	87.61	
11:58	4.8		6.62	1,102.00	14.05	0.84	-85.70	179.00	
12:01	5.4		6.63	1,103.20	14.02	0.83	-86.90	162.87	
12:04	6.0		6.63	1,102.80	13.99	0.81	-87.60	136.71	

Sampling Activities

Sampled By: BG — Sample Date/Time: 5/21/2025 12:04
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.63 pH — 1,102.80 Spec. Cond. — 13.99 Temp
Field Filtered: No — Filter Type:
Water Level: 4.21 feet below TOC — Drawdown: 0.29 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/21/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-11
Sample ID: 012
Date (s): 5/22/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 58 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 10:30
Static Water Level: 12.03 feet below TOC
Total Depth: 22.95 feet below TOC
Water Column: 10.92 feet

Purging Activities

Purged By: DC — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 10.92 ft. x 0.022 = 0.24 L x 3 Vol. = 0.72 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:30	0.0	160	purge start time						
10:43	2.1	↓	6.55	1,117.80	13.61	1.51	167.70	22.69	
10:46	2.6		6.54	1,106.60	13.79	1.35	168.40	13.78	
10:49	3.0		6.54	1,110.80	13.51	1.16	167.80	9.56	
10:52	3.5		6.53	1,105.70	13.30	1.13	167.10	9.02	
10:55	4.0		6.53	1,107.80	13.03	1.09	166.10	8.90	

Sampling Activities

Sampled By: BG — Sample Date/Time: 5/22/2025 10:55
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.53 pH — 1,107.80 Spec. Cond. — 13.03 Temp
Field Filtered: No — Filter Type:
Water Level: 12.05 feet below TOC — Drawdown: 0.02 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/22/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-12
Sample ID: 013
Date (s): 5/22/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 59 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 11:12
Static Water Level: 15.16 feet below TOC
Total Depth: 30.40 feet below TOC
Water Column: 15.24 feet

Purging Activities

Purged By: DC — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 15.24 ft. x 0.022 = 0.34 L x 3 Vol. = 1.02 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Cloudy — Odor: None — Color: Lt Orange

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:12	0.0	154	purge start time						
11:25	2.0	↓	6.51	1,328.30	13.10	1.22	110.10	211.77	
11:28	2.5		6.51	1,325.30	12.91	1.11	102.10	174.11	
11:31	2.9		6.51	1,322.60	12.99	1.09	95.20	135.07	
11:34	3.4		6.50	1,323.50	13.32	1.07	88.80	95.93	
11:37	3.8		6.50	1,325.90	13.42	1.05	82.70	98.34	

Sampling Activities

Sampled By: BG — Sample Date/Time: 5/22/2025 11:38
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.50 pH — 1,325.90 Spec. Cond. — 13.42 Temp
Field Filtered: No — Filter Type:
Water Level: 15.26 feet below TOC — Drawdown: 0.10 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/22/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-13
Sample ID: 014
Date (s): 5/22/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 59 °F — Wind Direction: ☐ N ☐ S ☐ E ☑ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 12:37
Static Water Level: 14.73 feet below TOC
Total Depth: 31.00 feet below TOC
Water Column: 16.27 feet

Purging Activities

Purged By: DC — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 16.27 ft. x 0.022 = 0.36 L x 3 Vol. = 1.08 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:37	0.0	167	purge start time						
12:55	3.0	↓	6.70	758.80	12.97	1.02	-46.10	22.00	
12:58	3.5		6.69	756.60	12.69	0.99	-46.90	17.69	
13:01	4.0		6.69	755.70	12.62	0.97	-47.60	16.88	
13:04	4.5		6.68	755.30	12.56	0.94	-47.90	12.02	
13:07	5.0		6.68	754.60	12.56	0.93	-48.10	25.44	

Sampling Activities

Sampled By: BG — Sample Date/Time: 5/22/2025 13:07
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.68 pH — 754.60 Spec. Cond. — 12.56 Temp
Field Filtered: No — Filter Type:
Water Level: 14.96 feet below TOC — Drawdown: 0.23 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/22/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AP-14
Sample ID: 015
Date (s): 5/27/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 65 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 13:07
Static Water Level: 2.72 feet below TOC
Total Depth: 31.20 feet below TOC
Water Column: 28.48 feet

Purging Activities

Purged By: JC — Purge Date: 5/27/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 28.48 ft. x 0.022 = 0.63 L x 3 Vol. = 1.89 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 9.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:06	0.0	237	purge start time						
13:14	1.9	↓	7.16	2,023.70	14.74	5.78	111.10	16.61	
13:17	2.6		7.11	2,023.20	14.71	5.30	110.80	7.27	
13:20	3.3		7.08	2,021.40	14.44	4.94	110.30	5.26	
13:23	4.0		7.06	2,022.40	14.39	4.63	109.60	2.83	
13:26	4.7		7.05	2,023.00	14.34	4.37	108.80	6.82	
13:29	5.4		7.04	2,023.20	14.33	4.15	107.90	5.66	
13:32	6.2		7.03	2,025.90	14.57	3.94	106.90	14.55	
13:35	6.9		7.03	2,026.70	14.56	3.76	105.80	9.22	
13:38	7.6		7.03	2,026.10	14.52	3.59	105.00	3.49	
13:41	8.3		7.03	2,023.50	14.40	3.45	104.30	2.62	
13:44	9.0		7.02	2,021.50	14.34	3.33	103.50	3.23	

Sampling Activities

Sampled By: JC — Sample Date/Time: 5/27/2025 13:44
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 7.02 pH — 2,021.50 Spec. Cond. — 14.34 Temp
Field Filtered: No — Filter Type:
Water Level: 3.09 feet below TOC — Drawdown: 0.37 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Justin Colp — **Date:** 5/27/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: T-1
Sample ID: 016
Date (s): 5/22/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 60 °F — Wind Direction: ☐ N ☐ S ☐ E ☑ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 13:23
Static Water Level: 10.86 feet below TOC
Total Depth: 22.95 feet below TOC
Water Column: 12.09 feet

Purging Activities

Purged By: DC — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 12.09 ft. x 0.022 = 0.27 L x 3 Vol. = 0.81 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:23	0.0	185	purge start time						
13:38	2.8	↓	6.60	1,281.40	12.17	1.05	31.10	53.11	
13:41	3.3		6.59	1,285.80	12.23	0.99	33.80	40.42	
13:44	3.9		6.59	1,286.30	12.21	0.97	36.40	35.04	
13:47	4.4		6.58	1,285.40	12.26	0.96	39.00	31.18	
13:50	5.0		6.58	1,284.90	12.26	0.98	41.30	24.38	

Sampling Activities

Sampled By: BG — Sample Date/Time: 5/22/2025 13:50
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.58 pH — 1,284.90 Spec. Cond. — 12.26 Temp
Field Filtered: No — Filter Type:
Water Level: 11.25 feet below TOC — Drawdown: 0.39 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/22/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: T-2
Sample ID: 017
Date (s): 5/22/2025

Field Team Members

Name: Danny Crump — Affiliation: TekLab, Inc.
Name: Brett Gillihan — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 58 °F — Wind Direction: ☐ N ☐ S ☐ E ☑ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 11:58
Static Water Level: 23.83 feet below TOC
Total Depth: 34.44 feet below TOC
Water Column: 10.61 feet

Purging Activities

Purged By: DC — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 10.61 ft. x 0.022 = 0.23 L x 3 Vol. = 0.69 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:58	0.0	238	purge start time						
12:07	2.1	↓	6.54	1,700.10	12.86	1.85	-31.10	14.04	
12:10	2.9		6.53	1,705.50	13.33	2.37	-37.90	18.37	
12:13	3.6		6.54	1,718.20	13.74	2.71	-43.30	18.19	
12:16	4.3		6.54	1,731.30	13.91	3.00	-47.10	17.42	
12:19	5.0		6.55	1,742.30	13.96	3.03	-49.80	17.28	

Sampling Activities

Sampled By: BG — Sample Date/Time: 5/22/2025 12:19
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.55 pH — 1,742.30 Spec. Cond. — 13.96 Temp
Field Filtered: No — Filter Type:
Water Level: 23.98 feet below TOC — Drawdown: 0.15 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan — **Date:** 5/22/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: T-4
Sample ID: 018
Date (s): 5/27/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez Affiliation: TekLab, Inc.

Weather Conditions

Temp: 62 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☑ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 10:44
Static Water Level: 15.64 feet below TOC
Total Depth: 27.42 feet below TOC
Water Column: 11.78 feet

Purging Activities

Purged By: BG Purge Date: 5/27/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 11.78 ft. x 0.022 = 0.26 L x 3 Vol. = 0.78 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:44	0.0	250	purge start time						
10:52	2.0	↓	6.68	650.50	13.27	1.64	190.40	21.71	
10:55	2.8		6.65	647.50	13.59	1.72	194.10	26.95	
10:58	3.5		6.63	645.50	13.45	1.70	196.90	23.73	
11:01	4.3		6.63	642.60	13.50	1.63	199.00	26.12	
11:04	5.0		6.63	641.30	13.46	1.58	200.60	22.74	

Sampling Activities

Sampled By: JR Sample Date/Time: 5/27/2025 11:04
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.63 pH 641.30 Spec. Cond. 13.46 Temp
Field Filtered: No Filter Type:
Water Level: 15.80 feet below TOC Drawdown: 0.16 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan **Date:** 5/27/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: T-5
Sample ID: 019
Date (s): 5/27/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez Affiliation: TekLab, Inc.

Weather Conditions

Temp: 66 °F Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 12:59
Static Water Level: 8.57 feet below TOC
Total Depth: 22.34 feet below TOC
Water Column: 13.77 feet

Purging Activities

Purged By: BG Purge Date: 5/27/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 13.77 ft. x 0.022 = 0.3 L x 3 Vol. = 0.9 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:59	0.0	167	purge start time						
13:11	2.0	↓	6.78	543.10	16.36	1.21	28.70	11.50	
13:14	2.5		6.77	540.30	16.12	1.17	32.60	10.59	
13:17	3.0		6.77	539.10	16.07	1.15	36.50	9.76	
13:20	3.5		6.77	537.20	16.00	1.13	40.10	10.74	
13:23	4.0		6.77	536.50	15.94	1.13	43.80	9.87	

Sampling Activities

Sampled By: JR Sample Date/Time: 5/27/2025 13:23
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.77 pH 536.50 Spec. Cond. 15.94 Temp
Field Filtered: No Filter Type:
Water Level: 9.14 feet below TOC Drawdown: 0.57 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan **Date:** 5/27/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: T-6
Sample ID: 020
Date (s): 5/27/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez Affiliation: TekLab, Inc.

Weather Conditions

Temp: 65 °F Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/27/2025 12:15
Static Water Level: 8.83 feet below TOC
Total Depth: 43.62 feet below TOC
Water Column: 34.79 feet

Purging Activities

Purged By: JR Purge Date: 5/27/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 34.79 ft. x 0.022 = 0.77 L x 3 Vol. = 2.31 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:15	0.0	217	purge start time						
12:26	2.4	↓	6.99	858.40	16.17	1.46	-87.50	4.90	
12:29	3.0		6.99	862.80	15.83	1.30	-95.50	6.02	
12:32	3.7		6.99	857.20	15.83	1.16	-101.10	8.20	
12:35	4.3		6.99	855.90	15.95	1.19	-104.50	6.31	
12:38	5.0		7.00	859.60	16.00	1.14	-107.10	8.81	

Sampling Activities

Sampled By: JR Sample Date/Time: 5/27/2025 12:38
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 7.00 pH 859.60 Spec. Cond. 16.00 Temp
Field Filtered: No Filter Type:
Water Level: 9.05 feet below TOC Drawdown: 0.22 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 44716

Form Completed By: Brett Gillihan **Date:** 5/27/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: AW-1
Sample ID: 021
Date (s): 5/22/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 57 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/22/2025 9:50
Static Water Level: 13.77 feet below TOC
Total Depth: 54.81 feet below TOC
Water Column: 41.04 feet

Purging Activities

Purged By: PY — Purge Date: 5/22/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 41.04 ft. x 0.022 = 0.9 L x 3 Vol. = 2.7 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:55	0.0	172	purge start time						
10:12	2.9	↓	6.89	1,482.50	13.66	7.29	70.00	4.06	
10:15	3.4		6.90	1,480.20	13.86	7.16	70.40	4.64	
10:18	4.0		6.92	1,478.90	14.31	7.08	70.70	4.12	
10:21	4.5		6.94	1,478.80	14.50	7.10	71.00	3.38	
10:24	5.0		6.96	1,477.40	14.65	7.19	71.50	3.55	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/22/2025 10:24
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.96 pH — 1,477.40 Spec. Cond. — 14.65 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 15.72 feet below TOC — Drawdown: 1.95 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: Payton K — **Date:** 5/22/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25051158
Monitoring Point: G120
Sample ID: 022
Date (s): 5/21/2025

Field Team Members

Name: Payton Yoch — Affiliation: TekLab, Inc.
Name: Justin Colp — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 61 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 5/21/2025 13:34
Static Water Level: 16.18 feet below TOC
Total Depth: 50.37 feet below TOC
Water Column: 34.19 feet

Purging Activities

Purged By: PY — Purge Date: 5/21/2025
Purge Method: Submersible Pump — Well Diameter: 2"
Purge Volume Calculation (L): 34.19 ft. x 0.022 = 0.75 L x 3 Vol. = 2.25 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Slightly cloudy — Odor: Slight — Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:25	0.0	212	purge start time						
13:43	3.8	↓	6.59	1,943.40	15.75	3.59	77.90	15.49	
13:46	4.5		6.58	1,946.40	15.82	3.31	73.60	15.45	
13:49	5.1		6.58	1,947.80	15.70	3.11	68.80	20.89	
13:52	5.7		6.57	1,946.60	15.86	2.95	63.60	18.90	
13:55	6.4		6.57	1,949.50	15.88	2.82	58.10	13.31	
13:58	7.0		6.57	1,948.40	15.95	2.71	52.50	13.58	

Sampling Activities

Sampled By: PY — Sample Date/Time: 5/21/2025 13:58
Sample Method: Low Flow — Sample Equipment: Submersible Pump
Sample Parameters: 6.57 pH — 1,948.40 Spec. Cond. — 15.95 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 16.30 feet below TOC — Drawdown: 0.12 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210760

Form Completed By: [signature] **Date:** 5/21/2025

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25051158
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 44716 Technician(s): Brett Gillihan Date: 5/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/21/25 9:19
7.0 Buffer	WC250407A	7.00	5/21/25 9:12
10.0 Buffer	WC240625A	10.00	5/21/25 9:25
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/21/25 9:31

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.23	5/21/25 9:37
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-BG	LCS	5/21/25 9:41	17	7.01	1,447	0.63		
CCV-1-BG	CCV	5/21/25 16:03	17.8	7.04	1,422	0.66		

Comments:

Field Meter ID: Pine 44716 Technician(s): Brett Gillihan Date: 5/22/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/22/25 9:40
7.0 Buffer	WC250407A	7.00	5/22/25 9:35
10.0 Buffer	WC240625A	10.00	5/22/25 9:50
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1418	5/22/25 9:53

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.17	5/22/25 9:56
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-BG	LCS	5/22/25 10:30	18.1	6.94	1,436	0.45		
CCV-2-BG	CCV	5/22/25 14:19	17.1	7.02	1,439	0.66		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25051158
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 44716 Technician(s): Brett Gillihan Date: 5/27/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/27/25 8:17
7.0 Buffer	WC25047A	7.00	5/27/25 8:10
10.0 Buffer	WC240625A	10.00	5/27/25 8:26
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1413	5/27/25 8:36

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.23	5/27/25 8:43
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-BG	LCS	5/27/25 8:48	16.9	7.05	1,443	0.42		
CCV-3-BG	CCV	5/27/25 14:12	18.6	7.03	1,464	0.54		

Comments:

Field Meter ID: Pine 44716 Technician(s): Brett Gillihan Date: 5/28/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/28/25 8:37
7.0 Buffer	WC25047A	7.00	5/28/25 8:28
10.0 Buffer	WC240625A	10.00	5/28/25 8:43
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1418	5/28/25 8:49

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.19	5/28/25 8:52
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4-BG	LCS	5/28/25 8:55	17.1	6.99	1,446	0.35		
CCV-4-BG	CCV	5/28/25 12:08	18.4	7.02	1,425	0.48		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25051158
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210760 Technician(s): justin colp Date: 5/21/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc250102a	4.00	5/21/25 9:19
7.0 Buffer	wc250407a	7.00	5/21/25 9:14
10.0 Buffer	wc240625a	10.00	5/21/25 9:24
LCS/CCV (7.0 Buffer)	wc240918a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/21/25 9:29

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.12	5/21/25 9:30
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	5/21/25 9:34	18.9	6.98	1,410	1.08		
CCV-1-JC	CCV	5/21/25 14:37	20	6.96	1,434	1.05		

Comments:

Field Meter ID: Pine 210760 Technician(s): Payton Yoch Date: 5/22/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/22/25 9:14
7.0 Buffer	WC250407A	7.00	5/22/25 9:09
10.0 Buffer	WC240625A	10.00	5/22/25 9:20
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/22/25 9:23

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.07	5/22/25 9:31
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-PY	LCS	5/22/25 9:38	17.3	7.05	1,412	1.07		
CCV-2-PY	CCV	5/22/25 14:14	18.5	6.98	1,415	1.08		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25051158
Technician(s): DC, JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210760 Technician(s): justin colp Date: 5/27/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/27/25 8:56
7.0 Buffer	WC250407A	7.00	5/27/25 8:50
10.0 Buffer	WC240625A	10.00	5/27/25 9:01
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/27/25 9:07

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.21	5/27/25 9:08
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-JC	LCS	5/27/25 9:11	19.2	6.96	1,407	1.24		
CCV-3-JC	CCV	5/27/25 14:15	21.9	7.02	1,404	1.31		

Comments:

Field Meter ID: Pine 210760 Technician(s): justin colp Date: 5/28/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	5/28/25 8:47
7.0 Buffer	WC250407A	7.00	5/28/25 8:43
10.0 Buffer	WC240625A	10.00	5/28/25 8:51
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	5/28/25 8:57

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.12	5/28/25 8:58
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-4-JC	LCS	5/28/25 9:03	20.5	6.97	1,409	1.16		
CCV-4-JC	CCV	5/28/25 12:20	20.8	6.93	1,400	1.57		

Comments:

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

May 09, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 25041334

Dear Eric Staley:

TEKLAB, INC received 5 samples on 4/24/2025 12:27:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25041334
Report Date: 09-May-25

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	12
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25041334

Client Project: FGDS Landfill **Report Date:** 09-May-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25041334
Client Project: FGDS Landfill
Report Date: 09-May-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25041334
Report Date: 09-May-25

Cooler Receipt Temp: 10.5 °C

An employee of Teklab, Inc. collected the sample(s).

Radium 226/228 analysis was performed by Alliance Technical Group. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

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Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25041334
Client Project: FGDS Landfill
Report Date: 09-May-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2026	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25041334
Client Project: FGDS Landfill
Report Date: 09-May-25
Lab ID: 25041334-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 04/24/2025 10:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.53**	ft	1	04/24/2025 10:29	R363926
Depth to water	*	-5.00		**2.39**	ft	1	04/24/2025 10:29	R363926
Depth to water from measuring point	*	0		**5.19**	ft	1	04/24/2025 10:29	R363926
Elevation of groundwater surface	*	0		**541.61**	ft	1	04/24/2025 10:29	R363926
Measuring Point Elevation	*	0		**546.80**	ft	1	04/24/2025 10:29	R363926
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	04/24/2025 10:29	R363926
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**5.1**	NTU	1	04/24/2025 10:29	R363926
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.9**	°F	1	04/24/2025 10:29	R363926
SW-846 9040B								
pH, Field	*	1.00		**6.86**		1	04/24/2025 10:29	R363926
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1340**	µmhos/cm @25C	1	04/24/2025 10:29	R363926
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**956**	mg/L	1	04/29/2025 14:48	R364192
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	04/25/2025 18:04	R363968
Chloride	NELAP	5.00		**103**	mg/L	10	04/25/2025 18:04	R363968
Sulfate	NELAP	10.0		**256**	mg/L	10	04/25/2025 18:04	R363968
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0101**	mg/L	1	04/25/2025 9:13	238084
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/25/2025 9:13	238084
Boron	NELAP	0.0200		**0.124**	mg/L	1	04/25/2025 9:13	238084
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/25/2025 9:13	238084
Calcium	NELAP	0.100		**152**	mg/L	1	04/25/2025 9:13	238084
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:13	238084
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:13	238084
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	04/25/2025 9:13	238084
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/25/2025 9:13	238084
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:38	238084
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:38	238084
Lithium	*	0.0030		**0.0156**	mg/L	5	04/25/2025 15:38	238084
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:38	238084
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/25/2025 15:38	238084
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/28/2025 17:14	238209
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677
Radium-228	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25041334
Client Project: FGDS Landfill
Report Date: 09-May-25
Lab ID: 25041334-002
Client Sample ID: P07D
Matrix: GROUNDWATER
Collection Date: 04/24/2025 10:02

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	04/24/2025 10:02	R363926
Depth to water	*	-5.00		**0.99**	ft	1	04/24/2025 10:02	R363926
Depth to water from measuring point	*	0		**3.99**	ft	1	04/24/2025 10:02	R363926
Elevation of groundwater surface	*	0		**524.26**	ft	1	04/24/2025 10:02	R363926
Measuring Point Elevation	*	0		**528.25**	ft	1	04/24/2025 10:02	R363926
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	04/24/2025 10:02	R363926
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**11**	NTU	1	04/24/2025 10:02	R363926
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.1**	°F	1	04/24/2025 10:02	R363926
SW-846 9040B								
pH, Field	*	1.00		**6.70**		1	04/24/2025 10:02	R363926
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1550**	µmhos/cm @25C	1	04/24/2025 10:02	R363926
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	33		**1160**	mg/L	1.67	04/29/2025 14:47	R364192
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	04/25/2025 18:16	R363968
Chloride	NELAP	5.00		**31.9**	mg/L	10	04/25/2025 18:16	R363968
Sulfate	NELAP	10.0		**283**	mg/L	10	04/25/2025 18:16	R363968
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.847**	mg/L	1	04/25/2025 9:14	238084
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/25/2025 9:14	238084
Boron	NELAP	0.0200		**5.22**	mg/L	1	04/25/2025 9:14	238084
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/25/2025 9:14	238084
Calcium	NELAP	0.100		**175**	mg/L	1	04/25/2025 9:14	238084
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:14	238084
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:14	238084
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	04/25/2025 9:14	238084
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/25/2025 9:14	238084
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:44	238084
Arsenic	NELAP	0.0010		**0.0262**	mg/L	5	04/25/2025 15:44	238084
Lithium	*	0.0030		**0.0076**	mg/L	5	04/25/2025 15:44	238084
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:44	238084
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/25/2025 15:44	238084
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/28/2025 17:16	238209
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677
Radium-228	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25041334
Client Project: FGDS Landfill
Report Date: 09-May-25
Lab ID: 25041334-003
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 04/24/2025 9:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	04/24/2025 9:29	R363926
Depth to water	*	-5.00		**0.49**	ft	1	04/24/2025 9:29	R363926
Depth to water from measuring point	*	0		**3.79**	ft	1	04/24/2025 9:29	R363926
Elevation of groundwater surface	*	0		**526.19**	ft	1	04/24/2025 9:29	R363926
Measuring Point Elevation	*	0		**529.98**	ft	1	04/24/2025 9:29	R363926
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	04/24/2025 9:29	R363926
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.0**	NTU	1	04/24/2025 9:29	R363926
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.0**	°F	1	04/24/2025 9:29	R363926
SW-846 9040B								
pH, Field	*	1.00		**6.81**		1	04/24/2025 9:29	R363926
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1060**	µmhos/cm @25C	1	04/24/2025 9:29	R363926
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**650**	mg/L	1	04/29/2025 14:45	R364192
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	04/25/2025 18:27	R363968
Chloride	NELAP	5.00		**21.2**	mg/L	10	04/25/2025 18:27	R363968
Sulfate	NELAP	10.0		**65.8**	mg/L	10	04/25/2025 18:27	R363968
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.299**	mg/L	1	04/25/2025 9:15	238084
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/25/2025 9:15	238084
Boron	NELAP	0.0200		**1.77**	mg/L	1	04/25/2025 9:15	238084
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/25/2025 9:15	238084
Calcium	NELAP	0.100		**115**	mg/L	1	04/25/2025 9:15	238084
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:15	238084
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:15	238084
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	04/25/2025 9:15	238084
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/25/2025 9:15	238084
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:49	238084
Arsenic	NELAP	0.0010		**0.0014**	mg/L	5	04/25/2025 15:49	238084
Lithium	*	0.0030		**0.0054**	mg/L	5	04/25/2025 15:49	238084
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:49	238084
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/25/2025 15:49	238084
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/28/2025 17:19	238209
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677
Radium-228	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25041334
Client Project: FGDS Landfill
Report Date: 09-May-25
Lab ID: 25041334-004
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 04/24/2025 10:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	04/24/2025 10:36	R363926
Depth to water	*	-5.00		**25.26**	ft	1	04/24/2025 10:36	R363926
Depth to water from measuring point	*	0		**27.13**	ft	1	04/24/2025 10:36	R363926
Elevation of groundwater surface	*	0		**528.47**	ft	1	04/24/2025 10:36	R363926
Measuring Point Elevation	*	0		**555.60**	ft	1	04/24/2025 10:36	R363926
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	04/24/2025 10:36	R363926
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**78**	NTU	1	04/24/2025 10:36	R363926
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.0**	°F	1	04/24/2025 10:36	R363926
SW-846 9040B								
pH, Field	*	1.00		**6.65**		1	04/24/2025 10:36	R363926
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1500**	µmhos/cm @25C	1	04/24/2025 10:36	R363926
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**1240**	mg/L	1.25	04/29/2025 14:44	R364192
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	04/25/2025 18:39	R363968
Chloride	NELAP	5.00		**28.1**	mg/L	10	04/25/2025 18:39	R363968
Sulfate	NELAP	10.0		**310**	mg/L	10	04/25/2025 18:39	R363968
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.573**	mg/L	1	04/25/2025 9:15	238084
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/25/2025 9:15	238084
Boron	NELAP	0.0200		**3.65**	mg/L	1	04/25/2025 9:15	238084
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/25/2025 9:15	238084
Calcium	NELAP	0.100		**173**	mg/L	1	04/25/2025 9:15	238084
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:15	238084
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:15	238084
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	04/25/2025 9:15	238084
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/25/2025 9:15	238084
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:55	238084
Arsenic	NELAP	0.0010		**0.0145**	mg/L	5	04/25/2025 15:55	238084
Lithium	*	0.0030		**0.0068**	mg/L	5	04/25/2025 15:55	238084
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:55	238084
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/25/2025 15:55	238084
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/28/2025 17:21	238209
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677
Radium-228	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25041334
Client Project: FGDS Landfill
Report Date: 09-May-25
Lab ID: 25041334-005
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 04/24/2025 10:03

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**505.11**	ft	1	04/24/2025 10:03	R363926
Depth to water	*	-5.00		**27.05**	ft	1	04/24/2025 10:03	R363926
Depth to water from measuring point	*	0		**28.79**	ft	1	04/24/2025 10:03	R363926
Elevation of groundwater surface	*	0		**525.61**	ft	1	04/24/2025 10:03	R363926
Measuring Point Elevation	*	0		**554.40**	ft	1	04/24/2025 10:03	R363926
Measuring Point Height Above Land Surface	*	0		**1.74**	ft	1	04/24/2025 10:03	R363926
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**52**	NTU	1	04/24/2025 10:03	R363926
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.2**	°F	1	04/24/2025 10:03	R363926
SW-846 9040B								
pH, Field	*	1.00		**6.54**		1	04/24/2025 10:03	R363926
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1770**	µmhos/cm @25C	1	04/24/2025 10:03	R363926
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	33		**1200**	mg/L	1.67	04/29/2025 14:38	R364192
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	04/25/2025 19:26	R363968
Chloride	NELAP	5.00		**36.4**	mg/L	10	04/25/2025 19:26	R363968
Sulfate	NELAP	10.0		**537**	mg/L	10	04/25/2025 19:26	R363968
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.491**	mg/L	1	04/25/2025 10:09	238084
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/25/2025 10:09	238084
Boron	NELAP	0.0200		**12.0**	mg/L	1	04/25/2025 10:09	238084
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/25/2025 10:09	238084
Calcium	NELAP	0.100		**241**	mg/L	1	04/25/2025 10:09	238084
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 10:09	238084
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 10:09	238084
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	04/25/2025 10:09	238084
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/25/2025 10:09	238084
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 16:41	238084
Arsenic	NELAP	0.0010		**0.0032**	mg/L	5	04/25/2025 16:41	238084
Lithium	*	0.0030		**0.0062**	mg/L	5	04/25/2025 16:41	238084
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 16:41	238084
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/25/2025 16:41	238084
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/28/2025 17:23	238209
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677
Radium-228	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25041334
Report Date: 09-May-25

Carrier: Brett Gillihan

Received By: JMD

Completed by: Amber Dilallo
On: 24-Apr-25

Reviewed by: Ellie Hopkins
On: 24-Apr-25

Pages to follow: Chain of custody 1 Extra pages included 23

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	10.5
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice	☐
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐		
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐			
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.					
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑		
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑		
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐		
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑		

Any No responses must be detailed below or on the COC.

Additional Nitric Acid (103505) was needed for R101, P07D, AW-2, G121 and G122 upon arrival at the laboratory. - JD/amberdilallo - 4/24/2025 2:30:20 PM

pH strip #101358. - JD/amberdilallo - 4/24/2025 2:30:23 PM

Drop off Location
☐ Downers Grove, IL ☐ Lenexa, KS
☐ Springfield, IL ☒ Collinsville, IL

CHAIN OF CUSTODY

pg. 1 of 1 Work order # 25041334

TEKLAB, INC. 5445 Horseshoe Lake Road - Collinsville, IL 62234 - Phone: (618) 344-1004

Client:	City Water, Light & Power
Address:	3100 Stevenson Drive
City / State / Zip	Springfield, IL 62712
Contact:	Eric Staley
Phone:	(217) 757-8610
E-Mail:	eric.staley@cwlp.com
Fax:	

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 10.5 °C LTG# 5

Preserved in: ☐ LAB ☒ FIELD

FOR LAB USE ONLY

Lab Notes: PH 101358 Added HNO3(103505) 2/2 1-Liter R101, P07D AW-2, G121, G122 JD 4/24/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply ☐ Yes ☒ No

Are these samples known to be hazardous? If yes, include details of the hazard. ☐ Yes ☒ No

Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section. ☒ Yes ☐ No On file

Client Comments Report QC LVL:___

*Elevations, pH, conductivity, temperature

**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Mo Hg

Project Name/Number	Sample Collector's Name
FGDS Landfill	Justin Gilp

Results Requested (call for PFAS TAT and surcharges)
☒ Standard ☐ 1-2 Day (100% Surcharge) ☐ Date ___ ☐ 3 Day (50% Surcharge)

Billing/PO#

Lab Use Only	Sample Identification	Date/Time Sampled	# and Type of Containers: UNP	HNO3	MATRIX: Groundwater	INDICATE ANALYSIS REQUESTED: Cl SO4 TDS F (T)	Field parameters*	Field Turbidity	Metals (T)**	Radium-226/228
25041334-001	R101	4-24-25 / 1029	1	3	X	X	X	X	X	X
002	P07D	1002	1	3	X	X	X	X	X	X
003	AW-2	929	1	3	X	X	X	X	X	X
004	G121	1036	1	3	X	X	X	X	X	X
005	G122	1003	1	3	X	X	X	X	X	X

Relinquished By	Date/Time	Received By	Date/Time
[signature]	4-24-25 1227	[signature]	4/24/25 12:27

The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions.

BottleOrder: 99065

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25041334
Monitoring Point: R101
Sample ID: 001
Date (s): 4/24/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 73 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 4/24/2025 10:16
Static Water Level: 5.19 feet below TOC
Total Depth: 35.27 feet below TOC
Water Column: 30.08 feet

Purging Activities

Purged By: JC — Purge Date: 4/24/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 30.08 ft. x 0.022 = 0.66 L x 3 Vol. = 1.98 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.50 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:17	0.0	292	purge start time						
10:20	0.9	↓	6.95	1,341.60	14.47	3.79	64.10	5.57	
10:23	1.8		6.89	1,339.30	14.74	3.52	63.30	5.16	
10:26	2.6		6.87	1,339.60	14.68	3.46	62.50	5.68	
10:29	3.5		6.86	1,341.50	14.38	3.42	61.90	5.07	

Sampling Activities

Sampled By: JC — Sample Date/Time: 4/24/2025 10:29
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.86 pH — 1,341.50 Spec. Cond. — 14.38 Temp
Field Filtered: No — Filter Type:
Water Level: 7.03 feet below TOC — Drawdown: 1.84 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Justin Colp — **Date:** 4/24/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25041334
Monitoring Point: P07D
Sample ID: 002
Date (s): 4/24/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: — Affiliation:

Weather Conditions

Temp: 71 °F — Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 4/24/2025 9:40
Static Water Level: 3.99 feet below TOC
Total Depth: 32.54 feet below TOC
Water Column: 28.55 feet

Purging Activities

Purged By: JC — Purge Date: 4/24/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 28.55 ft. x 0.022 = 0.63 L x 3 Vol. = 1.89 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:40	0.0	273	purge start time						
9:44	1.1	↓	6.79	1,525.50	14.11	1.49	84.50	268.11	
9:47	1.9		6.74	1,530.00	14.19	1.06	83.40	56.68	
9:50	2.7		6.72	1,543.10	14.07	0.93	82.40	28.59	
9:53	3.5		6.71	1,545.90	14.09	0.85	81.00	21.49	
9:56	4.4		6.71	1,548.80	14.17	0.82	79.40	14.70	
9:59	5.2		6.70	1,552.50	14.09	0.81	77.80	11.92	
10:02	6.0		6.70	1,551.60	13.94	0.79	76.20	10.97	

Sampling Activities

Sampled By: JC — Sample Date/Time: 4/24/2025 10:02
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.70 pH — 1,551.60 Spec. Cond. — 13.94 Temp
Field Filtered: No — Filter Type:
Water Level: 4.25 feet below TOC — Drawdown: 0.26 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Justin Colp — **Date:** 4/24/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25041334
Monitoring Point: AW-2
Sample ID: 003
Date (s): 4/24/2025

Field Team Members

Name: Justin Colp Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 68 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☑ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 4/24/2025 9:11
Static Water Level: 3.79 feet below TOC
Total Depth: 32.64 feet below TOC
Water Column: 28.85 feet

Purging Activities

Purged By: JC Purge Date: 4/24/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 28.85 ft. x 0.022 = 0.63 L x 3 Vol. = 1.89 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear Odor: None Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:11	0.0	250	purge start time						
9:14	0.8	↓	6.78	1,056.00	13.91	1.75	65.60	17.13	
9:17	1.5		6.78	1,057.20	13.94	1.34	63.90	10.67	
9:20	2.3		6.78	1,051.80	14.95	1.43	63.00	10.36	
9:23	3.0		6.80	1,058.80	15.22	1.52	62.90	7.70	
9:26	3.8		6.80	1,060.40	15.19	1.39	63.10	7.79	
9:29	4.5		6.81	1,060.10	15.02	1.32	63.50	5.98	

Sampling Activities

Sampled By: JC Sample Date/Time: 4/24/2025 9:29
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.81 pH 1,060.10 Spec. Cond. 15.02 Temp
Field Filtered: No Filter Type:
Water Level: 3.86 feet below TOC Drawdown: 0.07 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Justin Colp **Date:** 4/24/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25041334
Monitoring Point: G121
Sample ID: 004
Date (s): 4/24/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 73 °F Wind Direction: ☐ N ☐ S ☐ E ☑ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 4/24/2025 9:31
Static Water Level: 27.13 feet below TOC
Total Depth: 58.56 feet below TOC
Water Column: 31.43 feet

Purging Activities

Purged By: BG Purge Date: 4/24/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 31.43 ft. x 0.022 = 0.69 L x 3 Vol. = 2.07 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.50 L
Physical appearance of purge water: Clear Odor: Slight Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:19	0.0	441	purge start time						
10:24	2.2	↓	6.64	1,513.80	13.75	0.61	-127.80	14.06	
10:27	3.5		6.64	1,511.60	13.82	0.51	-132.50	15.64	
10:30	4.9		6.64	1,508.70	13.83	0.45	-135.40	18.78	
10:33	6.2		6.64	1,506.00	13.85	0.42	-138.00	29.33	
10:36	7.5		6.65	1,503.40	13.89	0.39	-140.00	77.86	

Sampling Activities

Sampled By: PY Sample Date/Time: 4/24/2025 10:36
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.65 pH 1,503.40 Spec. Cond. 13.89 Temp
Field Filtered: No Filter Type:
Water Level: 27.67 feet below TOC Drawdown: 0.54 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45280

Form Completed By: Payton Yoch **Date:** 4/24/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25041334
Monitoring Point: G122
Sample ID: 005
Date (s): 4/24/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 68 °F Wind Direction: ☐ N ☐ S ☐ E ☑ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 4/24/2025 9:28
Static Water Level: 28.79 feet below TOC
Total Depth: 49.29 feet below TOC
Water Column: 20.50 feet

Purging Activities

Purged By: BG Purge Date: 4/24/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 20.5 ft. x 0.022 = 0.45 L x 3 Vol. = 1.35 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 11.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:39	0.0	458	purge start time						
9:51	5.5	↓	6.54	1,776.30	13.76	0.63	-124.80	37.94	
9:54	6.9		6.55	1,777.40	13.87	0.53	-127.80	41.97	
9:57	8.3		6.55	1,774.50	13.91	0.50	-129.50	45.09	
10:00	9.6		6.54	1,771.90	13.92	0.47	-130.40	48.42	
10:03	11.0		6.54	1,769.50	13.98	0.44	-131.40	52.50	

Sampling Activities

Sampled By: PY Sample Date/Time: 4/24/2025 10:03
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.54 pH 1,769.50 Spec. Cond. 13.98 Temp
Field Filtered: No Filter Type:
Water Level: 28.99 feet below TOC Drawdown: 0.20 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45280

Form Completed By: Payton K **Date:** 4/24/2025

Site Samping Event: FGDS Landfill
LIMS Workorder: 25041334
Technician(s): JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 210756 Technician(s): justin colp Date: 4/24/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc250102a	4.00	4/24/25 8:39
7.0 Buffer	wc240913b	7.00	4/24/25 8:34
10.0 Buffer	wc240625a	10.00	4/24/25 8:43
LCS/CCV (7.0 Buffer)	wc240913c		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	103743	1412	4/24/25 8:50

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.13	4/24/25 8:51
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	4/24/25 8:53	19.2	7.03	1,396	0.15		
CCV-1-JC	CCV	4/24/25 10:54	24	7.06	1,388	0.07		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25041334
Technician(s): JC, BG, PY

Field Calibration Log(s)
CWLP- 2Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45280 Technician(s): Payton Yoch Date: 4/24/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	4/24/25 9:05
7.0 Buffer	WC240913B	7.00	4/24/25 9:04
10.0 Buffer	WC240625A	10.00	4/24/25 9:08
LCS/CCV (7.0 Buffer)	WC240913C		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	10374	1412	4/24/25 9:11

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.34	4/24/25 9:15
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-PY	LCS	4/24/25 9:16	20.3	7.07	1,412	0.34		
CCV-1-PY	CCV	4/24/25 10:44	20.9	7.07	1,426	0.43		

Comments:

Third Quarter 2025

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

August 25, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10438
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: Ash Pond Monitoring Wells **WorkOrder:** 25080110

Dear Eric Staley:

TEKLAB, INC received 22 samples on 8/13/2025 2:36:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

PRELIMINARY REPORT

A preliminary report contains data that is incomplete or data that has not been fully validated. Caution should be exercised in the use of any data presented, as final reported results may not reflect the values presented.

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25080110
Report Date: 25-Aug-25

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PRELIMINARY REPORT

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Teklab, Inc. Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25080110

Client Project: Ash Pond Monitoring Wells **Report Date:** 25-Aug-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

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Teklab, Inc.
Environmental Laboratory

Definitions

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Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit	E -	Value above quantitation range
H -	Holding times exceeded	I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits	M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit	R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits	T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level		

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Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25080110
Report Date: 25-Aug-25

Cooler Receipt Temp: 4.3 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

PRELIMINARY REPORT

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Teklab, Inc. Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25080110
Report Date: 25-Aug-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10438	NELAP	7/31/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2026	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2026	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2026	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

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Teklab, Inc.
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Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-001
Client Sample ID: RW-3
Matrix: GROUNDWATER
Collection Date: 08/12/2025 13:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.49**	ft	1	08/12/2025 13:32	R369783
Depth to water	*	-5.00		**7.87**	ft	1	08/12/2025 13:32	R369783
Depth to water from measuring point	*	0		**10.57**	ft	1	08/12/2025 13:32	R369783
Elevation of groundwater surface	*	0		**528.93**	ft	1	08/12/2025 13:32	R369783
Measuring Point Elevation	*	0		**539.50**	ft	1	08/12/2025 13:32	R369783
Measuring Point Height Above Land Surface	*	0		**2.70**	ft	1	08/12/2025 13:32	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**13**	NTU	1	08/12/2025 13:32	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.3**	°F	1	08/12/2025 13:32	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.92**		1	08/12/2025 13:32	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**794**	µmhos/cm @25C	1	08/12/2025 13:32	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**440**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 12:51	R369781
Chloride	NELAP	5.00		**26.4**	mg/L	10	08/13/2025 12:51	R369781
Sulfate	NELAP	10.0		**ND**	mg/L	10	08/13/2025 12:51	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.169**	mg/L	1	08/14/2025 18:11	243344
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 18:11	243344
Boron	NELAP	0.0200		**0.160**	mg/L	1	08/14/2025 18:11	243344
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 18:11	243344
Calcium	NELAP	0.100		**73.9**	mg/L	1	08/14/2025 18:11	243344
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:11	243344
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:11	243344
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 18:11	243344
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 18:11	243344
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 14:36	243344
Arsenic	NELAP	0.0010		**0.103**	mg/L	5	08/15/2025 3:45	243344
Lithium	*	0.0030		**0.0080**	mg/L	5	08/16/2025 0:00	243344
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 14:36	243344
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 14:36	243344
Sample result(s) for Li exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 14:55	243378

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-002
Client Sample ID: AP-1
Matrix: GROUNDWATER
Collection Date: 08/12/2025 11:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**504.29**	ft	1	08/12/2025 11:55	R369783
Depth to water	*	-5.00		**8.95**	ft	1	08/12/2025 11:55	R369783
Depth to water from measuring point	*	0		**11.22**	ft	1	08/12/2025 11:55	R369783
Elevation of groundwater surface	*	0		**524.15**	ft	1	08/12/2025 11:55	R369783
Measuring Point Elevation	*	0		**535.37**	ft	1	08/12/2025 11:55	R369783
Measuring Point Height Above Land Surface	*	0		**2.27**	ft	1	08/12/2025 11:55	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**11**	NTU	1	08/12/2025 11:55	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.5**	°F	1	08/12/2025 11:55	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.42**		1	08/12/2025 11:55	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2100**	µmhos/cm @25C	1	08/12/2025 11:55	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1870**	mg/L	1	08/14/2025 16:05	R369886
Stable weight could not be achieved after multiple drying, cooling, and weighing. Lowest final weight reported.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 13:26	R369781
Chloride	NELAP	5.00		**51.8**	mg/L	10	08/13/2025 13:26	R369781
Sulfate	NELAP	10.0		**884**	mg/L	10	08/13/2025 13:26	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.276**	mg/L	1	08/14/2025 18:12	243344
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 18:12	243344
Boron	NELAP	0.200		**23.0**	mg/L	10	08/18/2025 13:19	243344
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 18:12	243344
Calcium	NELAP	0.100		**259**	mg/L	1	08/14/2025 18:12	243344
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:12	243344
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:12	243344
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 18:12	243344
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 18:12	243344
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 14:42	243344
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 3:51	243344
Lithium	*	0.0030		**0.0114**	mg/L	5	08/16/2025 0:06	243344
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 14:42	243344
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 14:42	243344
Sample result(s) for Li exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 14:57	243378

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Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-003
Client Sample ID: AP-2
Matrix: GROUNDWATER
Collection Date: 08/12/2025 12:26

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.77**	ft	1	08/12/2025 12:26	R369783
Depth to water	*	-5.00		**6.10**	ft	1	08/12/2025 12:26	R369783
Depth to water from measuring point	*	0		**8.60**	ft	1	08/12/2025 12:26	R369783
Elevation of groundwater surface	*	0		**527.50**	ft	1	08/12/2025 12:26	R369783
Measuring Point Elevation	*	0		**536.10**	ft	1	08/12/2025 12:26	R369783
Measuring Point Height Above Land Surface	*	0		**2.50**	ft	1	08/12/2025 12:26	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.4**	NTU	1	08/12/2025 12:26	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**62.0**	°F	1	08/12/2025 12:26	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.30**		1	08/12/2025 12:26	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1610**	µmhos/cm @25C	1	08/12/2025 12:26	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1280**	mg/L	1	08/14/2025 16:05	R369886
Stable weight could not be achieved after multiple drying, cooling, and weighing. Lowest final weight reported.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 13:37	R369781
Chloride	NELAP	5.00		**36.0**	mg/L	10	08/13/2025 13:37	R369781
Sulfate	NELAP	10.0		**422**	mg/L	10	08/13/2025 13:37	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0736**	mg/L	1	08/14/2025 18:12	243344
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 18:12	243344
Boron	NELAP	0.0200		**3.43**	mg/L	1	08/14/2025 18:12	243344
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 18:12	243344
Calcium	NELAP	0.100		**216**	mg/L	1	08/14/2025 18:12	243344
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:12	243344
Cobalt	NELAP	0.0050		**0.0127**	mg/L	1	08/14/2025 18:12	243344
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 18:12	243344
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 18:12	243344
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 14:49	243344
Arsenic	NELAP	0.0010		**0.0014**	mg/L	5	08/15/2025 3:57	243344
Lithium	*	0.0030		**0.0087**	mg/L	5	08/16/2025 0:12	243344
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 14:49	243344
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 14:49	243344
Sample result(s) for Li exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:00	243378

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Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-004
Client Sample ID: AP-3
Matrix: GROUNDWATER
Collection Date: 08/12/2025 12:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**514.45**	ft	1	08/12/2025 12:58	R369783
Depth to water	*	-5.00		**6.18**	ft	1	08/12/2025 12:58	R369783
Depth to water from measuring point	*	0		**8.73**	ft	1	08/12/2025 12:58	R369783
Elevation of groundwater surface	*	0		**526.52**	ft	1	08/12/2025 12:58	R369783
Measuring Point Elevation	*	0		**535.25**	ft	1	08/12/2025 12:58	R369783
Measuring Point Height Above Land Surface	*	0		**2.55**	ft	1	08/12/2025 12:58	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.9**	NTU	1	08/12/2025 12:58	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.2**	°F	1	08/12/2025 12:58	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.36**		1	08/12/2025 12:58	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1620**	µmhos/cm @25C	1	08/12/2025 12:58	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1400**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 13:49	R369781
Chloride	NELAP	5.00		**71.2**	mg/L	10	08/13/2025 13:49	R369781
Sulfate	NELAP	10.0		**609**	mg/L	10	08/13/2025 13:49	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.121**	mg/L	1	08/14/2025 18:13	243344
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 18:13	243344
Boron	NELAP	0.0200		**16.5**	mg/L	1	08/14/2025 18:13	243344
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 18:13	243344
Calcium	NELAP	0.100		**205**	mg/L	1	08/14/2025 18:13	243344
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:13	243344
Cobalt	NELAP	0.0050		**0.0076**	mg/L	1	08/20/2025 13:09	243344
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 18:13	243344
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 18:13	243344
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 14:55	243344
Arsenic	NELAP	0.0010		**0.0160**	mg/L	5	08/15/2025 4:04	243344
Lithium	*	0.0030		**0.0078**	mg/L	5	08/16/2025 1:03	243344
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 14:55	243344
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 14:55	243344
Sample result(s) for Li exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:02	243378

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-005
Client Sample ID: AP-4
Matrix: GROUNDWATER
Collection Date: 08/12/2025 10:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.19**	ft	1	08/12/2025 10:40	R369783
Depth to water	*	-5.00		**7.72**	ft	1	08/12/2025 10:40	R369783
Depth to water from measuring point	*	0		**10.86**	ft	1	08/12/2025 10:40	R369783
Elevation of groundwater surface	*	0		**544.74**	ft	1	08/12/2025 10:40	R369783
Measuring Point Elevation	*	0		**555.60**	ft	1	08/12/2025 10:40	R369783
Measuring Point Height Above Land Surface	*	0		**3.14**	ft	1	08/12/2025 10:40	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**120**	NTU	1	08/12/2025 10:40	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**67.5**	°F	1	08/12/2025 10:40	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	08/12/2025 10:40	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1000**	µmhos/cm @25C	1	08/12/2025 10:40	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**574**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 14:36	R369781
Chloride	NELAP	5.00		**12.4**	mg/L	10	08/13/2025 14:36	R369781
Sulfate	NELAP	10.0		**ND**	mg/L	10	08/13/2025 14:36	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.413**	mg/L	1	08/14/2025 18:14	243344
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 18:14	243344
Boron	NELAP	0.0200		**0.0940**	mg/L	1	08/14/2025 18:14	243344
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 18:14	243344
Calcium	NELAP	0.100		**124**	mg/L	1	08/14/2025 18:14	243344
Chromium	NELAP	0.0050		**0.0051**	mg/L	1	08/14/2025 18:14	243344
Cobalt	NELAP	0.0050		**0.0075**	mg/L	1	08/18/2025 13:20	243344
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 18:14	243344
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 18:14	243344
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 15:01	243344
Arsenic	NELAP	0.0010		**0.0248**	mg/L	5	08/15/2025 4:10	243344
Lithium	*	0.0030		**0.0127**	mg/L	5	08/16/2025 1:09	243344
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 15:01	243344
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 15:01	243344
Sample result(s) for Li exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:04	243378

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-006
Client Sample ID: AP-5
Matrix: GROUNDWATER
Collection Date: 08/12/2025 9:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**552.63**	ft	1	08/12/2025 9:56	R369783
Depth to water	*	-5.00		**13.64**	ft	1	08/12/2025 9:56	R369783
Depth to water from measuring point	*	0		**15.94**	ft	1	08/12/2025 9:56	R369783
Elevation of groundwater surface	*	0		**567.96**	ft	1	08/12/2025 9:56	R369783
Measuring Point Elevation	*	0		**583.90**	ft	1	08/12/2025 9:56	R369783
Measuring Point Height Above Land Surface	*	0		**2.30**	ft	1	08/12/2025 9:56	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**25**	NTU	1	08/12/2025 9:56	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.3**	°F	1	08/12/2025 9:56	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	08/12/2025 9:56	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**868**	µmhos/cm @25C	1	08/12/2025 9:56	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**568**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 14:48	R369781
Chloride	NELAP	5.00		**9.50**	mg/L	10	08/13/2025 14:48	R369781
Sulfate	NELAP	10.0		**69.1**	mg/L	10	08/13/2025 14:48	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0595**	mg/L	1	08/14/2025 18:18	243344
Beryllium	NELAP	0.0005		**0.0006**	mg/L	1	08/14/2025 18:18	243344
Boron	NELAP	0.0200		**0.0351**	mg/L	1	08/14/2025 18:18	243344
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 18:18	243344
Calcium	NELAP	0.100		**108**	mg/L	1	08/14/2025 18:18	243344
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:18	243344
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:18	243344
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 18:18	243344
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 18:18	243344
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 15:07	243344
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 4:16	243344
Lithium	*	0.0030		**0.0061**	mg/L	5	08/16/2025 1:15	243344
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 15:07	243344
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 15:07	243344
Sample result(s) for Li exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:07	243378

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-007
Client Sample ID: AP-6
Matrix: GROUNDWATER
Collection Date: 08/12/2025 11:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**498.20**	ft	1	08/12/2025 11:20	R369783
Depth to water	*	-5.00		**5.71**	ft	1	08/12/2025 11:20	R369783
Depth to water from measuring point	*	0		**8.13**	ft	1	08/12/2025 11:20	R369783
Elevation of groundwater surface	*	0		**529.69**	ft	1	08/12/2025 11:20	R369783
Measuring Point Elevation	*	0		**537.82**	ft	1	08/12/2025 11:20	R369783
Measuring Point Height Above Land Surface	*	0		**2.42**	ft	1	08/12/2025 11:20	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**7.1**	NTU	1	08/12/2025 11:20	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.7**	°F	1	08/12/2025 11:20	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.89**		1	08/12/2025 11:20	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**819**	µmhos/cm @25C	1	08/12/2025 11:20	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**482**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**0.53**	mg/L	10	08/13/2025 14:59	R369781
Chloride	NELAP	5.00		**37.5**	mg/L	10	08/13/2025 14:59	R369781
Sulfate	NELAP	10.0		**ND**	mg/L	10	08/13/2025 14:59	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.168**	mg/L	1	08/14/2025 18:19	243344
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 18:19	243344
Boron	NELAP	0.0200		**0.278**	mg/L	1	08/14/2025 18:19	243344
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 18:19	243344
Calcium	NELAP	0.100		**67.3**	mg/L	1	08/14/2025 18:19	243344
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:19	243344
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 18:19	243344
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 18:19	243344
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 18:19	243344
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 15:39	243344
Arsenic	NELAP	0.0010		**0.0068**	mg/L	5	08/15/2025 5:07	243344
Lithium	*	0.0030		**0.0092**	mg/L	5	08/16/2025 1:22	243344
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 15:39	243344
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 15:39	243344
Sample result(s) for Li exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:09	243378

PRELIMINARY REPORT

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Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-008
Client Sample ID: AP-7
Matrix: GROUNDWATER
Collection Date: 08/13/2025 9:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**496.50**	ft	1	08/13/2025 10:07	R369783
Depth to water	*	-5.00		**9.05**	ft	1	08/13/2025 10:07	R369783
Depth to water from measuring point	*	0		**11.71**	ft	1	08/13/2025 10:07	R369783
Elevation of groundwater surface	*	0		**527.31**	ft	1	08/13/2025 10:07	R369783
Measuring Point Elevation	*	0		**539.02**	ft	1	08/13/2025 10:07	R369783
Measuring Point Height Above Land Surface	*	0		**2.66**	ft	1	08/13/2025 10:07	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**98**	NTU	1	08/13/2025 10:07	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**60.2**	°F	1	08/13/2025 10:07	R369783
SW-846 9040B								
pH, Field	*	1.00		**7.12**		1	08/13/2025 10:07	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**908**	µmhos/cm @25C	1	08/13/2025 10:07	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**514**	mg/L	1	08/15/2025 13:31	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 15:41	R369837
Chloride	NELAP	5.00		**69.8**	mg/L	10	08/14/2025 15:41	R369837
Sulfate	NELAP	10.0		**ND**	mg/L	10	08/14/2025 15:41	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.143**	mg/L	1	08/19/2025 15:18	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:18	243426
Boron	NELAP	0.0200		**0.390**	mg/L	1	08/19/2025 15:18	243426
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:18	243426
Calcium	NELAP	0.100	S	**60.9**	mg/L	1	08/19/2025 15:18	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:18	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:18	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:18	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:18	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
Matrix spike control limits for Ca are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 16:02	243426
Arsenic	NELAP	0.0010		**0.0289**	mg/L	5	08/19/2025 17:37	243563
Lithium	*	0.0030		**0.0091**	mg/L	5	08/15/2025 12:27	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 12:27	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 12:27	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:12	243437

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-009
Client Sample ID: AP-8
Matrix: GROUNDWATER
Collection Date: 08/13/2025 12:14

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.60**	ft	1	08/13/2025 12:14	R369783
Depth to water	*	-5.00		**3.06**	ft	1	08/13/2025 12:14	R369783
Depth to water from measuring point	*	0		**5.96**	ft	1	08/13/2025 12:14	R369783
Elevation of groundwater surface	*	0		**531.24**	ft	1	08/13/2025 12:14	R369783
Measuring Point Elevation	*	0		**537.20**	ft	1	08/13/2025 12:14	R369783
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	08/13/2025 12:14	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**21**	NTU	1	08/13/2025 12:14	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.7**	°F	1	08/13/2025 12:14	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.71**		1	08/13/2025 12:14	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1070**	µmhos/cm @25C	1	08/13/2025 12:14	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**580**	mg/L	1	08/15/2025 13:41	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 16:16	R369837
Chloride	NELAP	5.00		**23.3**	mg/L	10	08/14/2025 16:16	R369837
Sulfate	NELAP	10.0		**ND**	mg/L	10	08/14/2025 16:16	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.394**	mg/L	1	08/19/2025 15:23	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:23	243426
Boron	NELAP	0.0200		**0.0840**	mg/L	1	08/19/2025 15:23	243426
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:23	243426
Calcium	NELAP	0.100		**102**	mg/L	1	08/19/2025 15:23	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:23	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:23	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:23	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:23	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 15:45	243426
Arsenic	NELAP	0.0010		**0.0389**	mg/L	5	08/19/2025 17:26	243563
Lithium	*	0.0030		**0.0066**	mg/L	5	08/15/2025 13:18	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 13:18	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 13:18	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:15	243437

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-010
Client Sample ID: AP-9
Matrix: GROUNDWATER
Collection Date: 08/13/2025 10:31

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.70**	ft	1	08/13/2025 10:31	R369783
Depth to water	*	-5.00		**10.54**	ft	1	08/13/2025 10:31	R369783
Depth to water from measuring point	*	0		**13.64**	ft	1	08/13/2025 10:31	R369783
Elevation of groundwater surface	*	0		**526.66**	ft	1	08/13/2025 10:31	R369783
Measuring Point Elevation	*	0		**540.30**	ft	1	08/13/2025 10:31	R369783
Measuring Point Height Above Land Surface	*	0		**3.10**	ft	1	08/13/2025 10:31	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**18**	NTU	1	08/13/2025 10:31	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**61.1**	°F	1	08/13/2025 10:31	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.57**		1	08/13/2025 10:31	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1150**	µmhos/cm @25C	1	08/13/2025 10:31	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**638**	mg/L	1	08/15/2025 13:41	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 19:00	R369837
Chloride	NELAP	5.00		**24.4**	mg/L	10	08/14/2025 19:00	R369837
Sulfate	NELAP	10.0		**15.9**	mg/L	10	08/14/2025 19:00	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.492**	mg/L	1	08/19/2025 15:24	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:24	243426
Boron	NELAP	0.0200		**0.0990**	mg/L	1	08/19/2025 15:24	243426
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:24	243426
Calcium	NELAP	0.100		**112**	mg/L	1	08/19/2025 15:24	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:24	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:24	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:24	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:24	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 15:51	243426
Arsenic	NELAP	0.0010		**0.0013**	mg/L	5	08/19/2025 17:32	243563
Lithium	*	0.0030		**0.0057**	mg/L	5	08/15/2025 13:23	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 13:23	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 13:23	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:22	243437

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-011
Client Sample ID: AP-10
Matrix: GROUNDWATER
Collection Date: 08/13/2025 11:32

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**499.43**	ft	1	08/13/2025 11:32	R369783
Depth to water	*	-5.00		**1.79**	ft	1	08/13/2025 11:32	R369783
Depth to water from measuring point	*	0		**4.89**	ft	1	08/13/2025 11:32	R369783
Elevation of groundwater surface	*	0		**532.61**	ft	1	08/13/2025 11:32	R369783
Measuring Point Elevation	*	0		**537.50**	ft	1	08/13/2025 11:32	R369783
Measuring Point Height Above Land Surface	*	0		**3.10**	ft	1	08/13/2025 11:32	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	08/13/2025 11:32	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.6**	°F	1	08/13/2025 11:32	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.52**		1	08/13/2025 11:32	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1390**	µmhos/cm @25C	1	08/13/2025 11:32	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**834**	mg/L	1	08/15/2025 13:41	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 16:28	R369837
Chloride	NELAP	5.00		**25.4**	mg/L	10	08/14/2025 16:28	R369837
Sulfate	NELAP	10.0		**96.7**	mg/L	10	08/14/2025 16:28	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.675**	mg/L	1	08/19/2025 15:26	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:26	243426
Boron	NELAP	0.0200		**4.25**	mg/L	1	08/19/2025 15:26	243426
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:26	243426
Calcium	NELAP	0.100		**158**	mg/L	1	08/19/2025 15:26	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:26	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:26	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:26	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:26	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 15:56	243426
Arsenic	NELAP	0.0010		**0.0012**	mg/L	5	08/20/2025 8:27	243563
Lithium	*	0.0030		**0.0092**	mg/L	5	08/15/2025 13:29	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 13:29	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 13:29	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:24	243437

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-012
Client Sample ID: AP-11
Matrix: GROUNDWATER
Collection Date: 08/12/2025 10:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**515.15**	ft	1	08/12/2025 10:44	R369783
Depth to water	*	-5.00		**12.89**	ft	1	08/12/2025 10:44	R369783
Depth to water from measuring point	*	0		**15.69**	ft	1	08/12/2025 10:44	R369783
Elevation of groundwater surface	*	0		**522.41**	ft	1	08/12/2025 10:44	R369783
Measuring Point Elevation	*	0		**538.10**	ft	1	08/12/2025 10:44	R369783
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	08/12/2025 10:44	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**13**	NTU	1	08/12/2025 10:44	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**77.7**	°F	1	08/12/2025 10:44	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.34**		1	08/12/2025 10:44	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1010**	µmhos/cm @25C	1	08/12/2025 10:44	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**756**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 15:11	R369781
Chloride	NELAP	5.00		**127**	mg/L	10	08/13/2025 15:11	R369781
Sulfate	NELAP	10.0		**85.7**	mg/L	10	08/13/2025 15:11	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.152**	mg/L	1	08/14/2025 17:25	243361
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:25	243361
Boron	NELAP	0.0200		**0.228**	mg/L	1	08/14/2025 17:25	243361
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:25	243361
Calcium	NELAP	0.100		**153**	mg/L	1	08/14/2025 17:25	243361
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:25	243361
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:25	243361
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:25	243361
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:25	243361
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 12:37	243361
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 1:45	243361
Lithium	*	0.0030		**0.0057**	mg/L	5	08/18/2025 12:37	243361
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 12:37	243361
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 12:37	243361
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:16	243378

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-013
Client Sample ID: AP-12
Matrix: GROUNDWATER
Collection Date: 08/12/2025 11:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**510.30**	ft	1	08/12/2025 11:27	R369783
Depth to water	*	-5.00		**15.13**	ft	1	08/12/2025 11:27	R369783
Depth to water from measuring point	*	0		**18.03**	ft	1	08/12/2025 11:27	R369783
Elevation of groundwater surface	*	0		**522.67**	ft	1	08/12/2025 11:27	R369783
Measuring Point Elevation	*	0		**540.70**	ft	1	08/12/2025 11:27	R369783
Measuring Point Height Above Land Surface	*	0		**2.90**	ft	1	08/12/2025 11:27	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**82**	NTU	1	08/12/2025 11:27	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**73.9**	°F	1	08/12/2025 11:27	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.38**		1	08/12/2025 11:27	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**951**	µmhos/cm @25C	1	08/12/2025 11:27	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1380**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 15:23	R369781
Chloride	NELAP	5.00		**119**	mg/L	10	08/13/2025 15:23	R369781
Sulfate	NELAP	10.0		**488**	mg/L	10	08/13/2025 15:23	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0561**	mg/L	1	08/14/2025 17:40	243361
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:40	243361
Boron	NELAP	0.0200		**0.0255**	mg/L	1	08/14/2025 17:40	243361
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:40	243361
Calcium	NELAP	0.100		**226**	mg/L	1	08/14/2025 17:40	243361
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:40	243361
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2025 18:15	243361
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:40	243361
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:40	243361
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 12:43	243361
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 12:43	243361
Lithium	*	0.0030		**0.0060**	mg/L	5	08/18/2025 12:43	243361
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 12:43	243361
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 12:43	243361
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:18	243378

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-014
Client Sample ID: AP-13
Matrix: GROUNDWATER
Collection Date: 08/13/2025 9:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.00**	ft	1	08/13/2025 9:53	R369783
Depth to water	*	-5.00		**15.25**	ft	1	08/13/2025 9:53	R369783
Depth to water from measuring point	*	0		**18.65**	ft	1	08/13/2025 9:53	R369783
Elevation of groundwater surface	*	0		**523.35**	ft	1	08/13/2025 9:53	R369783
Measuring Point Elevation	*	0		**542.00**	ft	1	08/13/2025 9:53	R369783
Measuring Point Height Above Land Surface	*	0		**3.40**	ft	1	08/13/2025 9:53	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**37**	NTU	1	08/13/2025 9:53	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**74.3**	°F	1	08/13/2025 9:53	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.43**		1	08/13/2025 9:53	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**763**	µmhos/cm @25C	1	08/13/2025 9:53	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**630**	mg/L	1	08/15/2025 13:42	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 16:40	R369837
Chloride	NELAP	5.00		**29.4**	mg/L	10	08/14/2025 16:40	R369837
Sulfate	NELAP	10.0		**104**	mg/L	10	08/14/2025 16:40	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.142**	mg/L	1	08/19/2025 15:35	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:35	243426
Boron	NELAP	0.0200		**0.0566**	mg/L	1	08/19/2025 15:35	243426
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:35	243426
Calcium	NELAP	0.100		**109**	mg/L	1	08/19/2025 15:35	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:35	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:35	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:35	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:35	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 16:52	243426
Arsenic	NELAP	0.0010		**0.0020**	mg/L	5	08/19/2025 18:29	243563
Lithium	*	0.0030		**0.0110**	mg/L	5	08/15/2025 13:34	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 13:34	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 13:34	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:26	243437

PRELIMINARY REPORT

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Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-015
Client Sample ID: AP-14
Matrix: GROUNDWATER
Collection Date: 08/13/2025 10:54

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**508.40**	ft	1	08/13/2025 10:54	R369783
Depth to water	*	-5.00		**0.42**	ft	1	08/13/2025 10:54	R369783
Depth to water from measuring point	*	0		**3.22**	ft	1	08/13/2025 10:54	R369783
Elevation of groundwater surface	*	0		**536.38**	ft	1	08/13/2025 10:54	R369783
Measuring Point Elevation	*	0		**539.60**	ft	1	08/13/2025 10:54	R369783
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	08/13/2025 10:54	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	08/13/2025 10:54	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**84.7**	°F	1	08/13/2025 10:54	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.71**		1	08/13/2025 10:54	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1120**	µmhos/cm @25C	1	08/13/2025 10:54	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1940**	mg/L	1	08/15/2025 13:42	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 16:51	R369837
Chloride	NELAP	5.00		**105**	mg/L	10	08/14/2025 16:51	R369837
Sulfate	NELAP	10.0		**926**	mg/L	10	08/14/2025 16:51	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.0463**	mg/L	1	08/19/2025 15:37	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:37	243426
Boron	NELAP	0.200		**21.9**	mg/L	10	08/20/2025 12:39	243563
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:37	243426
Calcium	NELAP	0.100		**277**	mg/L	1	08/19/2025 15:37	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:37	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:37	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:37	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:37	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 16:58	243426
Arsenic	NELAP	0.0010		**0.0011**	mg/L	5	08/20/2025 8:32	243563
Lithium	*	0.0030		**0.0068**	mg/L	5	08/15/2025 13:40	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 13:40	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 13:40	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:29	243437

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-016
Client Sample ID: T-1
Matrix: GROUNDWATER
Collection Date: 08/12/2025 13:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**512.70**	ft	1	08/12/2025 13:16	R369783
Depth to water	*	-5.00		**14.30**	ft	1	08/12/2025 13:16	R369783
Depth to water from measuring point	*	0		**14.63**	ft	1	08/12/2025 13:16	R369783
Elevation of groundwater surface	*	0		**521.02**	ft	1	08/12/2025 13:16	R369783
Measuring Point Elevation	*	0		**535.65**	ft	1	08/12/2025 13:16	R369783
Measuring Point Height Above Land Surface	*	0		**0.33**	ft	1	08/12/2025 13:16	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**36**	NTU	1	08/12/2025 13:16	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**75.6**	°F	1	08/12/2025 13:16	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.46**		1	08/12/2025 13:16	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1070**	µmhos/cm @25C	1	08/12/2025 13:16	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**950**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 15:34	R369781
Chloride	NELAP	5.00		**233**	mg/L	10	08/13/2025 15:34	R369781
Sulfate	NELAP	10.0		**151**	mg/L	10	08/13/2025 15:34	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0747**	mg/L	1	08/14/2025 17:41	243361
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:41	243361
Boron	NELAP	0.0200		**0.173**	mg/L	1	08/14/2025 17:41	243361
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:41	243361
Calcium	NELAP	0.100		**172**	mg/L	1	08/14/2025 17:41	243361
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:41	243361
Cobalt	NELAP	0.0050		**0.0063**	mg/L	1	08/14/2025 17:41	243361
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:41	243361
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:41	243361
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 1:07	243361
Arsenic	NELAP	0.0010		**0.0016**	mg/L	5	08/18/2025 12:49	243361
Lithium	*	0.0030		**0.0177**	mg/L	5	08/18/2025 12:49	243361
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 12:49	243361
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 12:49	243361
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:26	243378

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-017
Client Sample ID: T-2
Matrix: GROUNDWATER
Collection Date: 08/12/2025 12:20

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**515.18**	ft	1	08/12/2025 12:20	R369783
Depth to water	*	-5.00		**23.32**	ft	1	08/12/2025 12:20	R369783
Depth to water from measuring point	*	0		**25.72**	ft	1	08/12/2025 12:20	R369783
Elevation of groundwater surface	*	0		**523.90**	ft	1	08/12/2025 12:20	R369783
Measuring Point Elevation	*	0		**549.62**	ft	1	08/12/2025 12:20	R369783
Measuring Point Height Above Land Surface	*	0		**2.40**	ft	1	08/12/2025 12:20	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.4**	NTU	1	08/12/2025 12:20	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**72.7**	°F	1	08/12/2025 12:20	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.51**		1	08/12/2025 12:20	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**905**	µmhos/cm @25C	1	08/12/2025 12:20	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1490**	mg/L	1	08/14/2025 16:05	R369886
Stable weight could not be achieved after multiple drying, cooling, and weighing. Lowest final weight reported.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 15:46	R369781
Chloride	NELAP	5.00		**509**	mg/L	10	08/13/2025 15:46	R369781
Sulfate	NELAP	10.0		**136**	mg/L	10	08/13/2025 15:46	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.232**	mg/L	1	08/14/2025 17:42	243361
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:42	243361
Boron	NELAP	0.0200		**0.0504**	mg/L	1	08/14/2025 17:42	243361
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:42	243361
Calcium	NELAP	0.100		**231**	mg/L	1	08/14/2025 17:42	243361
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:42	243361
Cobalt	NELAP	0.0050		**0.0062**	mg/L	1	08/14/2025 17:42	243361
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:42	243361
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:42	243361
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 12:56	243361
Arsenic	NELAP	0.0010		**0.0068**	mg/L	5	08/15/2025 1:39	243361
Lithium	*	0.0030		**0.0342**	mg/L	5	08/18/2025 12:56	243361
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 12:56	243361
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 12:56	243361
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:28	243378

PRELIMINARY REPORT

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Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-018
Client Sample ID: T-4
Matrix: GROUNDWATER
Collection Date: 08/13/2025 11:54

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**521.52**	ft	1	08/13/2025 11:54	R369783
Depth to water	*	-5.00		**15.87**	ft	1	08/13/2025 11:54	R369783
Depth to water from measuring point	*	0		**18.25**	ft	1	08/13/2025 11:54	R369783
Elevation of groundwater surface	*	0		**530.69**	ft	1	08/13/2025 11:54	R369783
Measuring Point Elevation	*	0		**548.94**	ft	1	08/13/2025 11:54	R369783
Measuring Point Height Above Land Surface	*	0		**2.38**	ft	1	08/13/2025 11:54	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**32**	NTU	1	08/13/2025 11:54	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.4**	°F	1	08/13/2025 11:54	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.60**		1	08/13/2025 11:54	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**607**	µmhos/cm @25C	1	08/13/2025 11:54	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**370**	mg/L	1	08/15/2025 13:42	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 17:03	R369837
Chloride	NELAP	5.00		**ND**	mg/L	10	08/14/2025 17:03	R369837
Sulfate	NELAP	10.0		**76.7**	mg/L	10	08/14/2025 17:03	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.0456**	mg/L	1	08/19/2025 15:38	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:38	243426
Boron	NELAP	0.0200		**0.0504**	mg/L	1	08/19/2025 15:38	243426
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:38	243426
Calcium	NELAP	0.100		**61.9**	mg/L	1	08/19/2025 15:38	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:38	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:38	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:38	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:38	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 17:03	243426
Arsenic	NELAP	0.0010		**0.0038**	mg/L	5	08/19/2025 18:40	243563
Lithium	*	0.0030		**0.0130**	mg/L	5	08/15/2025 13:45	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 13:45	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 13:45	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:31	243437

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-019
Client Sample ID: T-5
Matrix: GROUNDWATER
Collection Date: 08/13/2025 11:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**518.32**	ft	1	08/13/2025 11:19	R369783
Depth to water	*	-5.00		**7.81**	ft	1	08/13/2025 11:19	R369783
Depth to water from measuring point	*	0		**10.32**	ft	1	08/13/2025 11:19	R369783
Elevation of groundwater surface	*	0		**530.34**	ft	1	08/13/2025 11:19	R369783
Measuring Point Elevation	*	0		**540.66**	ft	1	08/13/2025 11:19	R369783
Measuring Point Height Above Land Surface	*	0		**2.51**	ft	1	08/13/2025 11:19	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**13**	NTU	1	08/13/2025 11:19	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**65.9**	°F	1	08/13/2025 11:19	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.80**		1	08/13/2025 11:19	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**616**	µmhos/cm @25C	1	08/13/2025 11:19	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**392**	mg/L	1	08/15/2025 13:52	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 17:15	R369837
Chloride	NELAP	5.00		**ND**	mg/L	10	08/14/2025 17:15	R369837
Sulfate	NELAP	10.0		**31.3**	mg/L	10	08/14/2025 17:15	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.0658**	mg/L	1	08/19/2025 15:40	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:40	243426
Boron	NELAP	0.0200		**0.0917**	mg/L	1	08/19/2025 15:40	243426
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:40	243426
Calcium	NELAP	0.100		**73.3**	mg/L	1	08/19/2025 15:40	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:40	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:40	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:40	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:40	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 17:09	243426
Arsenic	NELAP	0.0010		**0.0014**	mg/L	5	08/19/2025 18:46	243563
Lithium	*	0.0030		**0.0103**	mg/L	5	08/15/2025 13:51	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 13:51	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 13:51	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:33	243437

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-020
Client Sample ID: T-6
Matrix: GROUNDWATER
Collection Date: 08/13/2025 10:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**494.70**	ft	1	08/13/2025 10:42	R369783
Depth to water	*	-5.00		**5.79**	ft	1	08/13/2025 10:42	R369783
Depth to water from measuring point	*	0		**8.15**	ft	1	08/13/2025 10:42	R369783
Elevation of groundwater surface	*	0		**530.17**	ft	1	08/13/2025 10:42	R369783
Measuring Point Elevation	*	0		**538.32**	ft	1	08/13/2025 10:42	R369783
Measuring Point Height Above Land Surface	*	0		**2.36**	ft	1	08/13/2025 10:42	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**37**	NTU	1	08/13/2025 10:42	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**73.0**	°F	1	08/13/2025 10:42	R369783
SW-846 9040B								
pH, Field	*	1.00		**7.16**		1	08/13/2025 10:42	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**760**	µmhos/cm @25C	1	08/13/2025 10:42	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**412**	mg/L	1	08/15/2025 13:52	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/14/2025 18:01	R369837
Chloride	NELAP	5.00		**11.8**	mg/L	10	08/14/2025 18:01	R369837
Sulfate	NELAP	10.0		**15.5**	mg/L	10	08/14/2025 18:01	R369837
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025	B	**0.116**	mg/L	1	08/19/2025 15:42	243426
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/19/2025 15:42	243426
Boron	NELAP	0.0200		**0.0428**	mg/L	1	08/19/2025 15:42	243426
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/19/2025 15:42	243426
Calcium	NELAP	0.100		**86.7**	mg/L	1	08/19/2025 15:42	243426
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:42	243426
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/19/2025 15:42	243426
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/19/2025 15:42	243426
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/19/2025 15:42	243426
Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	08/18/2025 17:14	243426
Arsenic	NELAP	0.0010		**0.0086**	mg/L	5	08/19/2025 18:52	243563
Lithium	*	0.0030		**0.0066**	mg/L	5	08/15/2025 13:56	243426
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2025 13:56	243426
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2025 13:56	243426
Contamination present in the MBLK for Sb. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 16:40	243437

PRELIMINARY REPORT

A preliminary report contains data that is incomplete or data that has not been fully validated. Caution should be exercised in the use of any data presented, as final reported results may not reflect the values presented.

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-021
Client Sample ID: AW-1
Matrix: GROUNDWATER
Collection Date: 08/12/2025 11:02

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**500.79**	ft	1	08/12/2025 11:02	R369783
Depth to water	*	-5.00		**12.26**	ft	1	08/12/2025 11:02	R369783
Depth to water from measuring point	*	0		**15.01**	ft	1	08/12/2025 11:02	R369783
Elevation of groundwater surface	*	0		**540.59**	ft	1	08/12/2025 11:02	R369783
Measuring Point Elevation	*	0		**555.60**	ft	1	08/12/2025 11:02	R369783
Measuring Point Height Above Land Surface	*	0		**2.75**	ft	1	08/12/2025 11:02	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**71**	NTU	1	08/12/2025 11:02	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**66.1**	°F	1	08/12/2025 11:02	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.58**		1	08/12/2025 11:02	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1600**	µmhos/cm @25C	1	08/12/2025 11:02	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1250**	mg/L	1	08/14/2025 16:05	R369886
Stable weight could not be achieved after multiple drying, cooling, and weighing. Lowest final weight reported.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 15:58	R369781
Chloride	NELAP	5.00		**37.2**	mg/L	10	08/13/2025 15:58	R369781
Sulfate	NELAP	10.0		**408**	mg/L	10	08/13/2025 15:58	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.105**	mg/L	1	08/14/2025 17:42	243361
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:42	243361
Boron	NELAP	0.0200	S	**9.61**	mg/L	1	08/14/2025 17:42	243361
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:42	243361
Calcium	NELAP	0.100	S	**205**	mg/L	1	08/14/2025 17:42	243361
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:42	243361
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:42	243361
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:42	243361
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:42	243361
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
Matrix spike control limits for Ca & B are not applicable due to high sample/spike ratio.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 13:21	243361
Arsenic	NELAP	0.0010		**0.0098**	mg/L	5	08/15/2025 2:04	243361
Lithium	*	0.0030		**0.0112**	mg/L	5	08/18/2025 13:21	243361
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 13:21	243361
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 13:21	243361
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:30	243378

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080110
Client Project: Ash Pond Monitoring Wells
Report Date: 25-Aug-25
Lab ID: 25080110-022
Client Sample ID: G120
Matrix: GROUNDWATER
Collection Date: 08/12/2025 11:52

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**502.73**	ft	1	08/12/2025 11:52	R369783
Depth to water	*	-5.00		**18.10**	ft	1	08/12/2025 11:52	R369783
Depth to water from measuring point	*	0		**18.10**	ft	1	08/12/2025 11:52	R369783
Elevation of groundwater surface	*	0		**535.00**	ft	1	08/12/2025 11:52	R369783
Measuring Point Elevation	*	0		**553.10**	ft	1	08/12/2025 11:52	R369783
Measuring Point Height Above Land Surface	*	0		**0**	ft	1	08/12/2025 11:52	R369783
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**3.7**	NTU	1	08/12/2025 11:52	R369783
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**74.4**	°F	1	08/12/2025 11:52	R369783
SW-846 9040B								
pH, Field	*	1.00		**6.67**		1	08/12/2025 11:52	R369783
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2000**	µmhos/cm @25C	1	08/12/2025 11:52	R369783
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1640**	mg/L	1	08/14/2025 16:05	R369886
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/13/2025 16:09	R369781
Chloride	NELAP	5.00		**36.8**	mg/L	10	08/13/2025 16:09	R369781
Sulfate	NELAP	10.0		**569**	mg/L	10	08/13/2025 16:09	R369781
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.769**	mg/L	1	08/14/2025 17:45	243361
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:45	243361
Boron	NELAP	0.0200		**7.95**	mg/L	1	08/14/2025 17:45	243361
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:45	243361
Calcium	NELAP	0.100		**272**	mg/L	1	08/14/2025 17:45	243361
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:45	243361
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:45	243361
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:45	243361
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:45	243361
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 13:02	243361
Arsenic	NELAP	0.0010		**0.0115**	mg/L	5	08/15/2025 1:58	243361
Lithium	*	0.0030		**0.0073**	mg/L	5	08/18/2025 13:02	243361
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/18/2025 13:02	243361
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/18/2025 13:02	243361
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2025 15:33	243378

PRELIMINARY REPORT

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Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: Ash Pond Monitoring Wells

Work Order: 25080110
Report Date: 25-Aug-25

Carrier: Daniel Crump

Received By: LEH

Completed by: Laura E Henson
On: 13-Aug-25

Reviewed by: Ellie Hopkins
On: 14-Aug-25

Pages to follow: Chain of custody 4 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.3
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.				
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑	
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐	
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑	

Any No responses must be detailed below or on the COC.

pH strip #104524. - lhenson - 8/13/2025 8:47:33 AM

Additional nitric acid (104844) was needed in RW-3 and G120 upon arrival at the laboratory. - lhenson - 8/13/2025 8:47:35 AM

Cooler #2 = 5.3C, Cooler #3 = 4.7, and Cooler #4 = 3.7C (LTG #5). - LH 8/13/25

Samples were received on 8/13/25 at 1436 on ice [12.7, 11.9 and 15.3C - LTG#5]. pH strip #104524. - amberdilallo - 8/14/2025 7:41:56 AM

PRELIMINARY REPORT

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25080110

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

5.3, 4.7, 3.7

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [X] ICE [ ] BLUE ICE [ ] NO ICE 4.3 °C 5
Preserved in: [X] LAB [ ] FIELD FOR LAB USE ONLY
LAB NOTES: PM 104524
added HNO3 (104544) to RW3 and G120 LH 8/13/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Justin Colp

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other ____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25080110-001	RW-3	8-12-25 / 1332	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-002	AP-1	1155	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-003	AP-2	1226	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-004	AP-3	1258	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-005	AP-4	1040	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-006	AP-5	956	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-007	AP-6	1120	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-008	AP-7		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-009	AP-8		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-010	AP-9		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-011	AP-10		Groundwater	1	4								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
	8-12 / 1540		8/12/25 1540

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25080110

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☐ ICE ☐ BLUE ICE ☐ NO ICE _____ °C
Preserved in: ☐ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Brett Gillihan/Payton Tock

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25080110-012	AP-11	8-12-25 1044	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-013	AP-12	8-12-25 1127	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-014	AP-13		Groundwater	1	4								✔	✔	✔	✔	✔	✔
-015	AP-14		Groundwater	1	4								✔	✔	✔	✔	✔	✔
-016	T-1	8-12-25 1316	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-017	T-2	8-12-25 1220	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-018	T-4		Groundwater	1	4								✔	✔	✔	✔	✔	✔
-019	T-5		Groundwater	1	4								✔	✔	✔	✔	✔	✔
-020	T-6		Groundwater	1	4								✔	✔	✔	✔	✔	✔
-021	AW-1	8/12/25 1102	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-022	G120	8/12/25 1152	Groundwater	1	4								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
[signature]	8-12/1540	[signature]	8/12/25 1540

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 2 Workorder # 25080110

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

12.7, 11.9

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: [x] ICE [ ] BLUE ICE [ ] NO ICE 15.3 °C 5
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: 104524 [illegible] 8/14/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: [ ] Yes [✓] No
Are these samples known to be hazardous? [ ] Yes [✓] No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: [✓] Yes [ ] No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Li Se Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Allison Lampe

RESULTS REQUESTED
[✓] Standard [ ] 1-2 Day (100% Surcharge)
[ ] Other _____ [ ] 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25080110-001	RW-3		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-002	AP-1		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-003	AP-2		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-004	AP-3		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-005	AP-4		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-006	AP-5		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-007	AP-6		Groundwater	1	4								✓	✓	✓	✓	✓	✓
-008	AP-7	8-13-25 956	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-009	AP-8	8-13-25 1214	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-010	AP-9	8-13-25 1031	Groundwater	1	4								✓	✓	✓	✓	✓	✓
-011	AP-10	8-13-25 1132	Groundwater	1	4								✓	✓	✓	✓	✓	✓

Relinquished By	Date/Time	Received By	Date/Time
[signature]	8-13-25 236	[signature]	8/13/25 1436

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 2 of 2 Workorder # 25080110

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☑ ~~ICE~~ ☐ BLUE ICE ☐ NO ICE 15.3 °C 5
Preserved in: ☑ LAB ☐ FIELD FOR LAB USE ONLY
LAB NOTES:
**corrected collection times: T-4 11:54, T-5 11:19, T-6 10:42. SAH 8/18/25

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo
Quarterly monitoring

PROJECT NAME/NUMBER
Ash Pond Monitoring Wells

SAMPLE COLLECTOR'S NAME
Bret Gillihan

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID		Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
25080110-012	AP-11			Groundwater	1	4								✔	✔	✔	✔	✔	✔
-013	AP-12			Groundwater	1	4								✔	✔	✔	✔	✔	✔
-014	AP-13		8-13-25 953	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-015	AP-14		8-13-25 1054	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-016	T-1			Groundwater	1	4								✔	✔	✔	✔	✔	✔
-017	T-2			Groundwater	1	4								✔	✔	✔	✔	✔	✔
-018	T-4	**	8-13-25 1135	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-019	T-5	**	8-13-25 1100	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-020	T-6	**	8-13-25 1026	Groundwater	1	4								✔	✔	✔	✔	✔	✔
-021	AW-1			Groundwater	1	4								✔	✔	✔	✔	✔	✔
-022	G120			Groundwater	1	4								✔	✔	✔	✔	✔	✔

Relinquished By	Date/Time	Received By	Date/Time
[signature]	8-13-25 236	[signature]	8/13/25 1436

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	RW-3
Project Location:	Springfield, IL	**Sample ID:**	001
W.O. Number (s):	25080110	**Date (s):**	8/12/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 87 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 8/12/25 1:11 PM

Static Water Level: 10.57 feet below TOC

Total Depth: 44.01 feet below TOC

Water Column: 33.44 feet

Purging Activities

Purged By: JC — Purge Date: 8/12/2025

Purge Method: Bladder Pump — Well Diameter: 2"

Purge Volume Calculation (L): 33.44 ft. x 0.022 = 0.74 L x 3 Vol. = 2.22 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 5.00 L

Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:12	0.0	250	purge start time						
13:17	1.3	↓	7.07	798.90	15.60	2.83	50.20	19.30	
13:20	2.0		7.00	790.90	15.50	1.83	32.90	20.87	
13:23	2.8		6.97	790.00	15.29	1.42	19.30	8.51	
13:26	3.5		6.94	789.40	15.35	1.18	8.40	8.14	
13:29	4.3		6.93	792.30	15.36	1.04	-1.60	11.57	
13:32	5.0		6.92	794.40	15.17	0.94	-10.80	13.43	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/12/2025 13:32

Sample Method: Low Flow — Sample Equipment: Bladder Pump

Sample Parameters: 6.92 pH — 794.40 Spec. Cond. — 15.17 Temp

Field Filtered: Yes — Filter Type: Inline Disposable

Water Level: 17.62 feet below TOC — Drawdown: 7.05 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/12/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-1
Project Location:	Springfield, IL	**Sample ID:**	002
W.O. Number (s):	25080110	**Date (s):**	8/12/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 86 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	No			

Groundwater Level Measurements

Date/Time Measured: 8/12/25 11:34 AM

Static Water Level: 11.22 feet below TOC

Total Depth: 31.08 feet below TOC

Water Column: 19.86 feet

Purging Activities

Purged By: JC — Purge Date: 8/12/2025

Purge Method: Bladder Pump — Well Diameter: 2"

Purge Volume Calculation (L): 19.86 ft. x 0.022 = 0.44 L x 3 Vol. = 1.32 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 5.00 L

Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:35	0.0	250	purge start time						
11:40	1.3	↓	6.46	1,809.80	16.79	2.44	103.50	16.48	
11:43	2.0		6.44	1,883.30	16.76	1.63	76.10	17.05	
11:46	2.8		6.43	1,970.00	16.58	1.29	48.10	19.77	
11:49	3.5		6.42	2,021.40	16.60	1.09	26.30	22.55	
11:52	4.3		6.43	2,076.80	16.55	0.97	11.20	7.96	
11:55	5.0		6.42	2,104.50	16.41	0.88	0.50	10.98	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/12/2025 11:55

Sample Method: Low Flow — Sample Equipment: Bladder Pump

Sample Parameters: 6.42 pH — 2,104.50 Spec. Cond. — 16.41 Temp

Field Filtered: No — Filter Type:

Water Level: 11.55 feet below TOC — Drawdown: 0.33 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/12/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-2
Sample ID: 003
Date (s): 8/12/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 87 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 12:06 PM
Static Water Level: 8.60 feet below TOC
Total Depth: 21.33 feet below TOC
Water Column: 12.73 feet

Purging Activities

Purged By: JC — Purge Date: 8/12/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 12.73 ft. x 0.022 = 0.28 L x 3 Vol. = 0.84 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:07	0.0	263	purge start time						
12:14	1.8	↓	6.39	1,602.30	17.04	1.92	78.10	17.42	
12:17	2.6		6.35	1,603.90	16.92	1.43	75.60	17.06	
12:20	3.4		6.33	1,603.30	16.56	1.18	73.70	19.29	
12:23	4.2		6.32	1,603.10	16.48	1.03	72.20	6.81	
12:26	5.0		6.30	1,606.10	16.68	0.93	70.80	8.43	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/12/2025 12:26
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.30 pH — 1,606.10 Spec. Cond. — 16.68 Temp
Field Filtered: No — Filter Type:
Water Level: 8.80 feet below TOC — Drawdown: 0.20 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/12/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-3
Project Location:	Springfield, IL	**Sample ID:**	004
W.O. Number (s):	25080110	**Date (s):**	8/12/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 87 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 8/12/25 12:34 PM

Static Water Level: 8.73 feet below TOC

Total Depth: 20.80 feet below TOC

Water Column: 12.07 feet

Purging Activities

Purged By: JC — Purge Date: 8/12/2025

Purge Method: Bladder Pump — Well Diameter: 2"

Purge Volume Calculation (L): 12.07 ft. x 0.022 = 0.27 L x 3 Vol. = 0.81 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 5.50 L

Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:36	0.0	250	purge start time						
12:43	1.8	↓	6.42	1,622.60	17.60	2.04	96.00	5.57	
12:46	2.5		6.39	1,624.00	17.43	1.51	80.40	4.97	
12:49	3.3		6.38	1,625.40	17.53	1.22	64.50	4.11	
12:52	4.0		6.38	1,625.50	17.31	1.05	50.40	3.26	
12:55	4.8		6.37	1,625.40	17.24	0.94	38.90	3.14	
12:58	5.5		6.36	1,624.50	17.32	0.86	29.80	2.90	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/12/2025 12:58

Sample Method: Low Flow — Sample Equipment: Bladder Pump

Sample Parameters: 6.36 pH — 1,624.50 Spec. Cond. — 17.32 Temp

Field Filtered: No — Filter Type:

Water Level: 9.71 feet below TOC — Drawdown: 0.98 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/12/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-4
Sample ID: 005
Date (s): 8/12/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 82 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 10:12 AM
Static Water Level: 10.86 feet below TOC
Total Depth: 60.41 feet below TOC
Water Column: 49.55 feet

Purging Activities

Purged By: JC — Purge Date: 8/12/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 49.55 ft. x 0.022 = 1.09 L x 3 Vol. = 3.27 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.50 L
Physical appearance of purge water: Cloudy — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:13	0.0	241	purge start time						
10:22	2.2	↓	6.66	992.60	19.67	2.38	136.80	133.52	
10:25	2.9		6.65	995.50	19.62	1.78	89.50	167.82	
10:28	3.6		6.65	997.50	19.65	1.41	49.20	164.04	
10:31	4.3		6.65	999.30	19.62	1.19	21.50	168.64	
10:34	5.1		6.65	999.40	19.55	1.06	2.80	119.36	
10:37	5.8		6.65	999.70	19.60	0.96	-10.60	119.27	
10:40	6.5		6.64	999.90	19.70	0.90	-20.80	115.89	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/12/2025 10:40
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.64 pH — 999.90 Spec. Cond. — 19.70 Temp
Field Filtered: No — Filter Type:
Water Level: 12.10 feet below TOC — Drawdown: 1.24 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/12/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-5
Sample ID: 006
Date (s): 8/12/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 81 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 9:28 AM
Static Water Level: 15.94 feet below TOC
Total Depth: 31.27 feet below TOC
Water Column: 15.33 feet

Purging Activities

Purged By: JC — Purge Date: 8/12/2025
Purge Method: Bladder Pump — Well Diameter: 2"
Purge Volume Calculation (L): 15.33 ft. x 0.022 = 0.34 L x 3 Vol. = 1.02 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 8.00 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:29	0.0	296	purge start time						
9:32	0.9	↓	6.61	854.60	15.72	4.28	192.80	7.48	
9:35	1.8		6.55	857.20	15.53	2.72	196.90	6.29	
9:38	2.7		6.55	861.90	15.34	2.12	199.20	6.06	
9:41	3.6		6.57	864.70	15.26	1.84	200.70	7.92	
9:44	4.4		6.59	865.30	15.30	1.67	201.20	10.44	
9:47	5.3		6.61	867.30	15.31	1.55	201.40	15.13	
9:50	6.2		6.62	867.50	15.22	1.47	202.40	33.56	
9:53	7.1		6.63	868.30	15.19	1.41	203.70	11.51	
9:56	8.0		6.64	867.70	15.16	1.37	204.60	24.57	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/12/2025 9:56
Sample Method: Low Flow — Sample Equipment: Bladder Pump
Sample Parameters: 6.64 pH — 867.70 Spec. Cond. — 15.16 Temp
Field Filtered: No — Filter Type:
Water Level: 18.27 feet below TOC — Drawdown: 2.33 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864
- Lid on protective cover won't close.

Form Completed By: Justin Colp — **Date:** 8/12/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-6
Project Location:	Springfield, IL	**Sample ID:**	007
W.O. Number (s):	25080110	**Date (s):**	8/12/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 85 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good	Protective Casing		X
Casing	Good	Well		X
Protective Casing	Good			
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 8/12/25 10:57 AM

Static Water Level: 8.13 feet below TOC

Total Depth: 39.62 feet below TOC

Water Column: 31.49 feet

Purging Activities

Purged By: JC — Purge Date: 8/12/2025

Purge Method: Bladder Pump — Well Diameter: 2"

Purge Volume Calculation (L): 31.49 ft. x 0.022 = 0.69 L x 3 Vol. = 2.07 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 5.00 L

Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:58	0.0	227	purge start time						
11:05	1.6	↓	7.05	814.60	15.62	1.87	64.10	18.67	
11:08	2.3		6.99	817.10	15.59	1.44	62.10	22.34	
11:11	3.0		6.95	817.50	15.52	1.21	60.10	17.42	
11:14	3.6		6.92	818.40	15.47	1.07	58.00	16.04	
11:17	4.3		6.91	817.30	15.45	0.97	55.40	9.09	
11:20	5.0		6.89	818.90	15.39	0.90	52.50	7.08	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/12/2025 11:20

Sample Method: Low Flow — Sample Equipment: Bladder Pump

Sample Parameters: 6.89 pH — 818.90 Spec. Cond. — 15.39 Temp

Field Filtered: No — Filter Type:

Water Level: 17.81 feet below TOC — Drawdown: 9.68 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/12/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-7
Project Location:	Springfield, IL	**Sample ID:**	008
W.O. Number (s):	25080110	**Date (s):**	8/13/2025

Field Team Members

Name: Allison Lampe — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 82 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/13/25 9:56 AM

Static Water Level: 11.71 feet below TOC

Total Depth: 42.52 feet below TOC

Water Column: 30.81 feet

Purging Activities

Purged By: AL — Purge Date: 8/13/2025

Purge Method: Bladder Pump — Well Diameter: 2"

Purge Volume Calculation (L): 30.81 ft. x 0.022 = 0.68 L x 3 Vol. = 2.04 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 4.00 L

Physical appearance of purge water: Clear — Odor: Moderate — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:56	0.0	364	purge start time						
9:58	0.7	↓	7.10	897.80	15.70	0.44	-121.80	73.22	
10:01	1.8		7.11	900.40	15.65	0.42	-126.10	78.01	
10:04	2.9		7.12	903.20	15.82	0.40	-129.10	65.72	
10:07	4.0		7.12	908.30	15.68	0.39	-131.50	98.20	

Sampling Activities

Sampled By: PY — Sample Date/Time: 8/13/2025 10:07

Sample Method: Low Flow — Sample Equipment: Bladder Pump

Sample Parameters: 7.12 pH — 908.30 Spec. Cond. — 15.68 Temp

Field Filtered: No — Filter Type:

Water Level: 16.35 feet below TOC — Drawdown: 4.64 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe — **Date:** 8/13/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-8
Sample ID: 009
Date (s): 8/13/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 82 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 8/13/25 11:47 AM
Static Water Level: 5.96 feet below TOC
Total Depth: 39.60 feet below TOC
Water Column: 33.64 feet

Purging Activities

Purged By: JC — Purge Date: 8/13/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 33.64 ft. x 0.022 = 0.74 L x 3 Vol. = 2.22 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 8.00 L
Physical appearance of purge water: Clear — Odor: Moderate — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:48	0.0	308	purge start time						
11:56	2.5	↓	6.78	1,072.50	17.37	2.36	47.10	27.64	
11:59	3.4		6.75	1,072.40	17.48	1.91	28.10	35.01	
12:02	4.3		6.74	1,073.20	17.31	1.67	13.70	27.08	
12:05	5.2		6.73	1,071.90	17.39	1.50	2.00	17.07	
12:08	6.2		6.72	1,072.50	17.50	1.39	-6.80	28.74	
12:11	7.1		6.72	1,073.40	17.37	1.30	-13.60	24.21	
12:14	8.0		6.71	1,074.30	17.59	1.23	-19.10	21.21	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/13/2025 12:14
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.71 pH — 1,074.30 Spec. Cond. — 17.59 Temp
Field Filtered: No — Filter Type:
Water Level: 6.38 feet below TOC — Drawdown: 0.42 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/13/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	AP-9
Project Location:	Springfield, IL	**Sample ID:**	010
W.O. Number (s):	25080110	**Date (s):**	8/13/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.

Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 77 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/13/25 9:38 AM

Static Water Level: 13.64 feet below TOC

Total Depth: 39.60 feet below TOC

Water Column: 25.96 feet

Purging Activities

Purged By: JC — Purge Date: 8/13/2025

Purge Method: Peristaltic Pump — Well Diameter: 2"

Purge Volume Calculation (L): 25.96 ft. x 0.022 = 0.57 L x 3 Vol. = 1.71 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 12.00 L

Physical appearance of purge water: Slightly cloudy — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:40	0.0	235	purge start time						
9:46	1.4	↓	6.58	1,143.50	18.23	3.47	154.00	61.09	
9:49	2.1		6.55	1,143.40	18.12	2.90	149.00	93.19	
9:52	2.8		6.55	1,148.00	17.86	2.54	138.20	43.74	
9:55	3.5		6.60	1,159.10	18.90	4.34	123.00	6.68	
9:58	4.2		6.59	1,161.00	17.02	3.46	106.30	14.03	
10:01	4.9		6.56	1,160.30	17.16	2.32	88.20	28.72	
10:04	5.6		6.58	1,159.50	17.76	3.20	74.30	3.11	
10:07	6.4		6.63	1,159.30	17.88	4.29	66.50	9.13	
10:10	7.1		6.82	1,153.60	18.14	6.08	62.30	8.03	
10:13	7.8		6.65	1,162.20	16.48	4.13	51.70	33.73	
10:16	8.5		6.60	1,155.00	16.09	2.53	39.50	22.64	
10:19	9.2		6.58	1,155.40	16.12	1.98	28.90	22.90	
10:22	9.9		6.58	1,152.40	16.11	1.71	20.00	22.52	
10:25	10.6		6.57	1,154.20	16.04	1.55	12.60	23.71	
10:28	11.3		6.57	1,155.10	16.11	1.44	6.70	23.15	
10:31	12.0		6.57	1,153.30	16.14	1.37	1.20	18.43	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/13/2025 10:31

Sample Method: Low Flow — Sample Equipment: Peristaltic Pump

Sample Parameters: 6.57 pH — 1,153.30 Spec. Cond. — 16.14 Temp

Field Filtered: No — Filter Type:

Water Level: 18.81 feet below TOC — Drawdown: 5.17 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/13/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-10
Sample ID: 011
Date (s): 8/13/2025

Field Team Members

Name: Justin Colp — Affiliation: TekLab, Inc.
Name: Danny Crump — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 79 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

		Locks	Yes	No
Well Pad	Good			
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 8/13/25 11:06 AM
Static Water Level: 4.89 feet below TOC
Total Depth: 38.07 feet below TOC
Water Column: 33.18 feet

Purging Activities

Purged By: JC — Purge Date: 8/13/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 33.18 ft. x 0.022 = 0.73 L x 3 Vol. = 2.19 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Clear — Odor: Slight — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:07	0.0	280	purge start time						
11:14	2.0	↓	6.62	1,382.40	18.51	2.74	100.30	6.70	
11:17	2.8		6.57	1,386.30	18.03	2.21	85.50	6.47	
11:20	3.6		6.54	1,380.40	17.98	1.91	70.90	8.95	
11:23	4.5		6.53	1,383.90	17.90	1.71	57.20	9.13	
11:26	5.3		6.52	1,385.80	17.97	1.58	45.10	8.34	
11:29	6.2		6.52	1,382.70	17.74	1.48	34.80	8.63	
11:32	7.0		6.52	1,386.40	17.54	1.41	26.50	11.76	

Sampling Activities

Sampled By: JC — Sample Date/Time: 8/13/2025 11:32
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.52 pH — 1,386.40 Spec. Cond. — 17.54 Temp
Field Filtered: No — Filter Type:
Water Level: 5.09 feet below TOC — Drawdown: 0.20 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46864

Form Completed By: Justin Colp — **Date:** 8/13/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-11
Sample ID: 012
Date (s): 8/12/2025

Field Team Members

Name: Brett Gillihan — Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 84 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 10:24 AM
Static Water Level: 15.69 feet below TOC
Total Depth: 22.95 feet below TOC
Water Column: 7.26 feet

Purging Activities

Purged By: JR — Purge Date: 8/12/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 7.26 ft. x 0.022 = 0.16 L x 3 Vol. = 0.48 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear — Odor: Slight — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:24	0.0	200	purge start time						
10:32	1.6	↓	6.22	1,056.40	23.96	2.24	94.90	10.24	
10:35	2.2		6.26	1,038.10	24.41	2.18	89.80	10.34	
10:38	2.8		6.31	1,026.00	24.76	2.17	84.40	10.81	
10:41	3.4		6.33	1,016.40	25.07	2.17	80.40	11.94	
10:44	4.0		6.34	1,009.40	25.37	2.18	77.80	12.85	

Sampling Activities

Sampled By: JR — Sample Date/Time: 8/12/2025 10:44
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.34 pH — 1,009.40 Spec. Cond. — 25.37 Temp
Field Filtered: No — Filter Type:
Water Level: 15.94 feet below TOC — Drawdown: 0.25 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan — **Date:** 8/12/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-12
Sample ID: 013
Date (s): 8/12/2025

Field Team Members

Name: Brett Gillihan — Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 86 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 11:03 AM
Static Water Level: 18.03 feet below TOC
Total Depth: 30.40 feet below TOC
Water Column: 12.37 feet

Purging Activities

Purged By: JR — Purge Date: 8/12/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 12.37 ft. x 0.022 = 0.27 L x 3 Vol. = 0.81 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: Lt Gray

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:03	0.0	167	purge start time						
11:15	2.0	↓	6.38	919.10	21.63	1.57	46.50	57.46	
11:18	2.5		6.37	935.60	22.73	1.59	43.00	66.31	
11:21	3.0		6.38	947.90	23.18	1.62	39.70	75.89	
11:24	3.5		6.38	950.20	23.04	1.64	37.30	78.00	
11:27	4.0		6.38	951.40	23.26	1.63	35.30	82.48	

Sampling Activities

Sampled By: JR — Sample Date/Time: 8/12/2025 11:27
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.38 pH — 951.40 Spec. Cond. — 23.26 Temp
Field Filtered: No — Filter Type:
Water Level: 19.01 feet below TOC — Drawdown: 0.98 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan — **Date:** 8/12/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-13
Sample ID: 014
Date (s): 8/13/2025

Field Team Members

Name: Brett Gillihan — Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 77 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/13/25 9:30 AM
Static Water Level: 18.65 feet below TOC
Total Depth: 31.00 feet below TOC
Water Column: 12.35 feet

Purging Activities

Purged By: JR — Purge Date: 8/13/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 12.35 ft. x 0.022 = 0.27 L x 3 Vol. = 0.81 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy — Odor: Slight — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
9:30	0.0	261	purge start time						
9:41	2.9	↓	6.39	806.30	22.60	2.47	71.70	23.29	
9:44	3.7		6.42	792.60	22.86	2.42	59.70	28.67	
9:47	4.4		6.43	781.40	23.25	2.32	49.60	30.32	
9:50	5.2		6.43	772.20	23.49	2.24	41.50	34.50	
9:53	6.0		6.43	762.80	23.52	2.15	34.80	37.20	

Sampling Activities

Sampled By: JR — Sample Date/Time: 8/13/2025 9:53
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.43 pH — 762.80 Spec. Cond. — 23.52 Temp
Field Filtered: No — Filter Type:
Water Level: 19.76 feet below TOC — Drawdown: 1.11 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan — **Date:** 8/13/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AP-14
Sample ID: 015
Date (s): 8/13/2025

Field Team Members

Name: Brett Gillihan — Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 79 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/13/25 10:34 AM
Static Water Level: 3.22 feet below TOC
Total Depth: 31.20 feet below TOC
Water Column: 27.98 feet

Purging Activities

Purged By: JR — Purge Date: 8/13/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 27.98 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:34	0.0	250	purge start time						
10:42	2.0	↓	6.79	1,095.20	29.34	3.69	71.40	11.59	
10:45	2.8		6.74	1,105.50	29.05	2.66	69.60	16.94	
10:48	3.5		6.72	1,097.90	28.88	1.99	68.00	18.64	
10:51	4.3		6.71	1,108.40	28.98	1.70	65.30	21.89	
10:54	5.0		6.71	1,115.40	29.26	1.59	61.50	11.84	

Sampling Activities

Sampled By: JR — Sample Date/Time: 8/13/2025 10:54
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.71 pH — 1,115.40 Spec. Cond. — 29.26 Temp
Field Filtered: No — Filter Type:
Water Level: 3.47 feet below TOC — Drawdown: 0.25 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan — **Date:** 8/13/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: T-1
Sample ID: 016
Date (s): 8/12/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez Affiliation: TekLab, Inc.

Weather Conditions

Temp: 87 °F Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 12:49 PM
Static Water Level: 14.63 feet below TOC
Total Depth: 22.95 feet below TOC
Water Column: 8.32 feet

Purging Activities

Purged By: JR Purge Date: 8/12/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 8.32 ft. x 0.022 = 0.18 L x 3 Vol. = 0.54 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy Odor: Slight Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:49	0.0	222	purge start time						
13:04	3.3	↓	6.48	1,032.00	23.62	1.96	37.20	31.78	
13:07	4.0		6.47	1,044.50	23.81	1.95	36.30	33.26	
13:10	4.7		6.47	1,051.90	24.03	1.94	35.50	29.37	
13:13	5.3		6.46	1,061.40	24.06	1.93	35.00	32.12	
13:16	6.0		6.46	1,069.60	24.24	1.91	34.70	35.67	

Sampling Activities

Sampled By: JR Sample Date/Time: 8/12/2025 13:16
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.46 pH 1,069.60 Spec. Cond. 24.24 Temp
Field Filtered: No Filter Type:
Water Level: 15.23 feet below TOC Drawdown: 0.60 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan **Date:** 8/12/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: T-2
Sample ID: 017
Date (s): 8/12/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Jeremy Rodriguez Affiliation: TekLab, Inc.

Weather Conditions

Temp: 87 °F Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 12:03 PM
Static Water Level: 25.72 feet below TOC
Total Depth: 34.44 feet below TOC
Water Column: 8.72 feet

Purging Activities

Purged By: JR Purge Date: 8/12/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 8.72 ft. x 0.022 = 0.19 L x 3 Vol. = 0.57 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear Odor: Strong Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:03	0.0	235	purge start time						
12:08	1.2	↓	6.62	807.50	20.46	2.29	-36.80	6.96	
12:11	1.9		6.54	849.50	21.69	2.25	-47.90	6.27	
12:14	2.6		6.52	868.30	22.19	2.15	-56.90	5.17	
12:17	3.3		6.51	883.40	22.48	2.03	-64.10	4.74	
12:20	4.0		6.51	905.10	22.61	1.95	-70.00	4.37	

Sampling Activities

Sampled By: JR Sample Date/Time: 8/12/2025 12:20
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.51 pH 905.10 Spec. Cond. 22.61 Temp
Field Filtered: No Filter Type:
Water Level: 26.12 feet below TOC Drawdown: 0.40 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan **Date:** 8/12/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	T-4
Project Location:	Springfield, IL	**Sample ID:**	018
W.O. Number (s):	25080110	**Date (s):**	8/13/2025

Field Team Members

Name: Allison Lampe — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 82 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/13/25 11:35 AM

Static Water Level: 18.25 feet below TOC

Total Depth: 27.42 feet below TOC

Water Column: 9.17 feet

Purging Activities

Purged By: AL — Purge Date: 8/13/2025

Purge Method: Peristaltic Pump — Well Diameter: 2"

Purge Volume Calculation (L): 9.17 ft. x 0.022 = 0.2 L x 3 Vol. = 0.6 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 9.00 L

Physical appearance of purge water: Slightly cloudy — Odor: Slight — Color: gray

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:35	0.0	474	purge start time						
11:45	4.7	↓	6.62	673.60	17.40	0.65	-2.30	66.72	
11:48	6.2		6.63	661.70	17.15	0.53	-6.10	38.28	
11:51	7.6		6.62	636.80	17.55	0.49	-7.70	33.95	
11:54	9.0		6.60	607.40	17.46	0.47	-7.60	31.69	

Sampling Activities

Sampled By: PY — Sample Date/Time: 8/13/2025 11:54

Sample Method: Low Flow — Sample Equipment: Peristaltic Pump

Sample Parameters: 6.60 pH — 607.40 Spec. Cond. — 17.46 Temp

Field Filtered: No — Filter Type:

Water Level: 20.10 feet below TOC — Drawdown: 1.85 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe — **Date:** 8/13/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: T-5
Sample ID: 019
Date (s): 8/13/2025

Field Team Members

Name: Allison Lampe — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 82 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/13/25 11:00 AM
Static Water Level: 10.32 feet below TOC
Total Depth: 22.34 feet below TOC
Water Column: 12.02 feet

Purging Activities

Purged By: AL — Purge Date: 8/13/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 12.02 ft. x 0.022 = 0.26 L x 3 Vol. = 0.78 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.00 L
Physical appearance of purge water: Slightly cloudy — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:00	0.0	158	purge start time						
11:10	1.6	↓	6.80	636.30	19.39	0.79	-7.80	27.89	
11:13	2.1		6.79	634.60	19.12	0.66	-9.80	20.48	
11:16	2.5		6.79	624.10	19.58	0.64	-10.10	15.44	
11:19	3.0		6.80	615.80	18.84	0.65	-8.80	13.45	

Sampling Activities

Sampled By: PY — Sample Date/Time: 8/13/2025 11:19
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.80 pH — 615.80 Spec. Cond. — 18.84 Temp
Field Filtered: No — Filter Type:
Water Level: 15.08 feet below TOC — Drawdown: 4.76 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe — **Date:** 8/13/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	T-6
Project Location:	Springfield, IL	**Sample ID:**	020
W.O. Number (s):	25080110	**Date (s):**	8/13/2025

Field Team Members

Name: Allison Lampe — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 82 °F — Wind Direction: ☐ N ☑ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/13/25 10:26 AM

Static Water Level: 8.15 feet below TOC

Total Depth: 43.62 feet below TOC

Water Column: 35.47 feet

Purging Activities

Purged By: AL — Purge Date: 8/13/2025

Purge Method: Peristaltic Pump — Well Diameter: 2"

Purge Volume Calculation (L): 35.47 ft. x 0.022 = 0.78 L x 3 Vol. = 2.34 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 6.00 L

Physical appearance of purge water: Slightly cloudy — Odor: Strong — Color: gray

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:26	0.0	375	purge start time						
10:33	2.6	↓	7.17	769.30	20.52	0.44	-147.00	70.17	
10:36	3.8		7.17	758.20	21.22	0.40	-149.20	61.90	
10:39	4.9		7.17	757.90	22.21	0.38	-150.90	50.89	
10:42	6.0		7.16	759.90	22.80	0.37	-152.20	37.05	

Sampling Activities

Sampled By: PY — Sample Date/Time: 8/13/2025 10:42

Sample Method: Low Flow — Sample Equipment: Peristaltic Pump

Sample Parameters: 7.16 pH — 759.90 Spec. Cond. — 22.80 Temp

Field Filtered: No — Filter Type:

Water Level: 11.61 feet below TOC — Drawdown: 3.46 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe — **Date:** 8/13/2025

Field Data Sheet

Project Name: Ash Pond Monitoring Wells
Project Location: Springfield, IL
W.O. Number (s): 25080110
Monitoring Point: AW-1
Sample ID: 021
Date (s): 8/12/2025

Field Team Members

Name: Allison Lampe — Affiliation: TekLab, Inc.
Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 85 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 10:46 AM
Static Water Level: 15.01 feet below TOC
Total Depth: 54.81 feet below TOC
Water Column: 39.80 feet

Purging Activities

Purged By: AL — Purge Date: 8/12/2025
Purge Method: Peristaltic Pump — Well Diameter: 2"
Purge Volume Calculation (L): 39.8 ft. x 0.022 = 0.88 L x 3 Vol. = 2.64 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.50 L
Physical appearance of purge water: Clear — Odor: None — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:46	0.0	281	purge start time						
10:53	2.0	↓	6.57	1,602.50	18.89	1.13	-70.70	52.46	
10:56	2.8		6.57	1,598.90	18.79	1.03	-70.90	48.78	
10:59	3.7		6.58	1,600.70	18.80	0.97	-70.90	53.77	
11:02	4.5		6.58	1,599.30	18.97	0.93	-70.90	70.99	

Sampling Activities

Sampled By: PY — Sample Date/Time: 8/12/2025 11:02
Sample Method: Low Flow — Sample Equipment: Peristaltic Pump
Sample Parameters: 6.58 pH — 1,599.30 Spec. Cond. — 18.97 Temp
Field Filtered: Yes — Filter Type: Inline Disposable
Water Level: 17.02 feet below TOC — Drawdown: 2.01 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe — **Date:** 8/12/2025

Field Data Sheet

Project Name:	Ash Pond Monitoring Wells	**Monitoring Point:**	G120
Project Location:	Springfield, IL	**Sample ID:**	022
W.O. Number (s):	25080110	**Date (s):**	8/12/2025

Field Team Members

Name: Allison Lampe — Affiliation: TekLab, Inc.

Name: Payton Yoch — Affiliation: TekLab, Inc.

Weather Conditions

Temp: 85 °F — Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy — Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 11:28 AM

Static Water Level: 18.10 feet below TOC

Total Depth: 50.37 feet below TOC

Water Column: 32.27 feet

Purging Activities

Purged By: AL — Purge Date: 8/12/2025

Purge Method: Submersible Pump — Well Diameter: 2"

Purge Volume Calculation (L): 32.27 ft. x 0.022 = 0.71 L x 3 Vol. = 2.13 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 3.00 L

Physical appearance of purge water: Slightly cloudy — Odor: Slight — Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:28	0.0	125	purge start time						
11:43	1.9	↓	6.67	1,995.10	24.23	0.83	-123.60	3.47	
11:46	2.3		6.66	2,010.50	25.64	0.65	-129.30	2.92	
11:49	2.6		6.66	2,014.80	24.46	0.57	-131.50	3.05	
11:52	3.0		6.67	2,003.10	23.53	0.51	-132.40	3.67	

Sampling Activities

Sampled By: PY — Sample Date/Time: 8/12/2025 11:52

Sample Method: Low Flow — Sample Equipment: Submersible Pump

Sample Parameters: 6.67 pH — 2,003.10 Spec. Cond. — 23.53 Temp

Field Filtered: Yes — Filter Type: Inline Disposable

Water Level: 18.21 feet below TOC — Drawdown: 0.11 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe — **Date:** 8/12/2025

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25080110
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 46868 Technician(s): B. Gillihan Date: 8/11/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	8/11/25 10:09
7.0 Buffer	WC240918A	7.00	8/11/25 9:59
10.0 Buffer	WC240625A	10.00	8/11/25 10:15
LCS/CCV (7.0 Buffer)	WC250407A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1411	8/11/25 10:26

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.31	8/11/25 10:28
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-BG	LCS	8/11/25 10:28	21.7	7.02	1,414	0.34		
CCV-1-BG	CCV	8/11/25 15:01	23.3	7.02	1,417	0.39		

Comments:

Field Meter ID: Pine 46868 Technician(s): B. Gillihan Date: 8/12/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	
7.0 Buffer	WC240918A	7.00	8/12/25 8:49
10.0 Buffer	WC240625A	10.00	8/12/25 8:55
LCS/CCV (7.0 Buffer)	WC250407A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1415	8/12/25 9:01

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.17	8/12/25 9:06
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-BG	LCS	8/12/25 9:08	22.6	7.02	1,418	0.2		
CCV-2-BG	CCV	8/12/25 14:07	24.3	7.03	1,422	0.29		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25080110
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 46868 B. Gillihan Date: 8/13/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	8/13/25 9:04
7.0 Buffer	WC240918A	7.00	8/13/25 8:58
10.0 Buffer	WC240625A	10.00	8/13/25 9:13
LCS/CCV (7.0 Buffer)	WC250407A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1415	8/13/25 9:18

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.37	8/13/25 9:19
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. bb
LCS-3-BG	LCS	8/13/25 9:28	23.4	7.01	1,435	0.63		
CCV-3-BG	CCV	8/13/25 12:39	24.7	7.03	1,444	0.55		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25080110
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 46864 Technician(s): justin colp Date: 8/12/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc250102a	4.00	8/12/25 9:03
7.0 Buffer	wc250407a	7.00	8/12/25 9:00
10.0 Buffer	wc240625a	10.00	8/12/25 9:06
LCS/CCV (7.0 Buffer)	wc240918a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/12/25 9:11

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.91	8/12/25 9:12
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	8/12/25 9:12	23.8	7.01	1,397	1.87		
CCV-1-JC	CCV	8/12/25 13:41	26.4	7.04	1,382	2.03		

Comments:

Field Meter ID: Pine 46864 Technician(s): justin colp Date: 8/13/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc250102a	4.00	8/13/25 8:54
7.0 Buffer	wc250407a	7.00	8/13/25 8:49
10.0 Buffer	wc240625a	10.00	8/13/25 8:58
LCS/CCV (7.0 Buffer)	wc240918a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/13/25 9:04

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.95	8/13/25 9:04
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-JC	LCS	8/13/25 9:06	23.6	7.03	1,410	1.92		
CCV-2-JC	CCV	8/13/25 13:00	24.2	6.97	1,388	2.03		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25080110
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45612 Technician(s): A.Lampe Date: 8/11/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250429L	4.00	8/11/25 10:09
7.0 Buffer	WC250407A	7.00	8/11/25 10:11
10.0 Buffer	Wc240625A	10.00	8/11/25 10:15
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/11/25 10:19

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.13	8/11/25 10:19
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-AL	LCS	8/11/25 10:21	21.9	7.07	1,416	0.13		
CCV-1-AL	CCV	8/11/25 14:16	25.7	7.09	1,412	0.23		

Comments:

Field Meter ID: Pine 45612 Technician(s): A.Lampe Date: 8/12/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250429L	4.00	8/12/25 9:11
7.0 Buffer	WC250407A	7.00	8/12/25 9:15
10.0 Buffer	Wc240625A	10.00	8/12/25 9:20
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/12/25 9:25

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.24	8/12/25 9:25
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-AL	LCS	8/12/25 9:31	25.8	7.09	1,418	0.24		
CCV-2-AL	CCV	8/12/25 14:14	27.5	7.09	1,420	0.21		

Comments:

Site Samping Event: Ash Pond Monitoring Wells
LIMS Workorder: 25080110
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45612 Technician(s): A.Lampe Date: 8/13/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250429L	4.00	8/13/25 9:06
7.0 Buffer	WC250407A	7.00	8/13/25 9:10
10.0 Buffer	Wc240625A	10.00	8/13/25 9:13
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/13/25 9:16

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.12	8/13/25 9:17
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-AL	LCS	8/13/25 9:16	25.3	7.09	1,413	0.12		
CCV-3-AL	CCV	8/13/25 12:35	27.6	7.09	1,406	0.14		

Comments:

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

September 10, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10438
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 25080111

Dear Eric Staley:

TEKLAB, INC received 10 samples on 8/12/2025 3:40:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25080111
Report Date: 10-Sep-25

This reporting package includes the following:

Cover Letter	1
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Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25080111

Client Project: FGDS Landfill **Report Date:** 10-Sep-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25080111
Report Date: 10-Sep-25

Cooler Receipt Temp: 11.1 °C

An employee of Teklab, Inc. collected the sample(s).

Radium-226 and Radium-228 analysis was performed by Alliance Technical Group. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10438	NELAP	7/31/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2026	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2026	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2026	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-001
Client Sample ID: R101
Matrix: GROUNDWATER
Collection Date: 08/11/2025 12:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**511.53**	ft	1	08/11/2025 12:18	R369784
Depth to water	*	-5.00		**4.69**	ft	1	08/11/2025 12:18	R369784
Depth to water from measuring point	*	0		**7.49**	ft	1	08/11/2025 12:18	R369784
Elevation of groundwater surface	*	0		**539.31**	ft	1	08/11/2025 12:18	R369784
Measuring Point Elevation	*	0		**546.80**	ft	1	08/11/2025 12:18	R369784
Measuring Point Height Above Land Surface	*	0		**2.80**	ft	1	08/11/2025 12:18	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**23**	NTU	1	08/11/2025 12:18	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**64.0**	°F	1	08/11/2025 12:18	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.69**		1	08/11/2025 12:18	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**834**	µmhos/cm @25C	1	08/11/2025 12:18	R369784
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**866**	mg/L	1	08/12/2025 15:23	R369703
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/12/2025 17:02	R369661
Chloride	NELAP	5.00		**105**	mg/L	10	08/12/2025 17:02	R369661
Sulfate	NELAP	10.0		**264**	mg/L	10	08/12/2025 17:02	R369661
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.0156**	mg/L	1	08/14/2025 17:31	243289
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/13/2025 19:16	243289
Boron	NELAP	0.0200		**0.127**	mg/L	1	08/13/2025 19:16	243289
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/13/2025 19:16	243289
Calcium	NELAP	0.100		**159**	mg/L	1	08/13/2025 19:16	243289
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/13/2025 19:16	243289
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/13/2025 19:16	243289
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/13/2025 19:16	243289
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/13/2025 19:16	243289
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:08	243289
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	08/19/2025 12:02	243589
Lithium	*	0.0030		**0.0167**	mg/L	5	08/14/2025 3:08	243289
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:08	243289
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2025 3:08	243289
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/12/2025 16:17	243283
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	08/22/2025 0:00	R371072
Radium-228	*	0		**See Attached**	pci/L	1	08/22/2025 0:00	R371072

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-002
Client Sample ID: G121
Matrix: GROUNDWATER
Collection Date: 08/11/2025 11:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	08/11/2025 11:23	R369784
Depth to water	*	-5.00		**26.98**	ft	1	08/11/2025 11:23	R369784
Depth to water from measuring point	*	0		**28.85**	ft	1	08/11/2025 11:23	R369784
Elevation of groundwater surface	*	0		**526.75**	ft	1	08/11/2025 11:23	R369784
Measuring Point Elevation	*	0		**555.60**	ft	1	08/11/2025 11:23	R369784
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	08/11/2025 11:23	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**14**	NTU	1	08/11/2025 11:23	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**69.7**	°F	1	08/11/2025 11:23	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.76**		1	08/11/2025 11:23	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1650**	µmhos/cm @25C	1	08/11/2025 11:23	R369784
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	33		**1250**	mg/L	1.67	08/15/2025 13:31	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/12/2025 17:37	R369661
Chloride	NELAP	5.00		**28.9**	mg/L	10	08/12/2025 17:37	R369661
Sulfate	NELAP	10.0		**344**	mg/L	10	08/12/2025 17:37	R369661
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.354**	mg/L	1	08/13/2025 19:17	243289
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/13/2025 19:17	243289
Boron	NELAP	0.0200		**3.21**	mg/L	1	08/13/2025 19:17	243289
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/13/2025 19:17	243289
Calcium	NELAP	0.100		**194**	mg/L	1	08/13/2025 19:17	243289
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/13/2025 19:17	243289
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/13/2025 19:17	243289
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/13/2025 19:17	243289
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/13/2025 19:17	243289
Sample result for Ba exceeds 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0020**	mg/L	5	08/14/2025 3:14	243289
Arsenic	NELAP	0.0010		**0.0044**	mg/L	5	08/19/2025 12:08	243589
Lithium	*	0.0030		**0.0067**	mg/L	5	08/14/2025 3:14	243289
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:14	243289
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2025 3:14	243289
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/12/2025 16:20	243283
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	08/25/2025 0:00	R371072
Radium-228	*	0		**See Attached**	pci/L	1	08/25/2025 0:00	R371072

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-003
Client Sample ID: G122
Matrix: GROUNDWATER
Collection Date: 08/11/2025 12:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**505.11**	ft	1	08/11/2025 12:12	R369784
Depth to water	*	-5.00		**30.38**	ft	1	08/11/2025 12:12	R369784
Depth to water from measuring point	*	0		**32.12**	ft	1	08/11/2025 12:12	R369784
Elevation of groundwater surface	*	0		**522.28**	ft	1	08/11/2025 12:12	R369784
Measuring Point Elevation	*	0		**554.40**	ft	1	08/11/2025 12:12	R369784
Measuring Point Height Above Land Surface	*	0		**1.74**	ft	1	08/11/2025 12:12	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**18**	NTU	1	08/11/2025 12:12	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**64.5**	°F	1	08/11/2025 12:12	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.71**		1	08/11/2025 12:12	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1850**	µmhos/cm @25C	1	08/11/2025 12:12	R369784
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1480**	mg/L	1	08/12/2025 15:23	R369703
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/12/2025 17:48	R369661
Chloride	NELAP	5.00		**37.3**	mg/L	10	08/12/2025 17:48	R369661
Sulfate	NELAP	10.0		**552**	mg/L	10	08/12/2025 17:48	R369661
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.466**	mg/L	1	08/14/2025 17:32	243289
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:32	243289
Boron	NELAP	0.0200		**12.5**	mg/L	1	08/14/2025 17:32	243289
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:32	243289
Calcium	NELAP	0.100		**258**	mg/L	1	08/14/2025 17:32	243289
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:32	243289
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:32	243289
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:32	243289
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:32	243289
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:20	243289
Arsenic	NELAP	0.0010		**0.0029**	mg/L	5	08/19/2025 12:15	243589
Lithium	*	0.0030		**0.0062**	mg/L	5	08/14/2025 3:20	243289
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:20	243289
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2025 3:20	243289
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/12/2025 16:22	243283
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	08/22/2025 0:00	R371072
Radium-228	*	0		**See Attached**	pci/L	1	08/22/2025 0:00	R371072

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-004
Client Sample ID: AW-2
Matrix: GROUNDWATER
Collection Date: 08/11/2025 12:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	08/11/2025 12:56	R369784
Depth to water	*	-5.00		**2.72**	ft	1	08/11/2025 12:56	R369784
Depth to water from measuring point	*	0		**6.02**	ft	1	08/11/2025 12:56	R369784
Elevation of groundwater surface	*	0		**523.96**	ft	1	08/11/2025 12:56	R369784
Measuring Point Elevation	*	0		**529.98**	ft	1	08/11/2025 12:56	R369784
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	08/11/2025 12:56	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.9**	NTU	1	08/11/2025 12:56	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**72.0**	°F	1	08/11/2025 12:56	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.87**		1	08/11/2025 12:56	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1200**	µmhos/cm @25C	1	08/11/2025 12:56	R369784
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**790**	mg/L	1	08/12/2025 15:23	R369703
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/12/2025 18:00	R369661
Chloride	NELAP	5.00		**26.0**	mg/L	10	08/12/2025 18:00	R369661
Sulfate	NELAP	10.0		**131**	mg/L	10	08/12/2025 18:00	R369661
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.604**	mg/L	1	08/14/2025 17:33	243289
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:33	243289
Boron	NELAP	0.0200		**3.08**	mg/L	1	08/14/2025 17:33	243289
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:33	243289
Calcium	NELAP	0.100		**157**	mg/L	1	08/14/2025 17:33	243289
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:33	243289
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:33	243289
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:33	243289
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:33	243289
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:26	243289
Arsenic	NELAP	0.0010		**0.0110**	mg/L	5	08/19/2025 12:21	243589
Lithium	*	0.0030		**0.0053**	mg/L	5	08/14/2025 3:26	243289
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:26	243289
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2025 3:26	243289
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/12/2025 16:24	243283
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	08/22/2025 0:00	R371072
Radium-228	*	0		**See Attached**	pci/L	1	08/22/2025 0:00	R371072

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-005
Client Sample ID: P07D
Matrix: GROUNDWATER
Collection Date: 08/11/2025 11:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.71**	ft	1	08/11/2025 11:23	R369784
Depth to water	*	-5.00		**2.02**	ft	1	08/11/2025 11:23	R369784
Depth to water from measuring point	*	0		**5.02**	ft	1	08/11/2025 11:23	R369784
Elevation of groundwater surface	*	0		**523.23**	ft	1	08/11/2025 11:23	R369784
Measuring Point Elevation	*	0		**528.25**	ft	1	08/11/2025 11:23	R369784
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	08/11/2025 11:23	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**35**	NTU	1	08/11/2025 11:23	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**66.9**	°F	1	08/11/2025 11:23	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.67**		1	08/11/2025 11:23	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**931**	µmhos/cm @25C	1	08/11/2025 11:23	R369784
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	33		**1180**	mg/L	1.67	08/15/2025 13:31	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/12/2025 18:12	R369661
Chloride	NELAP	5.00		**31.8**	mg/L	10	08/12/2025 18:12	R369661
Sulfate	NELAP	10.0		**324**	mg/L	10	08/12/2025 18:12	R369661
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.789**	mg/L	1	08/14/2025 17:34	243289
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:34	243289
Boron	NELAP	0.0200		**5.54**	mg/L	1	08/14/2025 17:34	243289
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:34	243289
Calcium	NELAP	0.100		**194**	mg/L	1	08/14/2025 17:34	243289
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:34	243289
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:34	243289
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:34	243289
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:34	243289
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 4:38	243289
Arsenic	NELAP	0.0010		**0.0255**	mg/L	5	08/19/2025 12:27	243589
Lithium	*	0.0030		**0.0069**	mg/L	5	08/14/2025 4:38	243289
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 4:38	243289
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2025 4:38	243289
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/12/2025 16:27	243283
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	08/22/2025 0:00	R371072
Radium-228	*	0		**See Attached**	pci/L	1	08/22/2025 0:00	R371072

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-006
Client Sample ID: P03D
Matrix: GROUNDWATER
Collection Date: 08/11/2025 14:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**494.95**	ft	1	08/11/2025 14:10	R369784
Depth to water	*	-5.00		**5.46**	ft	1	08/11/2025 14:10	R369784
Depth to water from measuring point	*	0		**8.65**	ft	1	08/11/2025 14:10	R369784
Elevation of groundwater surface	*	0		**524.53**	ft	1	08/11/2025 14:10	R369784
Measuring Point Elevation	*	0		**533.20**	ft	1	08/11/2025 14:10	R369784
Measuring Point Height Above Land Surface	*	0		**3.18**	ft	1	08/11/2025 14:10	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	08/11/2025 14:10	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**68.3**	°F	1	08/11/2025 14:10	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.90**		1	08/11/2025 14:10	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1630**	µmhos/cm @25C	1	08/11/2025 14:10	R369784
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Arsenic	NELAP	0.0010		**0.0017**	mg/L	5	08/19/2025 12:34	243589

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-007
Client Sample ID: P104
Matrix: GROUNDWATER
Collection Date: 08/11/2025 13:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**494.07**	ft	1	08/11/2025 13:45	R369784
Depth to water	*	-5.00		**6.90**	ft	1	08/11/2025 13:45	R369784
Depth to water from measuring point	*	0		**9.54**	ft	1	08/11/2025 13:45	R369784
Elevation of groundwater surface	*	0		**522.25**	ft	1	08/11/2025 13:45	R369784
Measuring Point Elevation	*	0		**531.79**	ft	1	08/11/2025 13:45	R369784
Measuring Point Height Above Land Surface	*	0		**2.64**	ft	1	08/11/2025 13:45	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**5.2**	NTU	1	08/11/2025 13:45	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**66.2**	°F	1	08/11/2025 13:45	R369784
SW-846 9040B								
pH, Field	*	1.00		**7.30**		1	08/11/2025 13:45	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**495**	µmhos/cm @25C	1	08/11/2025 13:45	R369784
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Arsenic	NELAP	0.0010		**0.0055**	mg/L	5	08/20/2025 14:04	243589

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-008
Client Sample ID: P103
Matrix: GROUNDWATER
Collection Date: 08/11/2025 14:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**502.18**	ft	1	08/11/2025 14:45	R369784
Depth to water	*	-5.00		**8.88**	ft	1	08/11/2025 14:45	R369784
Depth to water from measuring point	*	0		**11.84**	ft	1	08/11/2025 14:45	R369784
Elevation of groundwater surface	*	0		**525.59**	ft	1	08/11/2025 14:45	R369784
Measuring Point Elevation	*	0		**537.43**	ft	1	08/11/2025 14:45	R369784
Measuring Point Height Above Land Surface	*	0		**2.96**	ft	1	08/11/2025 14:45	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**47**	NTU	1	08/11/2025 14:45	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**69.7**	°F	1	08/11/2025 14:45	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.97**		1	08/11/2025 14:45	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**902**	µmhos/cm @25C	1	08/11/2025 14:45	R369784
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Arsenic	NELAP	0.0010		**0.0018**	mg/L	5	08/20/2025 14:10	243589

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-009
Client Sample ID: GP-7
Matrix: GROUNDWATER
Collection Date: 08/12/2025 10:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**533.12**	ft	1	08/12/2025 10:33	R369784
Depth to water	*	-5.00		**5.85**	ft	1	08/12/2025 10:33	R369784
Depth to water from measuring point	*	0		**8.89**	ft	1	08/12/2025 10:33	R369784
Elevation of groundwater surface	*	0		**524.23**	ft	1	08/12/2025 10:33	R369784
Measuring Point Elevation	*	0		**533.12**	ft	1	08/12/2025 10:33	R369784
Measuring Point Height Above Land Surface	*	0		**3.04**	ft	1	08/12/2025 10:33	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**140**	NTU	1	08/12/2025 10:33	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**64.8**	°F	1	08/12/2025 10:33	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.78**		1	08/12/2025 10:33	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**884**	µmhos/cm @25C	1	08/12/2025 10:33	R369784
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Arsenic	NELAP	0.0010		**0.0072**	mg/L	5	08/15/2025 2:29	243361

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 10-Sep-25
Lab ID: 25080111-010
Client Sample ID: P04D
Matrix: GROUNDWATER
Collection Date: 08/11/2025 14:11

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.12**	ft	1	08/11/2025 14:11	R369784
Depth to water	*	-5.00		**7.96**	ft	1	08/11/2025 14:11	R369784
Depth to water from measuring point	*	0		**12.99**	ft	1	08/11/2025 14:11	R369784
Elevation of groundwater surface	*	0		**526.68**	ft	1	08/11/2025 14:11	R369784
Measuring Point Elevation	*	0		**539.67**	ft	1	08/11/2025 14:11	R369784
Measuring Point Height Above Land Surface	*	0		**5.03**	ft	1	08/11/2025 14:11	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**68**	NTU	1	08/11/2025 14:11	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**70.4**	°F	1	08/11/2025 14:11	R369784
SW-846 9040B								
pH, Field	*	1.00		**7.01**		1	08/11/2025 14:11	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**881**	µmhos/cm @25C	1	08/11/2025 14:11	R369784
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Arsenic	NELAP	0.0010		**0.0027**	mg/L	5	08/20/2025 14:16	243589

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25080111
Report Date: 10-Sep-25

Carrier: Daniel Crump

Received By: LEH

Completed by: Amber Dilallo
On: 12-Aug-25

Reviewed by: Elizabeth A. Hurley
On: 13-Aug-25

Pages to follow: Chain of custody 2 Extra pages included 18

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	11.1	
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice	☐	
Chain of custody present?	Yes ☑	No ☐				
Chain of custody signed when relinquished and received?	Yes ☑	No ☐				
Chain of custody agrees with sample labels?	Yes ☑	No ☐				
Samples in proper container/bottle?	Yes ☑	No ☐				
Sample containers intact?	Yes ☑	No ☐				
Sufficient sample volume for indicated test?	Yes ☑	No ☐				
All samples received within holding time?	Yes ☑	No ☐				
Reported field parameters measured:	Field ☑	Lab ☐	NA ☐			
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐				
When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.						
Water – at least one vial per sample has zero headspace?	Yes ☐	No ☐	No VOA vials ☑			
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑			
Water - pH acceptable upon receipt?	Yes ☐	No ☑	NA ☐			
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑			

Any No responses must be detailed below or on the COC.

Samples were received on 8/11/25 at 1625 on ice [Cooler #2 = 11.1C and Cooler #3 = 16.1C - LTG#3]. Additional Nitric Acid (104844) was needed for R101, G121, G122, AW2 and P07D upon arrival at the laboratory. pH strip #104524. - JD/amberdilallo - 8/12/2025 9:06:13 AM

Samples were received on 8/12/25 at 1540 on ice [Cooler #1 = 5.3C, Cooler #2 = 4.7C, Cooler #3 = 3.7C and Cooler #4 = 4.3C - LTG#5]. pH strip #104524. - amberdilallo - 8/13/2025 8:17:51 AM

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 25080111

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 16.1 11.1 °C 3
Preserved in: ☒ LAB ☐ FIELD FOR LAB USE ONLY pH 04524
LAB NOTES: Added HNO3 (104844) 3/3 liters R101, G121, G122, AW2, P07D

Client Comments: SO 8/12/25
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Brett Gillihan

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other _____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity	As (ICPMS)
25080111-001	R101	8-11-25 1218	Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-002	G121	8-11-25 1123	Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-003	G122	8-11-25 1212	Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-004	AW-2	8-11-25 1256	Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-005	P07D	8-11-25 1123	Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-006	P03D	8-11-25 1410	Groundwater	1	1								✔					✔	✔
-007	P104	8-11-25 1345	Groundwater	1	1								✔					✔	✔
-008	P103	8-11-25 1445	Groundwater	1	1								✔					✔	✔
-009	GP-7		Groundwater	1	1								✔					✔	✔
-010	P04D	8-11-25 1411	Groundwater	1	1								✔					✔	✔
			Groundwater																

Relinquished By	Date/Time	Received By	Date/Time
	8-11 / 1625		8/11/25 1625

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

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CHAIN OF CUSTODY

Pg 1 of 1 Workorder # 25080111

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005 5.3, 4.7, 3.7

Client: City Water, Light & Power
Address: 3100 Stevenson Drive, 2nd Floor Maintenance Building
City/State/Zip: Springfield IL 62712
Contact: Eric Staley Phone: (217) 757-8610
Email: eric.staley@cwlp.com Fax:

Samples on: ☒ ICE ☐ BLUE ICE ☐ NO ICE 4.3 °C 5
Preserved in: ☐ LAB ☒ FIELD FOR LAB USE ONLY
LAB NOTES: 104524 DM 8/13/25

Client Comments:
*elevations, pH, conductivity, temperature
**Sb As Se Li Tl (ICPMS) Ba Be B Cd Ca Cr Co Pb Hg Mo

Are these samples known to be involved in litigation? If yes, a surcharge will apply: ☐ Yes ☑ No
Are these samples known to be hazardous? ☐ Yes ☑ No
Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: ☑ Yes ☐ No Permit on file

PROJECT NAME/NUMBER
FGDS Landfill

SAMPLE COLLECTOR'S NAME
Patton Tock

RESULTS REQUESTED
☑ Standard ☐ 1-2 Day (100% Surcharge)
☐ Other ____ ☐ 3 Day (50% Surcharge)

BILLING INSTRUCTIONS

Lab Use Only	Sample ID	Date/Time Sampled	Matrix	# and Type of Containers: UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	INDICATE ANALYSIS REQUESTED: Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity	As (ICPMS)
25080111-001	R101		Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-002	G121		Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-003	G122		Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-004	AW-2		Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-005	P07D		Groundwater	1	4								✔	✔	✔	✔	✔	✔	
-006	P03D		Groundwater	1	1								✔					✔	✔
-007	P104		Groundwater	1	1								✔					✔	✔
-008	P103		Groundwater	1	1								✔					✔	✔
-009	GP-7	8/12/25 1033	Groundwater	1	1								✔					✔	✔
-010	P04D		Groundwater	1	1								✔					✔	✔
			Groundwater																

Relinquished By	Date/Time	Received By	Date/Time
	8-12/1540		8/12/25 1540

*The individual signing this agreement on behalf of the client, acknowledges that he/she has read and understands the terms and conditions of this agreement, and that he/she has the authority to sign on behalf of the client. See www.teklabinc.com for terms and conditions

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: R101
Sample ID: 001
Date (s): 8/11/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 84 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/11/25 11:55 AM
Static Water Level: 7.49 feet below TOC
Total Depth: 35.27 feet below TOC
Water Column: 27.78 feet

Purging Activities

Purged By: DC Purge Date: 8/11/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 27.78 ft. x 0.022 = 0.61 L x 3 Vol. = 1.83 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:55	0.0	217	purge start time						
12:06	2.4	↓	6.70	836.50	18.14	1.99	43.90	10.40	
12:09	3.0		6.69	837.60	18.11	1.83	42.40	15.24	
12:12	3.7		6.69	834.50	18.16	1.67	40.70	17.98	
12:15	4.3		6.68	832.20	17.93	1.55	39.10	20.87	
12:18	5.0		6.69	833.60	17.78	1.46	37.60	23.02	

Sampling Activities

Sampled By: BG Sample Date/Time: 8/11/2025 12:18
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.69 pH 833.60 Spec. Cond. 17.78 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 7.51 feet below TOC Drawdown: 0.02 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan **Date:** 8/11/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: G121
Sample ID: 002
Date (s): 8/11/2025

Field Team Members

Name: Allison Lampe Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 85 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/11/25 10:49 AM
Static Water Level: 28.85 feet below TOC
Total Depth: 58.56 feet below TOC
Water Column: 29.71 feet

Purging Activities

Purged By: AL Purge Date: 8/11/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 29.71 ft. x 0.022 = 0.65 L x 3 Vol. = 1.95 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.00 L
Physical appearance of purge water: Slightly cloudy Odor: Slight Color: light brown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:49	0.0	88	purge start time						
11:14	2.2	↓	6.77	1,651.80	20.65	4.82	-109.80	14.32	
11:17	2.5		6.76	1,653.50	20.46	4.71	-109.70	13.48	
11:20	2.7		6.76	1,651.10	20.81	4.79	-108.90	14.14	
11:23	3.0		6.76	1,654.40	20.92	4.75	-107.60	13.86	

Sampling Activities

Sampled By: PY Sample Date/Time: 8/11/2025 11:23
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.76 pH 1,654.40 Spec. Cond. 20.92 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 29.00 feet below TOC Drawdown: 0.15 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe **Date:** 8/11/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: G122
Sample ID: 003
Date (s): 8/11/2025

Field Team Members

Name: Allison Lampe Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 85 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/11/25 11:51 AM
Static Water Level: 32.12 feet below TOC
Total Depth: 49.29 feet below TOC
Water Column: 17.17 feet

Purging Activities

Purged By: AL Purge Date: 8/11/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 17.17 ft. x 0.022 = 0.38 L x 3 Vol. = 1.14 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: gray

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:51	0.0	286	purge start time						
12:03	3.4	↓	6.72	1,783.30	18.26	0.69	-104.40	31.73	
12:06	4.3		6.71	1,829.60	18.20	0.64	-111.10	22.91	
12:09	5.1		6.71	1,819.90	18.78	0.63	-114.10	21.11	
12:12	6.0		6.71	1,854.80	18.06	0.59	-116.00	17.86	

Sampling Activities

Sampled By: PY Sample Date/Time: 8/11/2025 12:12
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.71 pH 1,854.80 Spec. Cond. 18.06 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 32.31 feet below TOC Drawdown: 0.19 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe **Date:** 8/11/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: AW-2
Sample ID: 004
Date (s): 8/11/2025

Field Team Members

Name: Allison Lampe Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 85 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/11/25 12:38 PM
Static Water Level: 6.02 feet below TOC
Total Depth: 32.64 feet below TOC
Water Column: 26.62 feet

Purging Activities

Purged By: AL Purge Date: 8/11/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 26.62 ft. x 0.022 = 0.59 L x 3 Vol. = 1.77 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Slightly cloudy Odor: Slight Color: light brown

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
12:38	0.0	222	purge start time						
12:47	2.0	↓	6.88	1,199.00	21.32	1.19	-135.10	2.12	
12:50	2.7		6.88	1,195.90	21.21	1.04	-136.30	2.59	
12:53	3.3		6.87	1,198.20	21.68	0.99	-136.70	3.64	
12:56	4.0		6.87	1,198.00	22.23	0.97	-135.50	4.90	

Sampling Activities

Sampled By: PY Sample Date/Time: 8/11/2025 12:56
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.87 pH 1,198.00 Spec. Cond. 22.23 Temp
Field Filtered: Yes Filter Type: Inline Disposable
Water Level: 6.33 feet below TOC Drawdown: 0.31 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe **Date:** 8/11/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: P07D
Sample ID: 005
Date (s): 8/11/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 83 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☑ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/11/25 10:52 AM
Static Water Level: 5.02 feet below TOC
Total Depth: 32.54 feet below TOC
Water Column: 27.52 feet

Purging Activities

Purged By: DC Purge Date: 8/11/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 27.52 ft. x 0.022 = 0.61 L x 3 Vol. = 1.83 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 6.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:52	0.0	194	purge start time						
11:11	3.7	↓	6.67	973.80	18.71	1.29	-47.50	43.47	
11:14	4.3		6.67	958.90	18.90	1.25	-50.90	37.46	
11:17	4.8		6.67	947.80	19.27	1.23	-53.80	37.54	
11:20	5.4		6.67	948.30	19.81	1.24	-56.30	32.14	
11:23	6.0		6.67	931.20	19.37	1.23	-58.80	34.99	

Sampling Activities

Sampled By: BG Sample Date/Time: 8/11/2025 11:23
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.67 pH 931.20 Spec. Cond. 19.37 Temp
Field Filtered: No Filter Type:
Water Level: 5.21 feet below TOC Drawdown: 0.19 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan **Date:** 8/11/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: P03D
Sample ID: 006
Date (s): 8/11/2025

Field Team Members

Name: Allison Lampe Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 85 °F
Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☑ NE ☐ NW
Precipitation: ☑ None ☐ Light ☐ Heavy
Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/11/25 1:53 PM
Static Water Level: 8.65 feet below TOC
Total Depth: 38.25 feet below TOC
Water Column: 29.60 feet

Purging Activities

Purged By: AL Purge Date: 8/11/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 29.6 ft. x 0.022 = 0.65 L x 3 Vol. = 1.95 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear Odor: None Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:53	0.0	235	purge start time						
14:01	1.9	↓	6.90	1,632.10	20.00	1.13	-11.70	8.38	
14:04	2.6		6.90	1,615.30	20.04	1.04	-11.10	8.89	
14:07	3.3		6.90	1,630.80	20.52	1.07	-11.60	10.72	
14:10	4.0		6.90	1,628.40	20.15	0.98	-13.20	11.67	

Sampling Activities

Sampled By: PY Sample Date/Time: 8/11/2025 14:10
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.90 pH 1,628.40 Spec. Cond. 20.15 Temp
Field Filtered: No Filter Type:
Water Level: 8.85 feet below TOC Drawdown: 0.20 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe **Date:** 8/11/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: P104
Sample ID: 007
Date (s): 8/11/2025

Field Team Members

Name: Allison Lampe Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 85 °F Wind Direction: ☐ N ☐ S ☐ E ☐ SE ☐ SW ☑ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Damaged
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/11/25 1:25 PM
Static Water Level: 9.54 feet below TOC
Total Depth: 37.72 feet below TOC
Water Column: 28.18 feet

Purging Activities

Purged By: AL Purge Date: 8/11/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 28.18 ft. x 0.022 = 0.62 L x 3 Vol. = 1.86 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 4.00 L
Physical appearance of purge water: Clear Odor: Slight Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:25	0.0	200	purge start time						
13:36	2.2	↓	7.29	494.10	19.02	1.24	-120.70	5.62	
13:39	2.8		7.30	493.20	19.20	1.17	-126.70	6.82	
13:42	3.4		7.30	494.70	19.15	1.11	-129.20	5.23	
13:45	4.0		7.30	495.40	19.02	1.05	-130.80	5.16	

Sampling Activities

Sampled By: PY Sample Date/Time: 8/11/2025 13:45
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 7.30 pH 495.40 Spec. Cond. 19.02 Temp
Field Filtered: No Filter Type:
Water Level: 12.02 feet below TOC Drawdown: 2.48 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612
- Rusted casing

Form Completed By: Allison Lampe **Date:** 8/11/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: P103
Sample ID: 008
Date (s): 8/11/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.
Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 88 °F Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/11/25 2:25 PM
Static Water Level: 11.84 feet below TOC
Total Depth: 35.25 feet below TOC
Water Column: 23.41 feet

Purging Activities

Purged By: DC Purge Date: 8/11/2025
Purge Method: Peristaltic Pump Well Diameter: 3"
Purge Volume Calculation (L): 23.41 ft. x 0.022 = 0.52 L x 3 Vol. = 1.56 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 5.00 L
Physical appearance of purge water: Slightly cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
14:25	0.0	250	purge start time						
14:33	2.0	↓	6.99	890.00	21.44	1.68	90.20	77.54	
14:36	2.8		6.98	894.00	21.38	1.55	87.90	81.66	
14:39	3.5		6.98	895.10	21.22	1.47	86.00	78.69	
14:42	4.3		6.97	897.70	21.04	1.39	84.40	65.46	
14:45	5.0		6.97	901.70	20.95	1.34	83.00	47.18	

Sampling Activities

Sampled By: DC Sample Date/Time: 8/11/2025 14:45
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.97 pH 901.70 Spec. Cond. 20.95 Temp
Field Filtered: No Filter Type:
Water Level: 11.91 feet below TOC Drawdown: 0.07 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan **Date:** 8/11/2025

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: GP-7
Sample ID: 009
Date (s): 8/12/2025

Field Team Members

Name: Allison Lampe Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 84 °F Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 10:14 AM
Static Water Level: 8.89 feet below TOC
Total Depth: 40.52 feet below TOC
Water Column: 31.63 feet

Purging Activities

Purged By: AL Purge Date: 8/12/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 31.63 ft. x 0.022 = 0.7 L x 3 Vol. = 2.1 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.00 L
Physical appearance of purge water: Clear Odor: None Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:14	0.0	158	purge start time						
10:24	1.6	↓	6.86	790.50	18.48	1.41	-64.50	44.92	
10:27	2.1		6.87	793.20	18.35	1.21	-73.40	60.69	
10:30	2.5		6.85	829.00	18.23	1.06	-83.20	90.05	
10:33	3.0		6.78	884.20	18.22	0.94	-98.90	136.81	

Sampling Activities

Sampled By: PY Sample Date/Time: 8/12/2025 10:33
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.78 pH 884.20 Spec. Cond. 18.22 Temp
Field Filtered: No Filter Type:
Water Level: 9.35 feet below TOC Drawdown: 0.46 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe Date: 8/12/2025

Field Data Sheet

Project Name:	FGDS Landfill	**Monitoring Point:**	P04D
Project Location:	Springfield, IL	**Sample ID:**	010
W.O. Number (s):	25080111	**Date (s):**	8/11/2025

Field Team Members

Name: Brett Gillihan Affiliation: TekLab, Inc.

Name: Danny Crump Affiliation: TekLab, Inc.

Weather Conditions

Temp: 87 °F Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

			Yes	No
Well Pad	Good	**Locks**		
Casing	Good	Protective Casing		X
Protective Casing	Good	Well		X
Reference Mark/Identification	Yes			

Groundwater Level Measurements

Date/Time Measured: 8/11/25 1:47 PM

Static Water Level: 12.99 feet below TOC

Total Depth: 42.55 feet below TOC

Water Column: 29.56 feet

Purging Activities

Purged By: DC Purge Date: 8/11/2025

Purge Method: Peristaltic Pump Well Diameter: 2"

Purge Volume Calculation (L): 29.56 ft. x 0.022 = 0.65 L x 3 Vol. = 1.95 L **Based on Low-Flow (3/8" discharge)*

Actual Purge Volume (L): 5.00 L

Physical appearance of purge water: Slightly cloudy Odor: None Color: Clear

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
13:47	0.0	208	purge start time						
13:59	2.5	↓	7.16	683.80	21.23	3.43	62.90	48.65	
14:02	3.1		7.13	688.10	21.22	3.37	64.40	46.37	
14:05	3.8		7.07	712.70	21.29	3.21	68.20	42.87	
14:08	4.4		7.01	743.80	21.30	2.97	73.60	38.34	
14:11	5.0		6.93	803.30	21.28	2.65	80.40	36.19	
14:14	5.6		7.41	22.00	21.81	8.43	81.00	4.41	
14:17	6.2		7.80	20.00	23.08	8.93	74.40	4.54	
14:20	6.9		7.93	25.80	25.27	8.89	69.90	4.53	
14:23	7.5		8.05	22.20	26.65	8.70	65.70	4.60	
14:26	8.1		7.43	965.50	21.44	5.71	89.10	70.66	
14:29	8.8		7.07	853.50	20.43	2.14	92.80	73.21	
14:32	9.4		7.01	881.10	21.36	1.79	91.20	68.13	

Sampling Activities

Sampled By: BG Sample Date/Time: 8/11/2025 14:11

Sample Method: Low Flow Sample Equipment: Peristaltic Pump

Sample Parameters: 7.01 pH 881.10 Spec. Cond. 21.36 Temp

Field Filtered: No Filter Type:

Water Level: 13.05 feet below TOC Drawdown: 0.06 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 46868

Form Completed By: Brett Gillihan **Date:** 8/11/2025

Site Samping Event: FGDS Landfill
LIMS Workorder: 25080111
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 46868 Technician(s): B. Gillihan Date: 8/11/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	8/11/25 10:09
7.0 Buffer	WC240918A	7.00	8/11/25 9:59
10.0 Buffer	WC240625A	10.00	8/11/25 10:15
LCS/CCV (7.0 Buffer)	WC250407A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1411	8/11/25 10:26

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.31	8/11/25 10:28
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-BG	LCS	8/11/25 10:28	21.7	7.02	1,414	0.34		
CCV-1-BG	CCV	8/11/25 15:01	23.3	7.02	1,417	0.39		

Comments:

Field Meter ID: Pine 46868 Technician(s): B. Gillihan Date: 8/12/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	
7.0 Buffer	WC240918A	7.00	8/12/25 8:49
10.0 Buffer	WC240625A	10.00	8/12/25 8:55
LCS/CCV (7.0 Buffer)	WC250407A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1415	8/12/25 9:01

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.17	8/12/25 9:06
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-BG	LCS	8/12/25 9:08	22.6	7.02	1,418	0.2		
CCV-2-BG	CCV	8/12/25 14:07	24.3	7.03	1,422	0.29		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25080111
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 46868 B. Gillihan Date: 8/13/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250102A	4.00	8/13/25 9:04
7.0 Buffer	WC240918A	7.00	8/13/25 8:58
10.0 Buffer	WC240625A	10.00	8/13/25 9:13
LCS/CCV (7.0 Buffer)	WC250407A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1415	8/13/25 9:18

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.37	8/13/25 9:19
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. bb
LCS-3-BG	LCS	8/13/25 9:28	23.4	7.01	1,435	0.63		
CCV-3-BG	CCV	8/13/25 12:39	24.7	7.03	1,444	0.55		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25080111
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 46864 Technician(s): justin colp Date: 8/12/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc250102a	4.00	8/12/25 9:03
7.0 Buffer	wc250407a	7.00	8/12/25 9:00
10.0 Buffer	wc240625a	10.00	8/12/25 9:06
LCS/CCV (7.0 Buffer)	wc240918a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/12/25 9:11

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.91	8/12/25 9:12
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-JC	LCS	8/12/25 9:12	23.8	7.01	1,397	1.87		
CCV-1-JC	CCV	8/12/25 13:41	26.4	7.04	1,382	2.03		

Comments:

Field Meter ID: Pine 46864 Technician(s): justin colp Date: 8/13/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	wc250102a	4.00	8/13/25 8:54
7.0 Buffer	wc250407a	7.00	8/13/25 8:49
10.0 Buffer	wc240625a	10.00	8/13/25 8:58
LCS/CCV (7.0 Buffer)	wc240918a		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/13/25 9:04

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	1.95	8/13/25 9:04
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-JC	LCS	8/13/25 9:06	23.6	7.03	1,410	1.92		
CCV-2-JC	CCV	8/13/25 13:00	24.2	6.97	1,388	2.03		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25080111
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45612 Technician(s): A.Lampe Date: 8/11/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250429L	4.00	8/11/25 10:09
7.0 Buffer	WC250407A	7.00	8/11/25 10:11
10.0 Buffer	Wc240625A	10.00	8/11/25 10:15
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/11/25 10:19

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.13	8/11/25 10:19
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-1-AL	LCS	8/11/25 10:21	21.9	7.07	1,416	0.13		
CCV-1-AL	CCV	8/11/25 14:16	25.7	7.09	1,412	0.23		

Comments:

Field Meter ID: Pine 45612 Technician(s): A.Lampe Date: 8/12/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250429L	4.00	8/12/25 9:11
7.0 Buffer	WC250407A	7.00	8/12/25 9:15
10.0 Buffer	Wc240625A	10.00	8/12/25 9:20
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/12/25 9:25

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.24	8/12/25 9:25
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-2-AL	LCS	8/12/25 9:31	25.8	7.09	1,418	0.24		
CCV-2-AL	CCV	8/12/25 14:14	27.5	7.09	1,420	0.21		

Comments:

Site Samping Event: FGDS Landfill
LIMS Workorder: 25080111
Technician(s): DC, JC, BG, AL, JR, PY

Field Calibration Log(s)
CWLP- 3Q 2025

Field Temp SOP 1156 - SM 2550 B
Field pH SOP 1152 - SW-846 9040B - SM 4500-H B
Field Cond. SOP 1155 - SW-846 9050A - SM 2510 B

Field Meter ID: Pine 45612 Technician(s): A.Lampe Date: 8/13/2025

pH Standards	LIMS ID	Calibration reading	Date/Time
4.0 Buffer	WC250429L	4.00	8/13/25 9:06
7.0 Buffer	WC250407A	7.00	8/13/25 9:10
10.0 Buffer	Wc240625A	10.00	8/13/25 9:13
LCS/CCV (7.0 Buffer)	WC240918A		

Conductivity Standard	LIMS ID	Reading	Date/Time
1,412 µS Std.	105373	1412	8/13/25 9:16

Turbidity Standard	LIMS ID	Reading	Date/Time
0 NTU (DI Water)	1	0.12	8/13/25 9:17
124 NTU	95834		

ORP Standard	LIMS ID/Lot#	Reading	Date/Time

D.O. Saturation	LIMS ID/Lot#	Reading	Date/Time
100%	N/A		

Sample ID	Sample Type	Date/Time	Temp. °C	pH S.U.	Conductivity µS	Turbidity NTU	ORP mV	D.O. %
LCS-3-AL	LCS	8/13/25 9:16	25.3	7.09	1,413	0.12		
CCV-3-AL	CCV	8/13/25 12:35	27.6	7.09	1,406	0.14		

Comments:

APPENDIX H:

Boring Log/Well Completion Report and Laboratory Report for P06D

PATRICK ENGINEERING INC.

BORING NUMBER **P-6D** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,717.0 E 2,186.8**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
524.8	0.0		Brown silty clay, trace to little fine sand, soft, medium plasticity, wet CL	AU-1 0.0-2.0		22.2	
			Mottled at 2.0'	SS-2 2.0-4.0 18"R	2 1 2 3	✳ 21.2	
				SS-3 4.0-6.0 20"R	1 1 2 2	✳ 21.7	
518.3	6.5			SS-4AB 6.0-8.0 18"R	1 2 2 2	✳ 22.0 25.4	Water level at 6.0' during drilling.
517.3	7.5		Brown, clayey, fine sand, little to some silt, loose, poorly graded, saturated SC				
			Brown mottled silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-5 8.0-10.0 10"R	1 1 2 2	✳ 21.7	Wood fragments in SS-5.
514.8	10.0		Gray silty clay, trace fine sand, soft to medium stiff, medium plasticity, wet CL	SS-6 10.0-12.0 20"R	3 1 1 1	✳ 29.8	
				SS-7 12.0-14.0 20"R	2 2 2 2	✳ 28.3	
				SS-8 14.0-16.0 22"R	1 2 4 3	✳ 24.1	
				SS-9 16.0-18.0 24"R	2 2 2 2	✳ 24.7	
				3T-10 18.0-20.0 24"R		✳	
504.8	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/12/92** ENDED **8/12/92**

REMARKS
WOH = Weight of Hammer

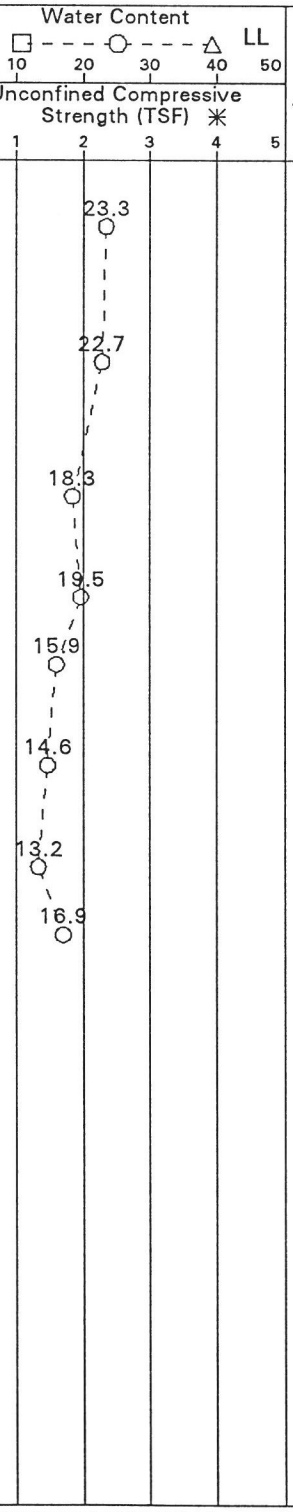
WATER LEVEL (ft.)
▽ **6.0'** during drilling
▼ **1.0'** after drilling

PATRICK ENGINEERING INC.

BORING NUMBER **P-6D** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,717.0 E 2,186.8**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
504.8	20.0		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	1 2 2 1
501.8	23.0		Little fine sand in SS-12	SS-12 22.0-24.0 24"R	WOH 1 2 1
			Gray clayey silt, trace fine sand, loose, wet to saturated CL-ML/ML	SS-13 24.0-26.0 24"R	2 3 4 4
				SS-14AB 26.0-28.0 24"R	4 4 7 10
497.3	27.5				
496.8	28.0		Gray fine sand, trace coarse to medium sand, some silt, medium dense, poorly graded, saturated SM	SS-15 28.0-30.0 24"R	7 7 18 9
			Gray coarse to fine sand, trace coarse to fine gravel, some silt, medium dense, well graded, saturated SM	SS-16AB 30.0-32.0 22"R	13 16 17 100 +
493.3	31.5				
492.8	32.0		Gray shale		
			End of Boring at 32.0'		



NOTES & TEST RESULTS

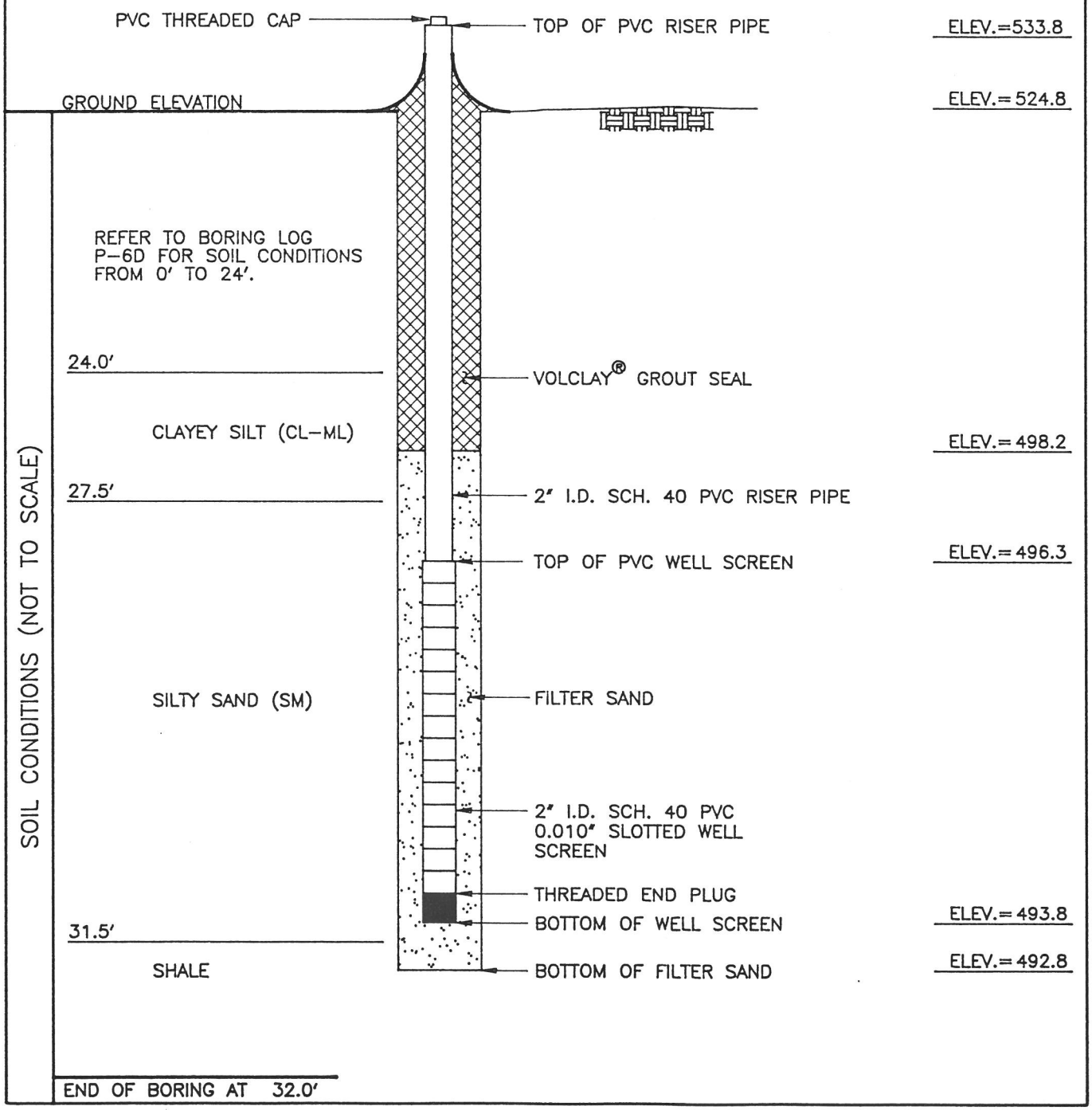
Water level at 1.0' immediately after drilling.
Piezometer was installed immediatley after completion of drilling.
Refer to As-Built Diagram P-6D for more information.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/12/92** ENDED **8/12/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **6.0'** during drilling.
▼ **1.0'** after drilling.

PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-6D PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-6D LOCATION N 4717.0 E 2186.8 INSTALLATION DATE 8/12/92 WEATHER SUNNY, 70'S



Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

April 22, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 25030753

Dear Eric Staley:

TEKLAB, INC received 9 samples on 3/18/2025 3:05:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Shelly A Hennessy

Shelly A. Hennessy
Project Manager
(618)344-1004 ex 36
SHennessy@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25030753
Report Date: 22-Apr-25

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Receiving Check List	16
Chain of Custody	Appended

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power **Work Order:** 25030753

Client Project: FGDS Landfill **Report Date:** 22-Apr-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25030753
Client Project: FGDS Landfill
Report Date: 22-Apr-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25030753
Report Date: 22-Apr-25

Cooler Receipt Temp: 13.7 °C

An employee of Teklab, Inc. collected the sample(s).

Radium 226/228 analysis was performed by Alliance Technical Group. See attached report for results.

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25030753
Client Project: FGDS Landfill
Report Date: 22-Apr-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2025	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2025	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2025	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25030753
Client Project: FGDS Landfill
Report Date: 22-Apr-25
Lab ID: 25030753-004
Client Sample ID: P06D
Matrix: GROUNDWATER
Collection Date: 03/18/2025 11:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Arsenic	NELAP	1.0		**15.3**	µg/L	5	03/24/2025 11:59	236195

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25030753
Monitoring Point: P06D
Sample ID: 004
Date (s): 3/18/2025

Field Team Members

Name: Tracy Carroll Affiliation: TekLab, Inc.
Name: Affiliation:

Weather Conditions

Temp: 58 °F Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☐ Clear ☐ Partly Cloudy ☑ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing		X
Well		X

Groundwater Level Measurements

Date/Time Measured: 3/18/2025 11:22
Static Water Level: 2.64 feet below TOC
Total Depth: 37.42 feet below TOC
Water Column: 34.78 feet

Purging Activities

Purged By: TC Purge Date: 3/18/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 34.78 ft. x 0.022 = 0.77 L x 3 Vol. = 2.31 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 7.00 L
Physical appearance of purge water: Clear Odor: None Color: None

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
11:24	0.0	333	purge start time						
11:33	3.0	↓	6.82	998.90	13.67	1.30	-87.00	4.78	
11:36	4.0		6.80	999.80	13.73	1.12	-97.80	4.28	
11:39	5.0		6.79	1,000.80	14.15	1.00	-104.70	4.28	
11:42	6.0		6.79	1,001.90	14.07	0.91	-109.30	4.81	
11:45	7.0		6.79	1,002.70	14.44	0.83	-113.00	6.76	

Sampling Activities

Sampled By: TC Sample Date/Time: 3/18/2025 11:45
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.79 pH 1,002.70 Spec. Cond. 14.44 Temp
Field Filtered: No Filter Type:
Water Level: 2.87 feet below TOC Drawdown: 0.23 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 210756

Form Completed By: Tracy Carroll **Date:** 3/18/2025

APPENDIX I:

Boring Log/Well Completion Report and Laboratory Report for GP-7

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water Light and Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: 80's F, Sunny

Boring Information:
Boring No: GP7
Well No: GP7
Surf Elev.: 0

Depth Information:
Total: 36.5
Auger: 36.5
Core: N/A

Dates:
Start: 5/16/19
Finish: 5/16/19

Drilling Contractor:
Contractor Name: Bulldog Drilling, Inc.
City: Dupo, IL
Equipment: AMS PowerProbe 9500 w/ 5' MC

Personnel:
Geologist: C. Myrvold
Driller: J. Edwards
Helper(s): S. Guy

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							Dark brown clayey silt TOPSOIL, moist, moderately loose.	
							Brown/gray silty CLAY to clayey SILT, moist, stiff, trace sand.	
	1		4.1/5					
5								-5.0
	2		4.0/4					
10								-10.0
	3		4.0/4					
							Gray silty CLAY, moist, stiff.	
15	4		2.7/4					-15.0
							17.0 - 18.0: Soft, saturated.	
							18.0 - 25.0: moderately loose to moderately stiff.	
	5		4.0/4					
20								-20.0

Notes: Refusal at 36.50'

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: GP7 Boring No: GP7 Well No: GP7

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							(cont.) Gray silty CLAY, moist, stiff.	
	6		4.0/4				23.0 - 25.0: gray to brown/gray.	
25							Dark gray silty CLAY, moist, moderately stiff; some sand.	-25.0
	7		3.1/4					
							Dark gray silty SAND, fine-grained, wet, loose, some clay.	
30	8		3.7/4					-30.0
	9		3.5/ 3.5					
35								-35.0
							Gray to dark gray SHALE, weathered, soft, dry.	
							End of Boring = 36.5 Feet	
40								-40.0

Notes: Refusal at 36.50'

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: T4S

Site Name: FGDS Development Borehole #: T4S

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 13 " Longitude: -89 ° 36 ' 3 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB, 2 ' split spoon Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/20/2025 Date Well Finished: 5/20/2025 Date Form Completed: 6/3/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: n/a

Installation method: _____

Setting time: _____

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 24+ hours

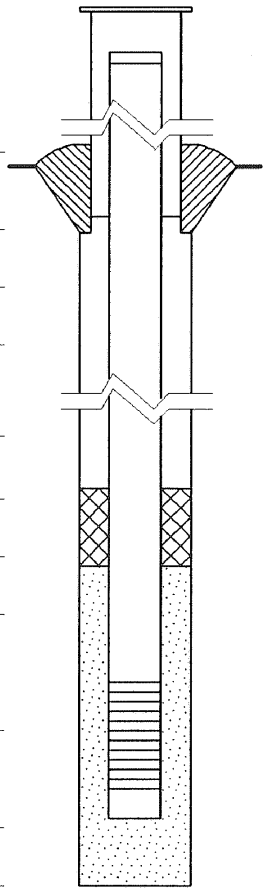
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	549.25	-2.5
Top of Riser Pipe	549.04	-2.29
Ground Surface	546.75	0.0
Top of Annular Sealant		
Static Water Level Measured on (after completion)		
Top of Seal	544.75	2.0
Top of Sandpack	538.85	7.9
Top of Screen	536.83	9.93
Bottom of Screen	532.15	14.6
Bottom of Well	531.75	15.0
Bottom of Borehole	531.75	15.0

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	12.21
Bottom of Screen to End Cap (ft)	0.4
Screen Length [1st slot to last slot] (ft)	4.68
Total Length of Casing (ft)	17.29
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

August 21, 2025

Eric Staley
City Water, Light & Power
3100 Stevenson Drive
2nd Floor Maintenance Building
Springfield, IL 62712
TEL: (217) 757-8610
FAX: (217) 757-8615

Illinois	100226
Illinois	1004652024-2
Kansas	E-10438
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: FGDS Landfill **WorkOrder:** 25080111

Dear Eric Staley:

TEKLAB, INC received 10 samples on 8/12/2025 3:40:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

PRELIMINARY REPORT

A preliminary report contains data that is incomplete or data that has not been fully validated. Caution should be exercised in the use of any data presented, as final reported results may not reflect the values presented.

Teklab, Inc.
Environmental Laboratory

Report Contents

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 21-Aug-25

This reporting package includes the following:

Cover Letter	1
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Accreditations	6
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Receiving Check List	17
Chain of Custody	Appended

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111

Client Project: FGDS Landfill
Report Date: 21-Aug-25

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111

Client Project: FGDS Landfill
Report Date: 21-Aug-25

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

PRELIMINARY REPORT

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Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: City Water, Light & Power
Client Project: FGDS Landfill

Work Order: 25080111
Report Date: 21-Aug-25

Cooler Receipt Temp: 11.1 °C

An employee of Teklab, Inc. collected the sample(s).

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

PRELIMINARY REPORT

A preliminary report contains data that is incomplete or data that has not been fully validated. Caution should be exercised in the use of any data presented, as final reported results may not reflect the values presented.

Teklab, Inc.
Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 21-Aug-25

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2026	Collinsville
Illinois	IEPA	1004652024-2	NELAP	4/30/2026	Collinsville
Kansas	KDHE	E-10438	NELAP	7/31/2026	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2026	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2026	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2026	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2025	Collinsville
Arkansas	ADEQ	88-0966		3/14/2026	Collinsville
Illinois	IDPH	17584		5/31/2025	Collinsville
Iowa	IDNR	430		6/1/2026	Collinsville
Kentucky	KWLCP	KY98050		12/31/2025	Collinsville
Kentucky	KWLCP	KY98006		12/31/2025	Collinsville
Kentucky	UST	0073		1/31/2026	Collinsville
Mississippi	MSDH			4/30/2026	Collinsville
Missouri	MDNR	930		1/31/2028	Collinsville
Missouri	MDNR	00930		10/31/2026	Collinsville

PRELIMINARY REPORT

A preliminary report contains data that is incomplete or data that has not been fully validated. Caution should be exercised in the use of any data presented, as final reported results may not reflect the values presented.

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: City Water, Light & Power
Work Order: 25080111
Client Project: FGDS Landfill
Report Date: 21-Aug-25
Lab ID: 25080111-009
Client Sample ID: GP-7
Matrix: GROUNDWATER
Collection Date: 08/12/2025 10:33

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**533.12**	ft	1	08/12/2025 10:33	R369784
Depth to water	*	-5.00		**5.85**	ft	1	08/12/2025 10:33	R369784
Depth to water from measuring point	*	0		**8.89**	ft	1	08/12/2025 10:33	R369784
Elevation of groundwater surface	*	0		**524.23**	ft	1	08/12/2025 10:33	R369784
Measuring Point Elevation	*	0		**533.12**	ft	1	08/12/2025 10:33	R369784
Measuring Point Height Above Land Surface	*	0		**3.04**	ft	1	08/12/2025 10:33	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**140**	NTU	1	08/12/2025 10:33	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**64.8**	°F	1	08/12/2025 10:33	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.78**		1	08/12/2025 10:33	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**884**	µmhos/cm @25C	1	08/12/2025 10:33	R369784
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Arsenic	NELAP	0.0010		**0.0072**	mg/L	5	08/15/2025 2:29	243361

PRELIMINARY REPORT

A preliminary report contains data that is incomplete or data that has not been fully validated. Caution should be exercised in the use of any data presented, as final reported results may not reflect the values presented.

Field Data Sheet

Project Name: FGDS Landfill
Project Location: Springfield, IL
W.O. Number (s): 25080111
Monitoring Point: GP-7
Sample ID: 009
Date (s): 8/12/2025

Field Team Members

Name: Allison Lampe Affiliation: TekLab, Inc.
Name: Payton Yoch Affiliation: TekLab, Inc.

Weather Conditions

Temp: 84 °F Wind Direction: ☑ N ☐ S ☐ E ☐ SE ☐ SW ☐ NE ☐ NW

Precipitation: ☑ None ☐ Light ☐ Heavy Sky: ☑ Clear ☐ Partly Cloudy ☐ Cloudy

Well Observations

Well Pad	Good
Casing	Good
Protective Casing	Good
Reference Mark/Identification	Yes

Locks	Yes	No
Protective Casing	X	
Well		X

Groundwater Level Measurements

Date/Time Measured: 8/12/25 10:14 AM
Static Water Level: 8.89 feet below TOC
Total Depth: 40.52 feet below TOC
Water Column: 31.63 feet

Purging Activities

Purged By: AL Purge Date: 8/12/2025
Purge Method: Peristaltic Pump Well Diameter: 2"
Purge Volume Calculation (L): 31.63 ft. x 0.022 = 0.7 L x 3 Vol. = 2.1 L **Based on Low-Flow (3/8" discharge)*
Actual Purge Volume (L): 3.00 L
Physical appearance of purge water: Clear Odor: None Color: none

Purge Time	Cumulative Purge Vol.(L)	Purge Rate (mL/m)	pH (S.U.)	Specific Conductivity (µS/cm)	Temp (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Other
10:14	0.0	158	purge start time						
10:24	1.6	↓	6.86	790.50	18.48	1.41	-64.50	44.92	
10:27	2.1		6.87	793.20	18.35	1.21	-73.40	60.69	
10:30	2.5		6.85	829.00	18.23	1.06	-83.20	90.05	
10:33	3.0		6.78	884.20	18.22	0.94	-98.90	136.81	

Sampling Activities

Sampled By: PY Sample Date/Time: 8/12/2025 10:33
Sample Method: Low Flow Sample Equipment: Peristaltic Pump
Sample Parameters: 6.78 pH 884.20 Spec. Cond. 18.22 Temp
Field Filtered: No Filter Type:
Water Level: 9.35 feet below TOC Drawdown: 0.46 feet

Observations/Comments: (i.e., equipment malfunctions, contamination sources, sampling difficulties; duplicate sample)

- Field Meter: 45612

Form Completed By: Allison Lampe Date: 8/12/2025

Appendix J:
Flow Path Report

City Water, Light & Power
Springfield, Illinois

CCR Surface Impoundments and
FGDS Unit 2 Landfill

Flow Path Report

September 2025

Prepared for:
City Water, Light & Power
3100 Stevenson Drive
Springfield, Illinois

ANDREWS ENGINEERING

3300 Ginger Creek Drive, Springfield, IL 62711 | 217.787.2334

ILLINOIS | MISSOURI | INDIANA

EXECUTIVE SUMMARY

This Flow Path Report is prepared in accordance with paragraphs 263 and 280 of the January 14, 2025 Consent Agreement and Final Order (CAFO). The purpose of this report is to fully characterize groundwater flow paths from the CCR surface impoundments and the FGDS Disposal Facility, evaluate potential preferential pathways including the abandoned creek beneath the Dallman Ash Pond and discontinuous shallow sand, assess the potential for contact between coal combustion residuals (CCR) and groundwater after closure, and demonstrate the absence of hydraulic communication between geologic units that could facilitate contaminant transport. This report integrates site-specific geologic, hydrogeologic, and construction data, including boring logs, well installation records, groundwater monitoring results, transducer data, hydrogeologic cross-sections, static groundwater elevations, pool elevations for Lake Springfield, the clarification pond, and Sugar Creek, and potentiometric surface maps and slug testing results for hydraulic conductivity.

Key findings include:

- The abandoned creek bed beneath the Dallman Ash Pond perimeter berms and the Unit 2 Landfill has been filled and compacted during construction, precluding it from acting as a preferential pathway. Historical aerial photographs and topographic maps (United Stated Geological Survey) do not show Sugar Creek being recently present beneath the Lakeside Ash Pond.
- Current groundwater movement is generally radial from the impoundments toward Sugar Creek, with an eastward component along the eastern portion of the site toward the FGDS Landfill, then northward toward Sugar Creek.
- The shallow sand unit, which is discontinuous, was largely removed during Dallman Ash Pond construction and Sugar Creek relocation and does not serve as a primary contaminant pathway.
- The potentiometric surfaces in the shallow sand piezometers do not reflect direct connection to the impoundments, indicating hydraulic separation, particularly along the northern periphery of the Dallman Ash Pond.
- Post-closure, CCR is not anticipated to be in contact with groundwater due to the confining properties of the lower cohesive unit.
- Construction of the impoundments did not occur below the potentiometric surfaces due to hydrogeologic properties of the sediments and complexities of building structures in wet or saturated conditions.
- Nested well group AP-15S/AP-15D is proposed to be added to the monitor well system; the Groundwater Monitoring Program will be updated accordingly.

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1. INTRODUCTION

1.1 Purpose and Scope

Pursuant to Paragraphs 263 and 280 of the CAFO, City Water, Light and Power (CWLP) agreed to prepare a Flow Path Report that includes all applicable data used to determine the groundwater flow paths for the CCR Surface Impoundments and Flue Gas Desulfurization System (FGDS) Unit 2 Landfill.

This Flow Path Report focuses on groundwater flow dynamics, geologic barriers, and potential pathways to address these items. It integrates data from historical site investigations, construction records, groundwater monitoring and recent assessments. Data collection includes semiannual monitoring and transducer deployments for groundwater level monitoring events.

1.2 Site Background

CWLP owns two existing CCR surface impoundments and a CCR landfill subject to the U.S. EPA Standards for the Disposal of Coal Combustion Residuals (40 CFR 257). The CWLP CCR surface impoundments and FGDS Unit 2 Landfill are located north and east of the former Lakeside Power Generating Station and Dallman Power Generating Station in the Eastern ½ of Section 12, Township 15 North, Range 5 West, in Springfield, Illinois (see Figure 1). The CCR surface impoundments are identified as the Lakeside Ash Pond and the Dallman Ash Pond and the CCR landfill is identified as Unit 2 of the Flue Gas Desulfurization Sludge (FGDS) Landfill (see Figure 2). Depicted in Figure 3 is the 1936 pre-CCR impoundment conditions of the CWLP facility looking to the north-northeast.

The Lakeside Ash Pond was placed into service prior to 1958 and ceased receiving ash in 2009. It has been divided into four separate ponds, three lime sludge ponds (out of service since October 13, 2023) and the settling pond consisting of approximately 35.0 acres. The Lakeside Ash Pond formerly received lime sludge from the CWLP Drinking Water Purification Plant, scrubber wastewater treatment plant clarifier blowdown and water from miscellaneous floor drains. Construction of new concrete-lined lime sludge ponds were completed and began operation simultaneously with the cessation of the use of Lakeside Ash Pond.

The Dallman Ash Pond was placed into service in 1976 and is approximately 34.5 acres. The Dallman Ash Pond formerly received fly ash and bottom ash, which were sluiced with raw lake water, industrial wastewater treatment plant clarifier blowdown and landfill leachate. CWLP ceased operating Dallman Units 31 & 32 and ceased operating Dallman Unit 33 by September 15, 2023 with all CCR/non-CCR waste streams ceased by October 13, 2023.

The FGDS Unit 2 Landfill, is an existing non-hazardous special waste landfill. Located immediately east of the Dallman Ash Pond, this is a permitted non-hazardous special waste landfill (Illinois EPA Permit No. 1995-243-LFM) for flue gas desulfurization sludge, bottom ash, fly ash, and lime sludge. The FGDS Disposal Facility consists of 40 acres with 22.3 acres of disposal area divided into two units. The south unit is identified as Unit 1 and the north unit is identified as Unit 2.

2. SURFACE IMPOUNDMENT/LANDFILL CONSTRUCTION

Prior to the area development the property on which the CCR surface impoundments and CCR landfill have been constructed was originally for agricultural/pasture purposes as well as woodlands where the Dallman Ash Pond is located. Sugar Creek historically meandered across the site, generally from the west to east with an overall flow direction to the north. Prior to the creek relocation, the creek bed was largely restricted to the northern half of the facility where the Dallman Ash Pond and Unit 2 Landfill are located. Figure 4 shows the subject area prior to development of the ponds or landfill. The upper layer of soil at the site consisted of eolian soils (loess) deposited near the surface, isolated pockets and lenses of fine-grained silty to clayey sand at some locations and alluvial silts and silty clays. Much of the shallow soils were displaced during area development.

During the construction of the Dallman Ash Pond, the creek was abandoned and relocated west and north of the site. The Grading Plan drawing by Burns & McDonnell (Drawing No. Y29, Rev. 4, dated August 13, 1976) (Figure 5) depicts the creek realignment. Abandonment of the creek channel included the placement of different soil types, ranging from cohesive soils characterized as silty clays, to granular fill characterized as poorly graded silty to clayey sands. While the vertical hydraulic conductivity of the material that forms the bottom of the surface impoundments is generally low, soils were not compacted beneath the impoundments except for sections where the dikes of the Dallman Ash Pond were built atop the existing creek bed. No composite liner or alternative composite liner as specified in 40 CFR Part 257.70 (b) or 40 CFR Part 257.70 9 (c)(1), was used to line the bottom of either ash pond.

The Lakeside Ash Pond contains approximately 1,565,000 cubic yards (cu. yds.) of CCR including water treatment plant sludge. The Lakeside Ash Pond is primarily a diked embankment with some incising along the east perimeter. The ash pond abuts the Lake Springfield Spaulding Dam to the south and the original portion of the ash pond abuts the Unit 1 landfill and the clarification pond to the north. Open downstream slopes are present along the west dike of the original ash pond, and the vertical expansion berms, which were constructed on the east, west and north boundaries of the ash pond. The original Lakeside Ash Pond has been divided into four separate ponds since it was expanded vertically in 1988; three lime ponds and the settling pond. The vertical expansion consists of berms built on top and inside of the existing embankments. The floor of the Lakeside

Ash Pond is approximately elevation 530 feet and slopes upward in the eastern portion following the natural topography.

The Dallman Ash Pond contains approximately 1,217,000 cu. yds. of CCR. The Dallman Ash Pond is a diked embankment surface impoundment. The entire Dallman Ash Pond is partially incised. The berms for the Dallman Ash Pond were built to a height of approximately 27 feet (554 feet MSL), using slopes of 2.5H:1V for both the inner and outer slopes. The elevation of the base of the surface impoundments is approximately 525 feet MSL based on aforementioned drawing Figure 5 and borings advanced to the floor of Dallman Ash Pond. Material from the center of the ash pond was excavated and utilized in the construction of the dikes. As depicted on the Grading Plan drawing by Burns & McDonnell (Figure 5), the Dallman Ash Pond dikes were constructed on areas of the old creek bed. According to Note 4 on this drawing, the creek bed in these areas was over-excavated by at least 4 feet below the existing channel banks and bottom. These excavations were then filled in with cohesive material and compacted to at least 90 percent of maximum dry density. The Dallman Ash Pond abuts the FGDS landfills to the east and the clarification pond to the south. The only open downstream slopes are on the west and north dikes. The floor of Dallman Ash Pond slopes from approximately 530 feet MSL along the southern perimeter to approximately 525 along the northern edge.

The CWLP FGDS Development Landfill Unit 2 is located directly to the east of the Dallman Ash Pond. CWLP has owned and operated the FGDS Development Landfill since 1988. Prior to 1988, the facility was owned and operated by the private corporation Environmental Site Developers, Inc. The original design for Landfill Unit 2 designated three disposal areas identified as Cells 1, 2, and 3. In September 1993, the Illinois Environmental Protection Agency (“IEPA”) approved an application seeking the separation of the active Cell 1 from the then-undeveloped Cells 2 and 3. This created Landfill Unit 1, which consists solely of the now-closed Cell 1, and Landfill Unit 2, which is comprised of Cells 2 and 3.

CWLP initiated development of Landfill Unit 2 in 1993, and IEPA issued a permit to operate Landfill Unit 2 under 35 Ill. Admin. Code Parts 811–814 on November 9, 1995. Landfill Unit 2 consists of approximately 22.3-acres of permitted disposal area separated into Cells 2 and 3. Cell 2 has not been developed and only 3.0 acres of Cell 3 has been developed. The IEPA operating permit authorizes Landfill Unit 2 to receive flue gas desulfurization (“FGD”) sludge (more commonly known as gypsum), bottom ash, fly ash, lime sludge from the Water Purification Plant, FGD wastewater treatment plant sludge, and Generating Facility wastewater treatment plant sludge.

The Landfill Unit 2 was constructed with a 5 foot recompacted clay liner overlain by a leachate collection system. The leachate collection system is composed of a 12-inch sand drainage layer on the floor grades with a geocomposite drain on the western and northern 10-percent sloped floor directly on the 5 foot recompacted clay liner. A geotextile fabric is directly above the 12-inch

sand drainage layer to prevent clogging of the sand. A leachate collection trench was centrally placed within the landfill running west to east over the 5 foot recompacted clay liner. The leachate collection trench is composed of a leachate collection pipe surrounded by gravel and wrapped in a geotextile fabric. The leachate collection pipe terminates into the leachate manhole riser on the east side of the landfill within the termination berm.

The lowest point of the 5 foot recompacted clay liner subgrade is approximately at an elevation of approximately 525 feet MSL and the lowest extent of the waste within the landfill is at an approximate elevation of 531 feet MSL, both near the central eastern point of the landfill near the leachate manhole riser. The remainder of the landfill is above these elevations.

3. SUBSURFACE CONDITIONS

3.1 Hydrogeologic Investigations

The subsurface conditions of the CWLP facility have been characterized through multiple subsurface investigations, including those prior to the CCR impoundment development, along the perimeter of the impoundments and including the hydrogeologic investigation at the CCR landfill located north of the Lakeside Ash Pond and east of the Dallman Ash Pond. These investigations span from June 1989 to present day. In chronological order, the investigations are:

- Professional Service Industries (PSI), June 1989. This investigation consisted of five soil borings within the east section of the south cell (Cell 1).
- Andrews Environmental Engineering, Inc., February 1990. This investigation was performed for Cell 2 and consisted of 13 soil borings. The drilling and testing were completed by PSI.
- Andrews Environmental Engineering, Inc., March 1990. This investigation was performed to install six wells at the Facility. The drilling and testing were completed by PSI.
- Patrick Engineering, Inc. (PEI), July 1992. This investigation was performed to further characterize the hydrogeology of the landfill setting.
- Stabilize, Inc., December 2008. This investigation installed three new monitoring wells as part of an assessment monitoring program for the landfill. The drilling, soil testing, and well construction were performed by Reynolds Well Drilling.
- CWLP, April 2010. This investigation was performed to install four piezometers on the west side of the CCR surface impoundments along Sugar Creek. The drilling and testing were completed by PSI.
- Stabilize, Inc., May 2011. This investigation installed four new monitoring wells to further the characterization of the CCR surface impoundments. The drilling, soil testing, and well construction were performed by PSI.

- Andrews Engineering, January 2012. This investigation was performed to replace CCR surface impoundment wells and install an additional background well. The drilling and well installation were completed by TerraDrill.
- Andrews Engineering, July 2017. This project included drilling peripheral to the Dallman Ash Pond and the installation of basal sand/bedrock interface wells at TW3E, TW3W and TW3N. TW3N is the replacement wells for AW-3 and is identified in the groundwater monitoring program as RW-3.
- Andrews Engineering, June 2019. This investigation advanced 7 direct push borings peripheral to the Dallman Ash Pond, GP-2, GP-3, GP-4, GP-5, GP-6 and GP-7 and included the installation 2 new monitoring wells (AP6 in boring GP6 and AP-7 in boring GP2) as part of an assessment program for the CCR ash impoundments.
- Andrews Engineering, February 2021. This investigation consisted of borings and construction of groundwater monitoring wells at 7 locations along the periphery of Dallman and Lakeside Ash Ponds; adjacent to Sugar Creek. These are identified as AP-8, AP-9, AP-10, AP11, AP-12, AP-13 and AP-14.
- Andrews Engineering, October 2023. This investigation consisted of 34 borings next to the impoundments and 4 next to landfill Unit 1, to investigate the CCR ash surface impoundment berm construction materials and the installation of 29 vibrating wire piezometers to characterize the stability of the berms. These are identified as B-1, B-1L, B-1LL, B-1U, B-1CCR, B-2, B-2L, B-2U, B-2CCR, B-3, B-3U, B-3CCR, B-4, B-4L, B-4U, B-4CCR, B-5, B-5L, B-5CCR, B-6, B-6L, B-6CCR, B-7, B-7L, B-7CCR, B8-L, B8-U, B-9L, B-9U, B-9CCR, B-10CCR, B-11U, B-12L, B-12U, B-13BN, B-13BS, B-13L, B-13LF. With the exception of B-4L, B-4U, B-4CCR, B-8U and B-11U, the borings were completed with vibrating wire sensors.
- Andrews Engineering, February 2024. This investigation consisted of 14 borings using a cone penetrometer adjacent to and within the Dallman and Lakeside Ash Ponds. These borings are identified as CPT-1CCR, CPT-2CCR, CPT-2L, CPT-3CCR, CPT-4CCR, CPT-4L, CPT 5CCR, CPT-6CCR, CPT-6L, CPT-7CCR, CPT-7L, CPT-10CCR, CPT-14CCR and CPT-15CCR.
- Andrews Engineering, April/May 2024. This investigation consisted of 4 borings advanced in the Dallman Ash Pond (D-1, D-2, D-3 and D-4) and 4 borings advanced in the Lakeside Ash Pond (L-1, L-3, L-4 and L-5). Wells were constructed to screen the bottom of the CCR in these borings. This investigation also included the advancement of borings T-1, T-2, T-4, T-5 and T-6 on the opposite side of Sugar Creek, west and north of the surface impoundment area and the advancement of a deep boring, B100, which was packer tested to characterize bedrock permeability.
- Hanson Professional Services, Inc. (Hanson), August 2024. This investigation consisted of a total of 12 borings, 5 through the Dallman Ash Pond (DB-01, DB-02, DB-03, DB-04 and DB-05) and 5 through the Lakeside Ash Pond (LB-01, LB-02, LB-03, LB-04 and

LB-05). Two of the Dallman Ash Pond borings were converted to piezometers (DB-04 and DB-05) and one of the borings in the Lakeside Ash Pond (LB02) was converted to a piezometer.

- Hanson, May/June 2025. This investigation consisted of 4 borings (D-06, D-07, D-08 and DW-01) completed as wells within the Dallman Ash Pond, and two of the borings, BH-01 and BH-02, were completed as wells along the berm that separates the Dallman Ash Pond from the clarification pond.
- Andrews Engineering, May 2025. This investigation consisted of the advancement of 21 borings (AP-6S, AP-6SA, AP-8S, AP-8SA, AP-15S, AP-15D, AP-16, AW-2, B2-LE, B-4E, B-6E, B-6LE, B-7E, B-7LE, G-104, G-104S, P-03D, P-03S, R-103, RW3S and T-4S) with the installation of 9 groundwater monitoring wells (AP-6SA, AP-8SA, AP-15S, AP-15D, AP-16, G-104S, P-03S, RW3S and T-4S). Seven of these borings (AW-2, B-2LE, B-4E, B-6E, B-6LE, B-7E and B-7LE) were completed to collect additional samples for characterization of the berm/foundation soils and one to verify previous boring log comments.

The investigations and related work conducted to date have provided sufficient information to characterize the site hydrogeologic conditions, including the uppermost saturated zone (i.e., basal sand) and the uppermost confining unit (i.e., bedrock). Figure 6 depicts all borings, monitoring wells/piezometers and vibrating wire locations. The site-specific geologic conditions have been refined through the advancement of additional borings during 2024 and 2025. Boring logs and well completion reports for these 2024 and 2025 investigations are included as Appendix A and Appendix B, respectively.

Data from these investigations has been used to create and refine the geologic cross-sections, with an emphasis on characterizing the primary hydrostratigraphic units. The geologic cross-sections have been updated to include information from these recent, 2024 and 2025 investigations. The revised geologic cross-sections are provided in Appendix C.

3.2 Uppermost Bedrock

The bedrock at the project site consists of Pennsylvanian aged shale that is gray in color with some coal seams. Erosion of the bedrock surface has occurred along the alluvial valley forming a south to north trough in which Sugar Creek is located. The bedrock increases in elevation to the eastern and western flanks of the bedrock trough. There appears to be a bedrock ridge which runs south southeast to north northwest at the northeast corner of the Dallman Ash Pond. At this location the bedrock elevation increases from approximately 497 feet MSL at RW3 to 527 feet MSL at GP-3, just north of Sugar Creek. Near the center of the landfill, the bedrock surface elevation varies from approximately 492 feet MSL to approximately 554 feet MSL at the southeast corner of Cell 1, boring B-14. Figure 7 depicts the bedrock surface elevations.

Rock Quality Designation (RQD) measurements were performed on core samples taken from the FGDS Landfill area. RQDs measured from core samples collected during this investigation ranges from 80% to 100%. The RQD values indicate that the bedrock exhibits minimal to no fracturing. Two in situ hydraulic conductivity tests were performed to determine the hydraulic conductivity of the upper portions of the bedrock. Test results indicate hydraulic conductivity values of 1.8×10^{-7} cm/sec and 1.3×10^{-6} cm/sec (Patrick, 1993). This shows that the bedrock encountered at the project site is a lower confining unit to the uppermost saturated zone. There is good correlation between the lithology of the rocks tested and the hydraulic conductivity values obtained. The upper bedrock beneath the impoundments is expected to exhibit the same characteristics as encountered at the landfill. RQD and slug test data for the Patrick 1989 application are included in Appendix D.

A 2024 investigation included the completion of deep boring B100. Located immediately north of the Dallman Ash Pond on adjacent to Sugar Creek the deep boring was advanced to 103.5 feet below ground surface (BGS). Bedrock at this location was encountered at 32.3 feet BGS (500.7 feet MSL). Packer testing was completed at seven intervals (i.e., 93 to 103.5 feet BGS, 82.5 to 93 feet BGS, 72 to 82.5 feet BGS, 61.5 to 72 feet BGS, and 51 to 61.5 feet BGS with the final two intervals overlapping 40.5 to 51 and 38.5 to 49 feet BGS). Test results indicate hydraulic conductivity below 482 feet MSL is less than 1×10^{-9} cm/sec. The results for the intervals tested above 482 feet MSL are invalid as a result of hydraulic fracturing of the bedrock and the resultant inability to establish a seal within the shallow bedrock portion of the borehole. The results confirm that bedrock below the weathered zone is relatively impermeable; however, the shallow weathered bedrock may have higher hydraulic conductivities and in direct hydraulic communication with the overlying basal sand such that the interface of the unconsolidated deposits and bedrock comprise the uppermost saturated zone. The packer test data from this investigation is included in Appendix D.

There is good correlation between the lithology of the rocks tested and the hydraulic conductivity values obtained. The upper bedrock beneath the impoundments is expected to exhibit the same characteristics as encountered at the landfill.

3.3 Surficial Deposits

The shallow stratigraphy and lithology at the CCR units include approximately 20 to 50 feet of unconsolidated sediments, dependent upon location. In ascending order (i.e., oldest to youngest) these materials are identified as basal sand, creek fill, lower cohesive deposit, shallow sand, upper cohesive deposit and fill material. For the FGDS Landfill, the hydrogeology is consistent with the adjacent impoundments, with the basal sand as the uppermost saturated zone. As described below, the uppermost unit directly beneath the CCR surface impoundment varies with the Lakeside Ash Pond resting directly on the upper cohesive deposit and the southern third of

the Dallman Ash Pond resting on the upper cohesive deposit and northern two-thirds resting on the lower cohesive deposit.

The overall tendency is for the finer-grained materials (clays, silty clays and silts) to overlie the coarser-grained materials (sands and gravels). This coarsening downward is present throughout much of the site. At the majority of the borehole locations, the coarser materials rest directly on top of the weathered bedrock surface. It is this coarser material, the basal sand, which is characterized as the uppermost saturated zone.

The occurrence of the deposits discussed below are variable due to the meandering nature of Sugar Creek prior to the development of Lake Springfield and Spaulding Dam. The meandering creek has resulted in sequential erosion and deposition (scour and fill) throughout much of the creek drainage system, both laterally and vertically.

3.3.1 Basal Sand

The basal sand generally overlies the bedrock surface and underlies the lower cohesive deposit. There are some pockets of very hard, fine-grained silty clay to clay overlying bedrock in a few areas. The basal sand is present above these pockets of clayey deposits, thought to be weathered bedrock. In most locations, the basal sand is the lower-most surficial deposit. The basal sand is a gray, poorly graded, silty to clayey fine sand to well graded sand with minor amounts of fine gravel. This unit is in a medium dense to dense condition. Across the CWLP facility (includes the Dallman and Lakeside Ash Ponds), the top elevation of the basal sand varies from 486.9 feet MSL (G113) to 535.1 feet MSL (GP-3) and the thickness ranges from absent to 18.6 feet. The unit was not consistently encountered, likely due to excessive erosion of the creek bottom. The surface of the Basal Sand is depicted in Figure 8. The thickness of the Basal Sand is depicted in Figure 9.

The basal sand generally consists of 0% to 34% gravel, 50% to 91% sand, and 6% to 44% silt/clay; and exhibits a horizontal hydraulic conductivity of ranging from 1.15 x 10^{-3} to 7.64 x 10^{-2} cm/sec. The geometric mean hydraulic conductivity is 1.25 x 10^{-2} cm/sec. The basal sand was saturated in all locations where it was encountered (Patrick, 1993). Grain size analyses are provided in Appendix E.

Hanson conducted slug testing on the FGDS Landfill and CCR Surface Impoundment groundwater monitoring wells and the ash impoundment CCR wells during March 2025. The basal sand wells exhibited hydraulic conductivities ranging from a minimum of 4.57 x 10^{-5} cm/sec to a maximum of 8.84 x 10^{-2} cm/sec. The geometric mean hydraulic conductivity of the basal sand is 1.86 x 10^{-3} cm/sec. The slug test data from Hanson is provided in Appendix D.

In August 2025 Andrews Engineering performed slug testing at Basal Sand wells AP-15D, AP-16 and P-03D. The slug testing results ranged from a minimum hydraulic conductivity of 2.62 x 10^{-5} cm/sec to a maximum of 4.03 x 10^{-3} cm/sec. The geometric mean hydraulic conductivity is 2.91 x 10^{-4} cm/sec. This value is in general agreement with that determined from previous investigations.

3.3.2 Lower Cohesive Deposit

The lower cohesive deposit consists of brown, gray, and brownish gray silty clays, clayey silts, and clays, having very soft to stiff consistency. Across the CWLP facility, the lower cohesive deposit is as much as 27 feet thick with an average thickness of about 11 feet. The deposit was not encountered in isolated areas along the abandoned creek, possibly due to excessive erosion of the creek bottom in these areas. The northern two-thirds of the Dallman Ash Pond rests directly on top of the lower cohesive deposit. The top of the lower cohesive deposit is depicted in Figure 10. The thickness of the lower cohesive deposit is depicted in Figure 11

The soils in the lower cohesive deposit can be similar in color and texture to the soils in the upper cohesive deposit. The distinction between the two deposits was based on the presence or changes in soil consistency (as measured with a calibrated hand held penetrometer) and a marked difference in moisture content. The lower cohesive deposit is not exposed at the ground surface in the investigation area.

The lower cohesive deposit consists of 0% gravel, 8% to 48% sand, and 52% to 95% silt/clay; and has a low hydraulic conductivity. The vertical hydraulic conductivity ranges from 1.3 x 10^{-8} to 1.8 x 10^{-6} cm/sec (triaxial permeameter). Based on these values, the average vertical hydraulic conductivity is 9.07 x 10^{-7}. The horizontal hydraulic conductivity ranges from 4.6 x 10^{-5} to 7.6 x 10^{-5} cm/sec (Patrick, 1993). Grain size analyses are provided in Appendix E.

As part of the 2023 geotechnical investigations conducted by Andrews Engineering, four borings were advanced in Lakeside Ash Pond and four borings in Dallman Ash Pond to confirm the bottom elevations of each impoundment. Borings L-1, L-3, L-4 and L-5 were advanced in Lakeside Ash pond where silty/clay materials were encountered at 534.5 feet MSL, 530.5 feet MSL, 553.0 feet MSL and 530.0 feet MSL, respectively. Borings D-1, D-2, D-3 and D-4 were advanced in Dalman Ash Pond where silty/clay materials were encountered at 526.0 feet MSL, 523.0 feet MSL, 526.2 feet MSL and 529.5 feet MSL respectively. The range of hydraulic conductivities for the silty/clay materials beneath Lakeside Ash Pond are from 6.8 x 10-6 cm/sec to 8.5 x 10-8 cm/sec with a geometric mean of 2.58 x 10-7 cm/sec. The range of hydraulic conductivities for the silty/clay materials beneath Dallman Ash Pond are from 2.1 x 10-6 cm/sec to 5.1 x 10-8 cm/sec with a geometric mean of 4.53 x 10-7 cm/sec.

3.3.3 Shallow Sand

The unit identified as the shallow sand is a fluvial deposit. Where it has been encountered, it is located between the top of the lower cohesive deposit and below the upper cohesive deposit. The discontinuous nature of the shallow sand is explained by the historical meandering nature of surface water across the area of investigation. Sediment deposition within a fluvial setting varies from fine-grained silts and clays to coarser sands, with the coarser materials being deposited as the water slows. As the creek flows into the inside of a bend, velocity decreases, causing the heaviest particles, typically sands and silty sands, to settle out first. Finer sediments remain suspended longer and are deposited further along the point bar or during overbank flooding. Because coarse-grained deposition is tied to localized drops in energy, such as those found only at specific points within the meander bends or during certain flood events, these deposits tend to be discontinuous. As a result, sand and silty sand lenses are often isolated within a matrix of finer material, creating a stratigraphic sequence that reflects the variable and shifting energy conditions of the meandering system.

The shallow sand was encountered on portions of the floor of FGDS Unit 2 Landfill and along the north side, and to a limited extent, west side of the Dallman Ash Pond from the middle of the north side to the eastern edge. The shallow sand was generally encountered between 515 feet MSL and 525 feet MSL, with some instance as low as 510 feet MSL and some as high as 530 feet MSL. This wide variation in elevations points to it variable deposition nature. Where encountered it is typically only a few feet in thickness or less. However, a thickness of 6 feet was observed in the undeveloped southern portion of Unit 2 and an approximate thickness of 7 feet was observed in boring AP15 west of the Lakeside Ash Pond. It appears the shallow sand may underlie a small section of the Lakeside Ash Pond where it is separated from the bottom of the Lakeside Ash Pond by approximately 8 feet of low permeability silty clay upper cohesive deposit. The shallow sand was not found to underlie the Dallman Ash Pond or Cell 3 of the Unit 2 Landfill. The extent and surface of the shallow sand is depicted in Figure 12. The thickness of the shallow sand is depicted in Figure 13.

Hydrogeologic cross-sections (e.g., Cross-Section A-A' and B-B') depict the limited extent of the shallow sand along the northern end and west side of the Dallman Ash Pond, respectively. These cross sections depict the shallow sand encountered at and above 525 feet MSL, but not intersecting CCR in saturated zones. Cross-section A-A' depicts the shallow sand present at AP-8, GP-4, TW3W and RW3.

According to the Grading Plan drawing by Burns & McDonnell (see Figure 5), the creek relocation project varied from an elevation of 520 feet MSL at the northwest corner to 516 MSL at the northeast corner. The drawing depicts that soils along the constructed creek channel were excavated along a 4:1 horizontal to vertical slope from the center line of the creek location channel and backfilled with cohesive soils essentially isolating the presence of the sand to a narrow band adjacent to the toe of the slope of the berm. This would result in the removal of the shallow sand

from the along the creek relocation area, essentially eliminating/removing the migration pathway of any fluvial sand deposits adjacent to the Dallman Ash Pond.

Along the west side of the Lakeside Ash Pond, a shallow sand appears in boring AP-15D and the B-2 series of borings used to characterize that portion of the Lakeside Ash Pond dike. A shallow sand was encountered at the location at approximately 525 feet MSL to 510 feet MSL. At this location, the bottom of the Lakeside Ash Pond is at approximately 535 feet MSL. This results in an approximate 10 foot vertical separation between the bottom of the Lakeside Ash Pond and the shallow sand at this location.

Laboratory tests performed on representative samples collected from the shallow sand unit during this and previous investigations indicate the shallow sand contains 0% gravel, 50% to 52% sand, and 48% to 50% silt/clay. Two FGDS Unit 2 Landfill piezometers (P06S and P07S) were screened in the shallow sand unit to obtain potentiometric surface information and conduct field hydraulic conductivity tests. The hydraulic conductivity of this unit based on the slug test results ranges from 3.6 x 10^{-3} to 2.9 x 10^{-2} cm/sec (Patrick, 1993). Grain size analyses are provided in Appendix E.

Hanson conducted slug testing on FGDS Unit 2 Landfill wells during March 2025. The Unit 2 shallow sand wells P06S and P07S exhibited hydraulic conductivities ranging from 1.53 x 10^{-3} cm/sec to a maximum of 3.35 x 10^{-3} cm/sec. The geometric mean hydraulic conductivity of the shallow sand is 2.29 x 10^{-3} cm/sec.

In August 2025 Andrews Engineering performed slug testing of the Shallow Sand wells AP6S, AP-15S, G-104S, P-03S, R-103S, and RW3S. The slug testing results ranged from a minimum hydraulic conductivity of 4.30 x 10^{-4} cm/sec to a maximum of 2.23 x 10^{-2} cm/sec. The geometric mean hydraulic conductivity is 1.53 x 10^{-3} cm/sec. This value is in general agreement with that determined from previous investigations.

3.3.4 Upper Cohesive Deposit

The upper cohesive deposit consists of brown, light brown to brownish-gray silty clays to clayey silts having soft to stiff consistency. The unit includes loess deposits and isolated pockets of fine-grained silty to clayey sand and at some location alluvial silts and silty clays. The upper cohesive deposit is laterally adjacent to the sidewall of the CCR surface impoundment. The top of the upper cohesive deposit is depicted in Figure 14. The thickness of the upper cohesive deposit is depicted in Figure 15.

The upper cohesive deposit has a low vertical hydraulic conductivity as determined by laboratory triaxial hydraulic conductivity tests from borings taken from the landfill investigation. The hydraulic conductivity values determined from the laboratory tests ranged from 5.2 x 10^{-7} cm/sec to

1.6 x 10^{5} cm/sec (Patrick, 1993). It is expected that the horizontal coefficient of hydraulic conductivity is greater than the vertical coefficient. Based on test results for the lower cohesive deposit, it is anticipated that the horizontal hydraulic conductivity for the upper cohesive deposit is in the range of 10^{-6} to 10^{-5} cm/sec (Patrick, 1993).

In 2024, four borings were conducted through both the Dallman and Lakeside Ash Ponds for the purposes of characterizing the geology immediately below the impoundments. Shelby tube samples were obtained from borings D-1, D-2, D-3 and D-4 (Dallman), and L-1, L-3, L-4 and L-5 (Lakeside). The geometric mean hydraulic conductivities of four samples under Dalman Ash Pond is 4.53 x 10^{-7} cm/sec. The geometric mean hydraulic conductivities of four samples under Lakeside Ash Pond is 2.58 x 10^{-7} cm/sec. The boring logs are provided in Appendix A and the laboratory hydraulic conductivity results are provided in Appendix E.

3.3.5 Creek Fill

Creek fill is the material used to abandon the former channel of Sugar Creek. Borings conducted along the abandoned creek (i.e., CB-1 through CB-4, CB-7 through CB-9, P-5D and P-8D) indicate that the creek fill is variable, ranging from silty clays to organic clays to silty sands. In some locations the CCR surface impoundment and CCR landfill dikes were constructed over the creek channel. The Grading Plan drawing by Burns & McDonnell (see Note 4 on Figure 5) indicates that where construction of a dike was over the former Sugar Creek channel, the creek fill was over excavated at least 4 feet below the existing channel banks and bottom and then filled with cohesive material and compacted to at 90%.

The cohesive soils are characterized as silty clay to organic silty clay which contain varying quantities of fine- to medium-grained sand. Wood fragments and other organic were typically encountered. In some areas, the cohesive fill materials extended down to the top of bedrock. The granular fill materials are typically poorly graded silty to clayey sands and contain organics or wood fragments. In some areas, the granular fill materials also extended down to the top of bedrock. The location of the creek abandonment is depicted on Figure 5.

The cohesive fill material contains 0% gravel, 2% to 48% sand, and 52% to 98% silt/clay. The vertical hydraulic conductivity ranges from 7.6 x 10^{-8} cm/sec to.2.1x10^{-5} cm/sec. The granular fill materials contain 0 to 2% gravel, 55% to 65% sand and 33% to 45% silt/clay. Based on one laboratory hydraulic conductivity test performed on a Shelby tube sample obtained from berm fill, the hydraulic conductivity of the granular fill material is 3.3 x 10^{-8} cm/sec (Patrick, 1993). Grain size analyses are provided in Appendix E.

Three landfill piezometers (P-3S, P-5S and P-8S) are screened across creek fill materials. Of these, one piezometer (P-5S) was installed across cohesive fill material (i.e., organic silty clay) and the other piezometers were installed across granular fill materials (i.e., clayey sand and silty

sand). Hydraulic conductivity of the granular fill materials ranged from a minimum of 7.1 x 10^{5} cm/sec to 1.5 x 10^{-2} cm/sec with a geometric mean of 6.02 x 10^{-4} cm/sec. The hydraulic conductivity of the cohesive fill material ranged from 7.1 x 10^{-5} cm/sec to 1.1 x 10^{-4} cm/sec, and an average of 8.6 x 10^{-5} cm/sec (Patrick 1993). These values represent the hydraulic conductivity in the horizontal direction.

The horizontal hydraulic conductivity values are believed to be typical of soils which contain organic matter (e.g. wood fragments). The hydraulic conductivity values based on laboratory tests are generally considered to be representative of the coefficient of hydraulic conductivity in the vertical direction because of the sample configuration during testing. However, because of the randomness of the fill, it is more likely that the hydraulic conductivity is within the range of 10^{-5} to 10^{-4} cm/sec (Patrick, 1993).

3.4 Hydrogeologic Units

The uppermost saturated zone and underlying confining unit control groundwater movement and the potential for CCR impacted groundwater migration at the site. A description of the uppermost saturated zone and the underlying confining unit follows:

3.4.1 Intermittent Saturated Shallow Sand

The shallow sand is the uppermost saturated interval. As described above, the shallow sand is encountered intermittently between the top of the lower cohesive deposit and below the upper cohesive deposit, primarily on portions of the FGDS Unit 2 Landfill floor and along the north and west sides of the Dallman Ash Pond, from the middle of the north side to the eastern edge. It occurs at elevations generally between 515 and 525 feet MSL, with variations from 510 to 530 feet MSL, and thicknesses typically a few feet or less, though up to 6-7 feet in isolated areas at boring AP-15. The intermittent saturated shallow sand appears to be under confined, semi-confined, or unconfined conditions dependent upon location. The unit may underlie a small portion of the Lakeside Ash Pond, separated by about 8-10 feet of low-permeability silty clay, but it is absent beneath the Dallman Ash Pond or the Unit 2 Landfill. Creek relocation excavations along the Dallman Ash Pond further limited its extent by removing sands adjacent to the berm slopes, as shown in hydrogeologic cross-sections and figures depicting its surface and thickness.

The shallow sand wells include AP-6S, AP-8S, AP-15S, G-113, P-03S, P-06S North, P-07S West, P-09S West, P-103S, P-104S, RW3S and T-4S. There are three complete sets of shallow groundwater elevation data: June, 25, 2025, July 21, 2025 and August 21, 2025. The shallow groundwater elevations range from a minimum of 518.98 to 537.67 feet MSL. The average shallow groundwater elevation is 527.08 feet MSL.

As described above, the creek relocation project resulted in the excavation of soils along the constructed creek channel (i.e., west to east creek bed elevations are 520 to 516 feet MSL) along

a 4:1 horizontal to vertical slope from the center line of the creek location channel. This excavation was then backfilled with cohesive soils essentially isolating the presence of the shallow sand to a narrow band adjacent to the toe of the slope of the northern berm. This would result in the removal of the shallow sand from the along the creek relocation area, essentially eliminating/removing the migration pathway of any fluvial sand deposits adjacent to the Dallman Ash Pond.

3.4.2 Uppermost Saturated Zone

The uppermost saturated zone is characterized as the basal sand overlying the shale bedrock. As indicated above, the hydraulic conductivity of the basal sand ranges from 1.15 x 10^{-3} to 7.64 x 10^{-2} cm/sec and exhibits a mean value of 1.25 x 10^{-2} cm/sec. The groundwater in the basal sand appears to be under semi- to confined conditions. The upper limit of the uppermost saturated zone is dependent upon the seasonally fluctuating groundwater table. The potentiometric surface of the basal sand varies from 565 feet MSL at upgradient locations (i.e., AP5), south of the Lakeside Ash Pond, to 525 feet MSL at down-gradient locations near Sugar Creek, north of the Dallman Ash Pond. As a result, the potentiometric surface is variably dependent upon the location and the seasonal variation.

Creek fill material was encountered in FGDS Unit 2 Landfill locations CB-1, CB-2, CB-3, CB-4, P-3D, P-5D, B1-89, B6-89, B11-89, B12-89, B17-89 and G-104. The creek fill materials directly overlay the basal sand at P-5D, B1-89, B6-89 and B11-89. At these locations the creek fill is a silty clay, effectively eliminating the creek fill as a flow path. Due to the highly variable hydraulic characteristics and random placement of the creek fill materials, further characterization is difficult. The creek fill material does not present a contaminant flow path from the CCR units to the basal sand. The basal sand appears to be separated from the overlying CCR units by the upper and lower cohesive deposit, and or soils recompacted under the dikes where the dikes intersected the former creek channel and where the creek realignment effectively removed the high permeability soils.

3.4.3 Lower Confining Unit

The uppermost bedrock at the project site is primarily Pennsylvanian age shale with isolated thin coal layers. The Pennsylvanian shale functions as a lower confining unit due to its low hydraulic conductivity and effective porosity. The lower confining unit represents a natural hydrogeologic barrier (i.e., aquitard) to the vertical movement of groundwater.

In situ hydraulic conductivity test (slug tests) indicate that the hydraulic conductivity for the upper portions of the bedrock range from 1.8 x 10^{-7} cm/sec (0.0568 m/a) to 1.3 x 10^{-6} cm/sec (0.410 m/a) (Patrick, 1993). There appears to be good correlation between the rock lithology and the measured values of hydraulic conductivity. The bedrock over most of the site will act as an aquiclude and prevent the downward movement of groundwater.

3.5 Groundwater Elevations and Pool Levels

Static groundwater elevations were measured on a monthly schedule during 2025. Intermittent saturated shallow sand wells AP-6S, AP-8S, AP-15S, P-03S, P-103S, P-104S, RW3S and T-4S were installed in June 2025. The collection of groundwater elevations at these wells commenced June 2025. A summary of the groundwater elevations (in feet MSL) is provided in Table 1. This table includes all monitoring points including the adjacent surface water bodies: Lake Springfield, the clarification pond, and Sugar Creek. Also included in this table are pore water elevations for the Dallman Ash Pond and Lakeside Ash Pond wells (i.e., D and L wells, respectively).

There appears to be a slight seasonal variation in groundwater and pore water levels with higher levels generally observed during April and the lowest elevations observed during August 2025. The horizontal hydraulic gradient of the basal sand was calculated based on groundwater flow from well G-110 to well P-106. Using these wells, a horizontal hydraulic gradients was calculated for averages of the 2025 reported groundwater elevations for these wells/piezometers. As presented below, the horizontal hydraulic gradient within the basal sand exhibits an average of 0.00591 ft/ft.

Vertical hydraulic gradient were calculated for the nested groundwater monitoring well/piezometer locations AP-6/AP-6S, AP-8/AP8S, AP-15D/AP-15S, P-03D/P-03S, P-06R/P-06R/P-06S, P-07D/P-07M/P-07S, P-09D/P-09S, P-103/P-103S, P-104/P-104S, and RW3/RW3S. The vertical hydraulic gradients are summarized in Table 2. With the exception of the vertical hydraulic gradients at well pairs AP-15D/AP-15S, P-103/P-103S, P-104/P-104S and RW3/RW3S, the vertical hydraulic gradients are positive (i.e., upward). The overall upward hydraulic gradient is consistent with the characterization of the basal sand being a confined unit.

Well pairs AP-15D/AP-15S and RW3/RW3S are located along the western and northern perimeter of Dallman Ash Pond, respectively. Well pairs P-103/P-103S and P-104/P-104S are located along the northern perimeter of Unit 2. These well pairs are located along the periphery of the Dallman Ash Pond and Unit 2 in the where the shallow sand appears to be the thickest.

3.6 Potentiometric Surface Maps

Groundwater movement is controlled by recharge along topographic highs and discharge along the original stream valley. The pre-surface impoundment flow direction in the uppermost saturated zone was dominantly horizontal from the adjacent banks toward the natural convergence along Sugar Creek, which formerly drained the site. The overall groundwater movement was from south to north with local deviations. This dominant flow pattern persists under present day conditions but with localized variation introduced by the hydrologic discontinuity created upon construction of the FGDS Landfill and CCR surface impoundments.

Existing wells at the site, including wells from the FGDS Landfill, were used to derive potentiometric surface maps. As discussed, overall groundwater flow is from south to north. The east perimeter of the Lakeside Ash Pond is largely up-gradient, and the west side is downgradient to side-gradient. Excavated areas within the landfill boundary act as a groundwater sink along the east side of the Dallman Ash Pond. Groundwater generally moves northward under the Dallman Ash Pond but also moves easterly towards the FGDS Landfill and westerly towards Sugar Creek. Groundwater beneath the Lakeside Ash Pond also moves northward and westerly along Sugar Creek.

The impoundments likely influence local groundwater dynamics by increasing potentiometric pressures beneath and around their footprints. However, there are no piezometers screened in the basal sand beneath the impoundments. The increased pressures occur due to the sustained elevated water levels within the ponds during operation. This elevated head establishes an outward hydraulic gradient, promoting radial flow away from the mound toward lower-potential areas, such as nearby surface water bodies like Sugar Creek. The outward gradient is typically steeper near the impoundment boundaries due to the contrast between the artificially high heads inside the ponds and the ambient groundwater levels outside, often resulting in gradients on the order of 0.01-0.02 ft/ft as observed in site data. At this site, the elevated heads contribute to the observed eastward flow component near the FGDS Landfill and westward toward Sugar Creek, integrating with the broader south-to-north regime.

Potentiometric surface maps (derived from 2025 data, similar to Figure 3 in the 2024 Annual Report for well locations) show groundwater flow radially from the impoundments toward Sugar Creek. Contours indicate a hydraulic gradient of approximately 0.01-0.02 ft/ft, with flow directed west-northwest overall. Along the eastern portion near the FGDS Unit 2 Landfill, there is an eastward flow component toward the FGDS Unit 2 landfill, then northward toward Sugar Creek. Maps for each 2024 event confirm consistent directions, with minor fluctuations due to seasonal recharge. For the FGDS Landfill, flow is integrated into site-wide maps, with no separate potentiometric surfaces identified, but consistent with basal sand flow toward Sugar Creek. Potentiometric surface maps are provided in Appendix F.

4. EVALUATION OF PREFERENTIAL PATHWAYS

4.1 Abandoned Creek

The abandoned creek is not a contaminant migration pathway. The relocation of the creek occurred with the construction of Dallman Ash Pond (1976). Realignment of the creek channel required the over-excavation of the new channel by a minimum of 4 feet and backfilling with cohesive soils compacted to 90% maximum dry density. Construction plans, boring logs, and grain size analyses confirm low permeability of the creek fill. Cross-sections show fill materials mixed with onsite soils, removing the hydraulic connection between the abandoned

creek and the basal sand. The abandoned creek does not extend under the FGDS Unit 2 Landfill, though a portion exists north of FGDS Landfill Unit 2, where the relocated creek bed has an elevation of approximately 520 to 516 feet MSL.

Based on the geologic characterization of the site the abandoned creek bed has been removed or mixed with other on-site materials, which precludes it from being a potential pathway. See Figure 12 and Figure 13 which depict the surface of the Shallow Sand and the thickness relative to the pre-relocated Sugar Creek.

4.2 Shallow Sand Unit

The shallow sand is not hydraulically connected to the CCR units and is not a contaminant migration pathway due to the confined extent along the north. The shallow sand unit (intermittent deposits above 525 feet MSL), if present, was removed within pond footprints during construction. Borings did not encounter shallow sand intersecting CCR, and there is no evidence of communication with the lower cohesive unit or basal sand. New well AP6S, paired with AP6, confirms isolation (screened in shallow sand at 525-530 feet MSL). For the FGDS Landfill, shallow sand is not a significant pathway due to landfill construction. The 2025 elevation data for shallow wells (e.g., P-103S, P-104S) shows consistent levels with no anomalous fluctuations indicating preferential flow. Slug testing in shallow units (e.g., P-06S, P-07S) yields K values around 1-3E-03 cm/s, indicating limited conductivity.

As discussed above, the over-excavation and backfilling of the former creek channel and along the creek realignment further limits the horizontal connectivity of the intermittent saturated shallow sand. The Grading Plan drawing by Burns & McDonnell (Figure 5) depicts the creek abandonment and realignment north of the Dallman Ash Pond and Unit 2. The abandonment of the creek resulted in the over-excavation of at least 4 feet under the dike below the existing channel banks and bottom (see cross-sections), followed by filling with cohesive material and compaction to at least 90%. In addition to the excavation of soils under the dikes, realignment of the creek channel required the over excavation of the new channel by a minimum of 4 feet and backfilling with cohesive soils compacted to 90% maximum dry density. Construction plans, boring logs, and grain size analyses confirm low permeability of the creek fill. Cross-sections show fill materials mixed with onsite soils, removing direct hydraulic connection between the abandoned creek and the basal sand.

Pursuant to recommendations by the EPA, a boring was advanced about midway between AP4 and AP-14 on the west side of the Lakeside Ash Pond. A shallow sand was encountered from approximately 14.5 to 21.5 feet in depth; therefore, a shallow and a deep well were installed at that location (AP-15S and AP-15D, respectively). The shallow sand is illustrated in Cross Section B-B' (Appendix C). Based in the differential in groundwater elevation from AP-15S and the liquid level in the Lakeside Ash Pond, there is no apparent direct hydraulic connection

from the shallow sand to the ash pond. For purposes of monitoring the groundwater between wells AP4 and AP14, wells AP-15S and AP-15D are proposed to be added to the groundwater monitoring system.

4.3 Communication Between Basal Sand and Shallow Sand

The intermittent saturated shallow sand is not hydraulically connected to the basal sand. Boring logs and cross-sections confirm the lower cohesive unit separates the intermittent saturated shallow sand from the basal sand. Cross-sections A-A' and B-B' depict the geology along the north and west side of the Dallman Ash Pond and the west side of the Lakeside Ash Pond. Furthermore, potentiometric data indicate semi-confined conditions in the basal sand, with head differences from water table aquifers. Slug test data from the lower cohesive deposit (e.g., low conductivity approximately 10e-5 cm/s in cohesive units) supports the conclusions that the basal sand is under confined conditions.

5. GROUNDWATER ELEVATIONS RELATIVE TO CCR BASE

Both of the CCR surface impoundments, the Lakeside Ash Pond and the Dallman Ash Pond, were constructed above the static potentiometric surface. The potentiometric surface represents the total pressure within a water-bearing unit to which the water will rise in a well/piezometer that is sealed in and penetrates the water-bearing unit. Given that the basal sand is overlain by the low hydraulic conductivity lower cohesive deposit, the basal sand is semi-confined. The potentiometric surface does not represent a water table setting. The potentiometric surface can be higher than the actual presence of water since its movement is restricted by the overlying clayey deposit. Constructing the ash ponds into or below the static water level would have been impractical and not economically feasible to attempt. As depicted in Figure 3, the historical use of the Lakeside parcel was agricultural/pasture. The parcels containing the Dallman Ash Pond and the Unit 2 Landfill were previously woodlands except on the southeast corner (agricultural/pasture).

A historic topographic map from 1950 for the site is presented as Figure 4. This figure depicts the preconstruction ground surface within the area of the CWLP CCR units. Based upon this figure, the preconstruction ground surface ranged from 540 feet MSL along the southern edge of the Lakeside Ash Pond and the northern edge of the Dallman Ash Pond down to 530 feet MSL adjacent to Sugar Creek. As indicated above, the Lakeside Ash Pond and Dallman Ash Pond were constructed at or just below the pre-existing land surface. Prior to construction, Sugar Creek meandered from the southwest corner of the site, exiting at the northeast corner of the site. There is no as-built construction documentation for the Lakeside Ash Pond or for the Dallman Ash Pond. Figure 5 is the proposed grading plan for the Dallman Ash Pond. According to Figure 5, the typical elevation of the floor of the Dallman Ash Pond is approximately 527 feet MSL.

The typical surface water elevation of Sugar Creek is approximately 520 feet MSL (average for 2025 monthly elevations is 520.56) based on creek elevations obtained at the time of potentiometric surface measurements. These results indicate an approximate separation between the base of the Dallman Ash Pond and the static surface water level.

The D and L series borings/wells are located entirely within the CCR material in the Dallman Ash Pond and Lakeside Ash Pond, respectively, and serve as piezometers to measure liquid levels within the impoundments. Liquid levels in the Dallman Ash Pond (D series wells) range from approximately 546 to 550 feet MSL across 2025 monitoring events, with averages around 548-550 feet MSL (e.g., D-1 at 547.69-550.41 feet MSL, D-2 at 549.44-550.85 feet MSL, D-3 at 546.89-550.04 feet MSL, D-4 at 546.99-549.53 feet MSL). In the Lakeside Ash Pond (L series wells), liquid levels are similarly elevated, ranging from 550 to 559 feet MSL (e.g., L-1 at 550.33-551.37 feet MSL, L-3 at 550.71-551.84 feet MSL, L-4 at 558.45-559.45 feet MSL, L-5 at 549.51-551.05 feet MSL). The liquid levels are precipitation that falls within the impoundment boundaries.

These impoundment liquid levels are consistently higher than the potentiometric surfaces in adjacent monitoring wells screened in the uppermost saturated zone. For example, downgradient wells such as AP-1 (524-527 feet MSL) and AP-2 (528-529 feet MSL) exhibit hydraulic heads 20-30 feet lower than the pond levels, indicating a downward hydraulic gradient from the impoundments to the underlying aquifer. This is further substantiated by the saturated intervals encountered at the borings advanced through the dikes (i.e., B-5, B-6, B-7, B-8 and B-9 series of borings conducted in 2023). The pore water levels within the berms are closer to the potentiometric surface exhibited outside of the impoundments, and very different from the liquid levels exhibited by the piezometers within the CCR surface impoundments.

Pre-closure dewatering will lower impoundment levels within the CCR, eliminating the downward gradient. The confining lower cohesive unit (low $K < 10 \times 10^{-5}$ cm/s) limits vertical migration, confining transport to lateral flow in the basal sand. As stated previously, Sugar Creek is a gaining creek, being fed not only by any lake water from the spillway, but from the basal sand. Once dewatering in the impoundment has been completed as part of closure activities, the potentiometric surface in the basal sand is expected to decrease to levels near that of the creek, below that of bottom of the Dallman Ash Pond. Given the low hydraulic conductivity of the lower cohesive deposit between the basal sand and the bottom of the Dallman Ash Pond, a temporary increase in the potentiometric surface due to an increase in creek level will not result in fluctuation of the potentiometric surface into the ash pond. The low hydraulic conductivity will restrict vertical upward movement of groundwater thereby continuing separation of the potentiometric surface and the ash pond.

The bottom of the five-foot recompacted clay liner for the FGDS Unit 2 Landfill extended to a minimum depth of approximately 525 feet MSL; the surface of the liner is approximately 530 feet MSL. The FGDS Landfill was designed and constructed above the uppermost saturated zone. The landfill contains a leachate collection system designed to maintain the liquid level to less than

one foot of head on the liner. Upon closure, the landfill will install a composite final cover. The leachate collection system will continue to operate for a minimum 30 years after closure pursuant to 35 Ill. Admin. Code Part 811.

6. RECENT ADDITION OF PIEZOMETERS

Borings were advanced and piezometers installed at these locations to further characterize the hydrogeologic conditions of the CWLP facility and to identify potential migration pathways. Completed in June 2025 the installed piezometers are:

- At the northeast corner of the FGDS Development area, paired with P-103 (designated as P-103S).
- Northeast of the Unit 2 CCR disposal area, paired with G-104 (designated as P-104S).
- At the northeast corner of the Dallman Ash Pond, paired with RW3 (designated as RW3S).
- In the shallow sand unit, paired with well AP-6 (designated as AP-6S).
- In the shallow sand unit paired with AP-8 (designated as AP8-S).
- On the far side of Sugar Creek, paired with T4 (designated T4S)
- North of well T-5 (designated AP-16).
- Between wells AP-14 and AP-4 (designated as AP-15S and AP-15D).

Wells AP-15S and AP-15D will be incorporated into the groundwater monitoring system. The remaining piezometers shall be maintained solely for the continued measurement of groundwater elevations. CWLP does not identify these piezometers as groundwater monitoring wells and does not anticipate the collection of analytical samples from these wells. The piezometer network is sufficient to provide a full characterization of the flow characteristics.

7. ANNUAL EVALUATION

This report will be evaluated annually to determine if groundwater flow paths have changed (e.g., due to climate or site modifications) or if additional wells are necessary for detecting/assessing Appendix III/IV releases. Changes will be reported in annual GWMCA Reports, with the first evaluation in August 2026.

8. CONCLUSION

This Flow Path Report provides a comprehensive characterization of groundwater flow paths at the CWLP Dallman and Lakeside Ash Ponds and FGDS Disposal Facility, in fulfillment of the requirements outlined in Section B, Paragraph 263 and Section B, Paragraph 280 of the CAFO and Attachment 1. Through integration of extensive site-specific data, including boring logs, well construction details, groundwater elevations, potentiometric maps, hydrogeologic cross-sections,

and slug testing results, the analysis demonstrates that groundwater flow is predominantly radial from the impoundments toward Sugar Creek, with an eastward component influencing the FGDS area before converging northward. Hydraulic gradients average 0.01-0.02 ft/ft, with seasonal fluctuations driven by recharge, but no significant deviations or reversals observed.

The report confirms no additional preferential pathways exist: the abandoned creek bed has been over-excavated, filled, and compacted beneath the perimeter berms for the Dallman Ash Pond, exhibiting low permeability ($K=10^{-5}$ to 10^{-4} cm/s) that precludes enhanced transport; the shallow sand unit is discontinuous, largely removed during construction, and shows no connectivity to the basal sand. The shallow sand is present at AP-15 and along the exterior of the northern berm of the Dallman Ash Pond. However, the shallow sand does not appear to directly intersect with the CCR as the potentiometric surfaces in the shallow wells are indicative of groundwater elevations largely unaffected by the much higher liquid levels within the impoundment. The shallow sand appears isolated north of the pond due to excavation and relocation of Sugar Creek. Therefore, monitoring of the shallow sand along the northern perimeter is not necessary. However, it is proposed to add wells AP15S and AP-15D located west of the Lakeside Ash Pond to the impoundment groundwater monitoring program. A revision to the subject detection monitoring program will be forthcoming with the inclusion of AP-15S and AP-15D.

Vertical communication between units is de minimis, with the lower cohesive deposit acting as an effective confining layer ($K \sim 10^{-7}$ cm/sec) restricting migration to lateral flow within the confined basal sand. Borings were advanced and piezometers installed at these locations to enhance the hydrogeology understanding of the site with an emphasis on further characterization of the migration pathways at the CWLP facility. The installation of additional piezometers/monitoring wells is not necessary at this time.

These findings meet CAFO objectives by delineating flow dynamics, ruling out high-risk pathways, and supporting the Assessment of Corrective Measures through a complete hydrogeologic characterization. Annual evaluations will ensure adaptive management, with the first review scheduled for August 2026.

9. ENGINEERING CERTIFICATION

The owner or operator of a coal combustion residual (CCR) unit must obtain a certification from a qualified professional engineer that the Flow Path Report has been completed pursuant to 40 C.F.R. § 257.91(b)(1).

The engineering certification for the groundwater monitoring system follows.

10. REFERENCES

Stabilize, Inc. 2009. City Water Light and Power – 35 IAC 620 Ash Pond Assessment

Patrick Engineering, 1993. Hydrogeologic Report on Flue Gas Desulfurization Sludge Landfill.

Professional Engineer Certification – Flow Path Report

In General Accordance with 40 CFR § 257.91(b)(1) - Groundwater Flow Path

In accordance with Title 40 of the Code of Federal Regulations (40 CFR), Part 257, Subpart D, Section 257.91(b)(1) the owner or operator of a coal combustion residuals (CCR) unit must obtain certification from a qualified professional engineer verifying the accuracy of the information in the Flow Path Report.

I, Karl W. Finke, a qualified professional engineer in good standing in the State of Illinois, certify that the information provided in the Flow Path Report for the CWLP impoundments and FGDS Unit 2 Landfill is accurate.



LICENSED PROFESSIONAL ENGINEER
KARL W. FINKE
062.068571
STATE OF ILLINOIS

Signature: Karl Finke

Illinois P.E. No: 062.068571

Date: September 22, 2025

Lic. Exp: 11/30/25

TABLES

TABLE 1:
GROUNDWATER ELEVATIONS

Table 1: Groundwater Elevations
CWLP, Springfield, Illinois

Well/Location	Elev. Of Meas. Point	Grnd. Surface	Stick Up	1/27/2025			2/25/2025			3/28/2025		
				DTW from Meas. Pt	DTW from Grnd	GW Elev	DTW from Meas. Pt	DTW from Grnd	GW Elev	DTW from Meas. Pt	DTW from Grnd	GW Elev
R101	546.8	543.57	3.23	6.49	3.26	540.31	6.89	3.66	539.91	6.44	3.21	540.36
P103	537.43	534.47	2.96	9.40	6.44	528.03	9.43	6.47	528.00	9.13	6.17	528.30
P103S	537.637	535.852	1.785	NI	NI	NI	NI	NI	NI	NI	NI	NI
P104	531.79	529.15	2.64	7.98	5.34	523.81	7.91	5.27	523.88	7.86	5.22	523.93
P104S	532.669	529.742	2.927									
P106	524.79	523.24	1.55	1.55	0.00	523.24	1.96	0.41	522.83	1.55	0.00	523.24
G110	555.92	553.79	2.13	23.49	21.36	532.43	24.40	22.27	531.52	24.37	22.24	531.55
R111	552.4	552.51	-0.11	25.15	25.26	527.25	25.04	25.15	527.36	25.06	25.17	527.34
G112	553.3	550.41	2.89	27.58	24.69	525.72	28.49	25.60	524.81	27.58	24.69	525.72
G113	536.77	533.64	3.13	4.51	1.38	532.26	5.01	1.88	531.76	4.60	1.47	532.17
G120	551.74	551.78	-0.04	15.87	15.91	535.87	15.89	15.93	535.85	15.66	15.70	536.08
G121	554.33	551.81	2.52	28.14	25.62	526.19	28.25	25.73	526.08	27.93	25.41	526.40
G122	553.28	550.97	2.31	26.71	24.40	526.57	29.72	27.41	523.56	29.66	27.35	523.62
G123	553.212	550.523	2.689									
P03D	533.203	530.018	3.185									
P03S	532.75	529.985	2.765	NI	NI	NI	NI	NI	NI	NI	NI	NI
P04D	539.67	534.64	5.03	7.98	2.95	531.69	12.42	7.39	527.25	12.41	7.38	527.26
P05D	536.92	533.64	3.28	6.02	2.74	530.90	5.88	2.60	531.04	5.96	2.68	530.96
P06S North	526.83	523.96	2.87	2.87	0.00	523.96	2.87	0.00	523.96	2.91	0.04	523.92
P06D Middle	529.8	523.96	5.84	5.84	0.00	523.96	5.84	0.00	523.96	5.84	0.00	523.96
P06R South	531.2	524.7	6.5	6.50	0.00	524.70	6.50	0.00	524.70	6.50	0.00	524.70
P07S West	527.39	525.08	2.31	5.28	2.97	522.11	3.00	0.69	524.39	4.74	2.43	522.65
P07D North	528.25	525.25	3	4.44	1.44	523.81	4.49	1.49	523.76	4.48	1.48	523.77
P07M East	527.04	525.02	2.02	4.31	2.29	522.73	2.02	0.00	525.02	4.51	2.49	522.53
P09S West	554.47	550.78	3.69	29.46	25.77	525.01	29.44	25.75	525.03	29.57	25.88	524.90
P09D East	554.84	551.47	3.37	29.08	25.71	525.76	28.93	25.56	525.91	29.14	25.77	525.70
AW-1	554.42	551.24	3.18	13.33	10.15	541.09	13.45	10.27	540.97	13.31	10.13	541.11
AW-2	528.25	525.02	3.23	4.56	1.33	523.69	4.53	1.30	523.72	4.50	1.27	523.75
RW3	538.42	535.65	2.77	9.99	7.22	528.43	9.56	6.79	528.86	9.55	6.78	528.87
RW3S	538.391	535.867	2.524	NI	NI	NI	NI	NI	NI	NI	NI	NI
TW3 West	538.293	535.833	2.46	11.37	8.91	526.92	11.21	8.75	527.08	11.08	8.62	527.21
AP-1	535.37	533.1	2.27	10.94	8.67	524.43	10.79	8.52	524.58	10.40	8.13	524.97
AP-2	536.1	533.6	2.5	7.88	5.38	528.22	7.87	5.37	528.23	7.47	4.97	528.63
AP-3	535.25	532.7	2.55	9.87	7.32	525.38	9.75	7.20	525.50	9.56	7.01	525.69
AP-4	555.6	552.46	3.14	10.88	7.74	544.72	10.68	7.54	544.92	10.76	7.62	544.84
AP-5	583.9	581.6	2.3	15.38	13.08	568.52	14.98	12.68	568.92	14.73	12.43	569.17
AP6	536.796	534.155	2.641	8.57	5.93	528.23	8.56	5.92	528.24	8.21	5.57	528.59
AP6S	536.854	533.959	2.895	NI	NI	NI	NI	NI	NI	NI	NI	NI
AP7	537.89	534.99	2.9	11.86	8.96	526.03	11.92	9.02	525.97	11.47	8.57	526.42
AP8	540.3	537.2	3.1	5.51	2.41	534.79	5.51	2.41	534.79	5.10	2.00	535.20
AP8S	538.585	535.974	2.611	NI	NI	NI	NI	NI	NI	NI	NI	NI
AP9	537.2	534.3	2.9	13.13	10.23	524.07	13.29	10.39	523.91	12.62	9.72	524.58
AP10	537.5	534.4	3.1	2.98	-0.12	534.52	4.04	0.94	533.46	3.88	0.78	533.62
AP11	538.1	535.3	2.8	15.22	12.42	522.88	15.24	12.44	522.86	14.57	11.77	523.53
AP12	540.7	537.8	2.9	18.06	15.16	522.64	18.08	15.18	522.62	17.51	14.61	523.19
AP13	542	538.6	3.4	18.46	15.06	523.54	18.44	15.04	523.56	17.28	13.88	524.72
AP14	539.6	536.8	2.8	2.30	-0.50	537.30	2.39	-0.41	537.21	2.34	-0.46	537.26
AP15D	538.609	536.295	2.314	NI	NI	NI	NI	NI	NI	NI	NI	NI
AP15S	538.532	536.417	2.115	NI	NI	NI	NI	NI	NI	NI	NI	NI
AP16	539.275	536.936	2.339	NI	NI	NI	NI	NI	NI	NI	NI	NI
GP1	537.72	535.62	2.1	11.91	9.81	525.81	11.89	9.79	525.83	11.61	9.51	526.11
GP3	550.41	547.56	2.85	21.57	18.72	528.84	21.08	18.23	529.33	20.06	17.21	530.35
GP7	535.74	533.25	2.49	8.15	5.66	527.59	8.11	5.62	527.63	7.89	5.40	527.85
T1	535.65	533.65	2	13.93	11.93	521.72	13.84	11.84	521.81	12.61	10.61	523.04
T2	549.62	547.22	2.4	25.39	22.99	524.23	25.65	23.25	523.97	24.71	22.31	524.91
T4	548.94	546.56	2.38	18.66	16.28	530.28	18.41	16.03	530.53	16.94	14.56	532.00
T4S	549.044	546.754	2.29	NI	NI	NI	NI	NI	NI	NI	NI	NI
T5	540.66	538.15	2.51	8.33	5.82	532.33	7.99	5.48	532.67	6.42	3.91	534.24
T6	538.32	535.96	2.36	9.87	7.51	528.45	9.8	7.44	528.52	9.4	7.04	528.92
L1 Deep	572.31	568.96	3.35	21.75	18.40	550.56	21.96	18.61	550.35	21.98	18.63	550.33
L1 Shallow	571.09	568.861	2.229	NI	NI	NI	NI	NI	NI	20.74	18.51	550.35
LB2 Deep	570.639	568.057	2.582	NI	NI	NI	NI	NI	NI	19.61	17.03	551.03
LB2 Shallow	570.452	568.136	2.316	NI	NI	NI	NI	NI	NI	19.39	17.07	551.06
L3 Deep	565.88	563.02	2.86	15.11	12.25	550.77	15.13	12.27	550.75	15.17	12.31	550.71
L3 Shallow	565.762	562.971	2.791	NI	NI	NI	NI	NI	NI	14.96	12.17	550.80
L4	568.58	566.25	2.33	9.76	7.43	558.82	10.13	7.80	558.45	9.74	7.41	558.84
L5 Deep	568.01	565.19	2.82	18.38	15.56	549.63	18.5	15.68	549.51	18.28	15.46	549.73
L5 Shallow	567.747	565.25	2.497	NI	NI	NI	NI	NI	NI	16.97	14.47	550.78
D1 Deep	566.2	564.02	2.18	17.44	15.26	548.76	17.28	15.10	548.92	17.27	15.09	548.93
D1 Shallow	566.333	563.871	2.462	NI	NI	NI	NI	NI	NI	17.21	14.75	549.12
D2 Deep	560.93	558	2.93	11.25	8.32	549.68	10.84	7.91	550.09	10.88	7.95	550.05
D2 Shallow	560.503	557.849	2.654	NI	NI	NI	NI	NI	NI	10.20	7.55	550.30
D3 Deep	557.9	555.03	2.87	10.21	7.34	547.69	9.55	6.68	548.35	10.49	7.62	547.41
D3 Shallow	557.743	554.673	3.07	NI	NI	NI	NI	NI	NI	10.71	7.64	547.03
D4	565.61	561.8	3.81	17.64	13.83	547.97	17.65	13.84	547.96	17.22	13.41	548.39
DB04 Deep	556.298	553.706	2.592	NI	NI	NI	NI	NI	NI	8.10	5.51	548.20
DB04 Shallow	556.433	553.548	2.885	NI	NI	NI	NI	NI	NI	7.93	5.05	548.50
DB05 Deep	555.82	553.385	2.435	NI	NI	NI	NI	NI	NI	7.77	5.33	548.05
DB05 Shallow	555.912	553.563	2.349	NI	NI	NI	NI	NI	NI	7.78	5.43	548.13
DB06	553.694	552.765	0.929	NI	NI	NI	NI	NI	NI	NI	NI	NI
DB07	555.798	552.754	3.044	NI	NI	NI	NI	NI	NI	NI	NI	NI
DB08	554.332	551.8	2.532	NI	NI	NI	NI	NI	NI	NI	NI	NI
Sugar Creek	510.44	NA	NA	9.77	NA	520.21	9.55	NA	519.99	9.8	NA	520.24
Lake Springfield	NA	NA	NA	NA	NA	559.59	NA	NA	559.58	NA	NA	559.63
Clarification Pond	553.29	NA	NA	6.6	NA	546.69	7.3	NA	545.99	7.3	NA	545.99

Notes:
NI - Not Installed
NA - Not Applicable

Table 1: Groundwater Elevations
CWLP, Springfield, Illinois

Well/Location	Elev. Of Meas. Point	Grnd. Surface	Stick Up	4/20/2025			5/29/2025			6/25/2025		
				DTW from Meas. Pt	DTW from Grnd	GW Elev	DTW from Meas. Pt	DTW from Grnd	GW Elev	DTW from Meas. Pt	DTW from Grnd	GW Elev
R101	546.8	543.57	3.23	5.19	1.96	541.61	6.88	3.65	539.92	7.12	3.89	539.68
P103	537.43	534.47	2.96		-2.96	537.43		-2.96	537.43	11.62	8.66	525.81
P103S	537.637	535.852	1.785	NI	NI	NI	NI	NI	NI	11.87	10.09	525.77
P104	531.79	529.15	2.64	7.04	4.40	524.75	7.61	4.97	524.18	8.57	5.93	523.22
P104S	532.669	529.742	2.927				NI	NI	NI	9.28	6.35	523.39
P106	524.79	523.24	1.55	1.55	0.00	523.24	1.67	0.12	523.12	1.55	0.00	523.24
G110	555.92	553.79	2.13	23.97	21.84	531.95	24.85	22.72	531.07	24.96	22.83	530.96
R111	552.4	552.51	-0.11	24.66	24.77	527.74	25.19	25.30	527.21	25.51	25.62	526.89
G112	553.3	550.41	2.89	27.27	24.38	526.03	17.54	14.65	535.76	17.77	14.88	535.53
G113	536.77	533.64	3.13	4.01	0.88	532.76	5.80	2.67	530.97	5.83	2.70	530.94
G120	551.74	551.78	-0.04	15.00	15.04	536.74	16.18	16.22	535.56	16.15	16.19	535.59
G121	554.33	551.81	2.52	27.27	24.75	527.06	28.13	25.61	526.20	27.93	25.41	526.40
G122	553.28	550.97	2.31	28.72	26.41	524.56	29.13	26.82	524.15	30.31	28.00	522.97
G123	553.212	550.523	2.689							30.26	27.57	522.95
P03D	533.203	530.018	3.185							7.82	4.64	525.38
P03S	532.75	529.985	2.765	NI	NI	NI	NI	NI	NI	9.89	7.13	522.86
P04D	539.67	534.64	5.03	12.26	7.23	527.41	13.22	8.19	526.45	13.66	8.63	526.01
P05D	536.92	533.64	3.28	5.45	2.17	531.47	6.09	2.81	530.83	6.23	2.95	530.69
P06S North	526.83	523.96	2.87	2.91	0.04	523.92	2.99	0.12	523.84	2.87	0.00	523.96
P06D Middle	529.8	523.96	5.84	5.84	0.00	523.96	6.12	0.28	523.68	5.84	0.00	523.96
P06R South	531.2	524.7	6.5	6.50	0.00	524.70	6.72	0.22	524.48	6.50	0.00	524.70
P07S West	527.39	525.08	2.31	4.14	1.83	523.25	4.89	2.58	522.50	6.71	4.40	520.68
P07D North	528.25	525.25	3	3.88	0.88	524.37	5.31	2.31	522.94	5.43	2.43	522.82
P07M East	527.04	525.02	2.02	3.46	1.44	523.58	4.37	2.35	522.67	5.55	3.53	521.49
P09S West	554.47	550.78	3.69	29.23	25.54	525.24	30.44	26.75	524.03	29.67	25.98	524.80
P09D East	554.84	551.47	3.37	28.80	25.43	526.04	29.65	26.28	525.19	29.73	26.36	525.11
AW-1	554.42	551.24	3.18	12.52	9.34	541.90	14.26	11.08	540.16	14.76	11.58	539.66
AW-2	528.25	525.02	3.23	3.72	0.49	524.53	5.35	2.12	522.90	5.44	2.21	522.81
RW3	538.42	535.65	2.77	8.94	6.17	529.48	9.27	6.50	529.15	9.85	7.08	528.57
RW3S	538.391	535.867	2.524	NI	NI	NI	NI	NI	NI	9.23	6.71	529.16
TW3 West	538.293	535.833	2.46	8.88	6.42	529.41	9.23	6.77	529.06	11.66	9.20	526.63
AP-1	535.37	533.1	2.27	8.11	5.84	527.26	9.79	7.52	525.58	10.50	8.23	524.87
AP-2	536.1	533.6	2.5	6.38	3.88	529.72	7.79	5.29	528.31	8.06	5.56	528.04
AP-3	535.25	532.7	2.55	8.39	5.84	526.86	7.67	5.12	527.58	9.32	6.77	525.93
AP-4	555.6	552.46	3.14	10.08	6.94	545.52	10.38	7.24	545.22	10.44	7.30	545.16
AP-5	583.9	581.6	2.3	13.48	11.18	570.42	14.41	12.11	569.49	14.63	12.33	569.27
AP6	536.796	534.155	2.641	7.00	4.36	529.80	7.77	5.13	529.03	8.47	5.83	528.33
AP6S	536.854	533.959	2.895	NI	NI	NI	NI	NI	NI	9.06	6.16	527.79
AP7	537.89	534.99	2.9	7.44	4.54	530.45	10.92	8.02	526.97	11.04	8.14	526.85
AP8	540.3	537.2	3.1	8.05	4.95	532.25	4.01	0.91	536.29	5.22	2.12	535.08
AP8S	538.585	535.974	2.611	NI	NI	NI	NI	NI	NI	11.45	8.84	527.14
AP9	537.2	534.3	2.9	10.18	7.28	527.02	12.86	9.96	524.34	12.80	9.90	524.40
AP10	537.5	534.4	3.1	2.94	-0.16	534.56	3.92	0.82	533.58	3.99	0.89	533.51
AP11	538.1	535.3	2.8	12.04	9.24	526.06	12.03	9.23	526.07	15.03	12.23	523.07
AP12	540.7	537.8	2.9	15.16	12.26	525.54	15.16	12.26	525.54	17.01	14.11	523.69
AP13	542	538.6	3.4	13.43	10.03	528.57	14.73	11.33	527.27	16.82	13.42	525.18
AP14	539.6	536.8	2.8	1.86	-0.94	537.74	2.72	-0.08	536.88	2.56	-0.24	537.04
AP15D	538.609	536.295	2.314	NI	NI	NI	NI	NI	NI	1.90	-0.41	536.71
AP15S	538.532	536.417	2.115	NI	NI	NI	NI	NI	NI	0.91	-1.21	537.62
AP16	539.275	536.936	2.339	NI	NI	NI	NI	NI	NI	6.95	4.61	532.33
GP1	537.72	535.62	2.1	10.80	8.70	526.92	12.88	10.78	524.84	12.32	10.22	525.40
GP3	550.41	547.56	2.85	17.91	15.06	532.50	19.64	16.79	530.77	19.54	16.69	530.87
GP7	535.74	533.25	2.49	7.32	4.83	528.42	7.46	4.97	528.28	8.14	5.65	527.60
T1	535.65	533.65	2	10.64	8.64	525.01	10.86	8.86	524.79	13.18	11.18	522.47
T2	549.62	547.22	2.4	23.23	20.83	526.39	23.83	21.43	525.79	23.92	21.52	525.70
T4	548.94	546.56	2.38	14.06	11.68	534.88	17.24	14.86	531.70	16.68	14.30	532.26
T4S	549.044	546.754	2.29	NI	NI	NI	NI	NI	NI	16.44	14.15	532.60
T5	540.66	538.15	2.51	4.28	1.77	536.38	9.14	6.63	531.52	8.49	5.98	532.17
T6	538.32	535.96	2.36	8.92	6.56	529.40	8.86	6.50	529.46	9.07	6.71	529.25
L1 Deep	572.31	568.96	3.35	20.94	17.59	551.37	21.19	17.84	551.12	20.98	17.63	551.33
L1 Shallow	571.09	568.861	2.229	19.75	17.52	551.34	19.91	17.68	551.18	19.72	17.49	551.37
LB2 Deep	570.639	568.057	2.582	18.53	15.95	552.11	18.93	16.35	551.71	18.77	16.19	551.87
LB2 Shallow	570.452	568.136	2.316	18.33	16.01	552.12	18.68	16.36	551.77	18.49	16.17	551.96
L3 Deep	565.88	563.02	2.86	14.04	11.18	551.84	14.55	11.69	551.33	14.33	11.47	551.55
L3 Shallow	565.762	562.971	2.791	13.84	11.05	551.92	14.43	11.64	551.33	14.24	11.45	551.52
L4	568.58	566.25	2.33	9.13	6.80	559.45	9.67	7.34	558.91	9.43	7.10	559.15
L5 Deep	568.01	565.19	2.82	16.96	14.14	551.05	17.96	15.14	550.05	17.72	14.90	550.29
L5 Shallow	567.747	565.25	2.497	15.29	12.79	552.46	16.46	13.96	551.29	16.36	13.86	551.39
D1 Deep	566.2	564.02	2.18	15.79	13.61	550.41	18.51	16.33	547.69	17.66	15.48	548.54
D1 Shallow	566.333	563.871	2.462	15.87	13.41	550.46	18.78	16.32	547.55	17.69	15.23	548.64
D2 Deep	560.93	558	2.93	10.08	7.15	550.85	11.49	8.56	549.44	11.36	8.43	549.57
D2 Shallow	560.503	557.849	2.654	9.74	7.09	550.76	11.14	8.49	549.36	10.68	8.03	549.82
D3 Deep	557.9	555.03	2.87	8.09	5.22	549.81	8.62	5.75	549.28	11.01	8.14	546.89
D3 Shallow	557.743	554.673	3.07	7.69	4.62	550.05	8.16	5.09	549.58	10.66	7.59	547.08
D4	565.61	561.8	3.81	16.08	12.27	549.53	18.62	14.81	546.99	17.36	13.55	548.25
DB04 Deep	556.298	553.706	2.592	6.40	3.81	549.90	6.66	4.07	549.64	7.55	4.96	548.75
DB04 Shallow	556.433	553.548	2.885	6.89	4.01	549.54	7.49	4.61	548.94	7.42	4.54	549.01
DB05 Deep	555.82	553.385	2.435	6.46	4.02	549.36	7.99	5.55	547.83	7.81	5.37	548.01
DB05 Shallow	555.912	553.563	2.349	6.42	4.07	549.49	7.85	5.50	548.06	7.84	5.49	548.07
DB06	553.694	552.765	0.929	NI	NI	NI	NI	NI	NI	NI	NI	NI
DB07	555.798	552.754	3.044	NI	NI	NI	NI	NI	NI	NI	NI	NI
DB08	554.332	551.8	2.532	NI	NI	NI	NI	NI	NI	NI	NI	NI
Sugar Creek	510.44	NA	NA	10.31		520.75	11.06	NA	521.50	10.31	NA	520.75
Lake Springfield	NA	NA	NA	NA	NA	560.02	NA	NA	560.40	NA	NA	560.38
Clarification Pond	553.29	NA	NA	6		547.29	6.9	NA	546.39	6.4	NA	546.89

Notes:
NI - Not Installed
NA - Not Applicable

Table 1: Groundwater Elevations
CWLP, Springfield, Illinois

Well/Location	Elev. Of Meas. Point	Grnd. Surface	Stick Up	7/21/2025			8/21/2025		
				DTW from Meas. Pt	DTW from Grnd	GW Elev	DTW from Meas. Pt	DTW from Grnd	GW Elev
R101	546.8	543.57	3.23	6.52	3.29	540.28	8.67	5.44	538.13
P103	537.43	534.47	2.96	10.67	7.71	526.76	12.54	9.58	524.89
P103S	537.637	535.852	1.785	10.41	8.63	527.23	12.86	11.08	524.78
P104	531.79	529.15	2.64	8.12	5.48	523.67	9.90	7.26	521.89
P104S	532.669	529.742	2.927	9.16	6.23	523.51	10.26	7.33	522.41
P106	524.79	523.24	1.55	1.55	0.00	523.24	3.22	1.67	521.57
G110	555.92	553.79	2.13	24.51	22.38	531.41	25.79	23.66	530.13
R111	552.4	552.51	-0.11	24.96	25.07	527.44	26.91	27.02	525.49
G112	553.3	550.41	2.89	27.43	24.54	525.87	29.69	26.80	523.61
G113	536.77	533.64	3.13	5.03	1.90	531.74	7.23	4.10	529.54
G120	551.74	551.78	-0.04	16.16	16.20	535.58	18.03	18.07	533.71
G121	554.33	551.81	2.52	28.48	25.96	525.85	29.22	26.70	525.11
G122	553.28	550.97	2.31	29.93	27.62	523.35	31.61	29.30	521.67
G123	553.212	550.523	2.689	29.41	26.72	523.80	31.75	29.06	521.46
P03D	533.203	530.018	3.185	7.07	3.89	526.13	9.14	5.96	524.06
P03S	532.75	529.985	2.765	9.83	7.07	522.92	10.17	7.41	522.58
P04D	539.67	534.64	5.03	13.11	8.08	526.56	14.48	9.45	525.19
P05D	536.92	533.64	3.28	6.89	3.61	530.03	7.82	4.54	529.10
P06S North	526.83	523.96	2.87	2.87	0.00	523.96	5.43	2.56	521.40
P06D Middle	529.8	523.96	5.84	5.84	0.00	523.96	4.91	-0.93	524.89
P06R South	531.2	524.7	6.5	6.50	0.00	524.70	6.50	0.00	524.70
P07S West	527.39	525.08	2.31	4.80	2.49	522.59	8.41	6.10	518.98
P07D North	528.25	525.25	3	4.34	1.34	523.91	6.92	3.92	521.33
P07M East	527.04	525.02	2.02	4.04	2.02	523.00	7.14	5.12	519.90
P09S West	554.47	550.78	3.69	29.42	25.73	525.05	30.38	26.69	524.09
P09D East	554.84	551.47	3.37	29.11	25.74	525.73	31.27	27.90	523.57
AW-1	554.42	551.24	3.18	13.44	10.26	540.98	15.94	12.76	538.48
AW-2	528.25	525.02	3.23	4.41	1.18	523.84	6.87	3.64	521.38
RW3	538.42	535.65	2.77	10.49	7.72	527.93	11.05	8.28	527.37
RW3S	538.391	535.867	2.524	8.20	5.68	530.19	10.95	8.43	527.44
TW3 West	538.293	535.833	2.46	11.01	8.55	527.28	13.22	10.76	525.07
AP-1	535.37	533.1	2.27	10.13	7.86	525.24	11.53	9.26	523.84
AP-2	536.1	533.6	2.5	7.28	4.78	528.82	8.87	6.37	527.23
AP-3	535.25	532.7	2.55	9.03	6.48	526.22	9.74	7.19	525.51
AP-4	555.6	552.46	3.14	10.38	7.24	545.22	11.21	8.07	544.39
AP-5	583.9	581.6	2.3	14.94	12.64	568.96	16.90	14.60	567.00
AP6	536.796	534.155	2.641	8.93	6.29	527.87	9.58	6.94	527.22
AP6S	536.854	533.959	2.895	8.08	5.18	528.77	10.24	7.34	526.61
AP7	537.89	534.99	2.9	11.38	8.48	526.51	11.83	8.93	526.06
AP8	540.3	537.2	3.1	5.76	2.66	534.54	6.73	3.63	533.57
AP8S	538.585	535.974	2.611	8.13	5.52	530.46	13.59	10.98	525.00
AP9	537.2	534.3	2.9	12.46	9.56	524.74	14.92	12.02	522.28
AP10	537.5	534.4	3.1	4.08	0.98	533.42	5.54	2.44	531.96
AP11	538.1	535.3	2.8	10.13	7.33	527.97	15.83	13.03	522.27
AP12	540.7	537.8	2.9	17.19	14.29	523.51	18.22	15.32	522.48
AP13	542	538.6	3.4	17.46	14.06	524.54	19.14	15.74	522.86
AP14	539.6	536.8	2.8	2.37	-0.43	537.23	2.39	-0.41	537.21
AP15D	538.609	536.295	2.314	1.87	-0.44	536.74	2.54	0.23	536.07
AP15S	538.532	536.417	2.115	0.86	-1.26	537.67	1.57	-0.55	536.96
AP16	539.275	536.936	2.339	6.61	4.27	532.67	8.82	6.48	530.46
GP1	537.72	535.62	2.1	12.02	9.92	525.70	13.01	10.91	524.71
GP3	550.41	547.56	2.85	19.93	17.08	530.48	20.76	17.91	529.65
GP7	535.74	533.25	2.49	8.74	6.25	527.00	9.38	6.89	526.36
T1	535.65	533.65	2	13.48	11.48	522.17	14.93	12.93	520.72
T2	549.62	547.22	2.4	24.82	22.42	524.80	26.31	23.91	523.31
T4	548.94	546.56	2.38	16.96	14.58	531.98	18.54	16.16	530.40
T4S	549.044	546.754	2.29	16.91	14.62	532.13	16.87	14.58	532.17
T5	540.66	538.15	2.51	7.57	5.06	533.09	11.16	8.65	529.50
T6	538.32	535.96	2.36	9.34	6.98	528.98	9.77	7.41	528.55
L1 Deep	572.31	568.96	3.35	21.02	17.67	551.29	22.13	18.78	550.18
L1 Shallow	571.09	568.861	2.229	20.61	18.38	550.48	20.85	18.62	550.24
LB2 Deep	570.639	568.057	2.582	18.63	16.05	552.01	19.95	17.37	550.69
LB2 Shallow	570.452	568.136	2.316	18.40	16.08	552.05	19.71	17.39	550.74
L3 Deep	565.88	563.02	2.86	14.37	11.51	551.51	15.49	12.63	550.39
L3 Shallow	565.762	562.971	2.791	14.33	11.54	551.43	15.51	12.72	550.25
L4	568.58	566.25	2.33	9.46	7.13	559.12	11.25	8.92	557.33
L5 Deep	568.01	565.19	2.82	17.86	15.04	550.15	18.84	16.02	549.17
L5 Shallow	567.747	565.25	2.497	16.61	14.11	551.14	17.41	14.91	550.34
D1 Deep	566.2	564.02	2.18	18.08	15.90	548.12	20.11	17.93	546.09
D1 Shallow	566.333	563.871	2.462	18.34	15.88	547.99	20.06	17.60	546.27
D2 Deep	560.93	558	2.93	10.47	7.54	550.46	15.7	12.77	545.23
D2 Shallow	560.503	557.849	2.654	10.43	7.78	550.07	15.02	12.37	545.48
D3 Deep	557.9	555.03	2.87	7.86	4.99	550.04	13.67	10.80	544.23
D3 Shallow	557.743	554.673	3.07	7.34	4.27	550.40	12.97	9.90	544.77
D4	565.61	561.8	3.81	17.01	13.20	548.60	19.29	15.48	546.32
DB04 Deep	556.298	553.706	2.592	7.46	4.87	548.84	9.47	6.88	546.83
DB04 Shallow	556.433	553.548	2.885	7.44	4.56	548.99	9.40	6.52	547.03
DB05 Deep	555.82	553.385	2.435	6.31	3.87	549.51	12.04	9.60	543.78
DB05 Shallow	555.912	553.563	2.349	6.42	4.07	549.49	12.01	9.66	543.90
DB06	553.694	552.765	0.929	3.96	3.03	549.73	8.93	8.00	544.76
DB07	555.798	552.754	3.044	6.39	3.35	549.41	9.88	6.84	545.92
DB08	554.332	551.8	2.532	4.30	1.77	550.03	11.25	8.72	543.08
Sugar Creek	510.44	NA	NA	10.41	NA	520.85	9.73	NA	520.17
Lake Springfield	NA	NA	NA	NA	NA	560.26	NA	NA	559.64
Clarification Pond	553.29	NA	NA	6.9	NA	546.39	7	NA	546.29

Notes:
NI - Not Installed
NA - Not Applicable

TABLE 2:
VERTICAL HYDRAULIC GRADIENTS

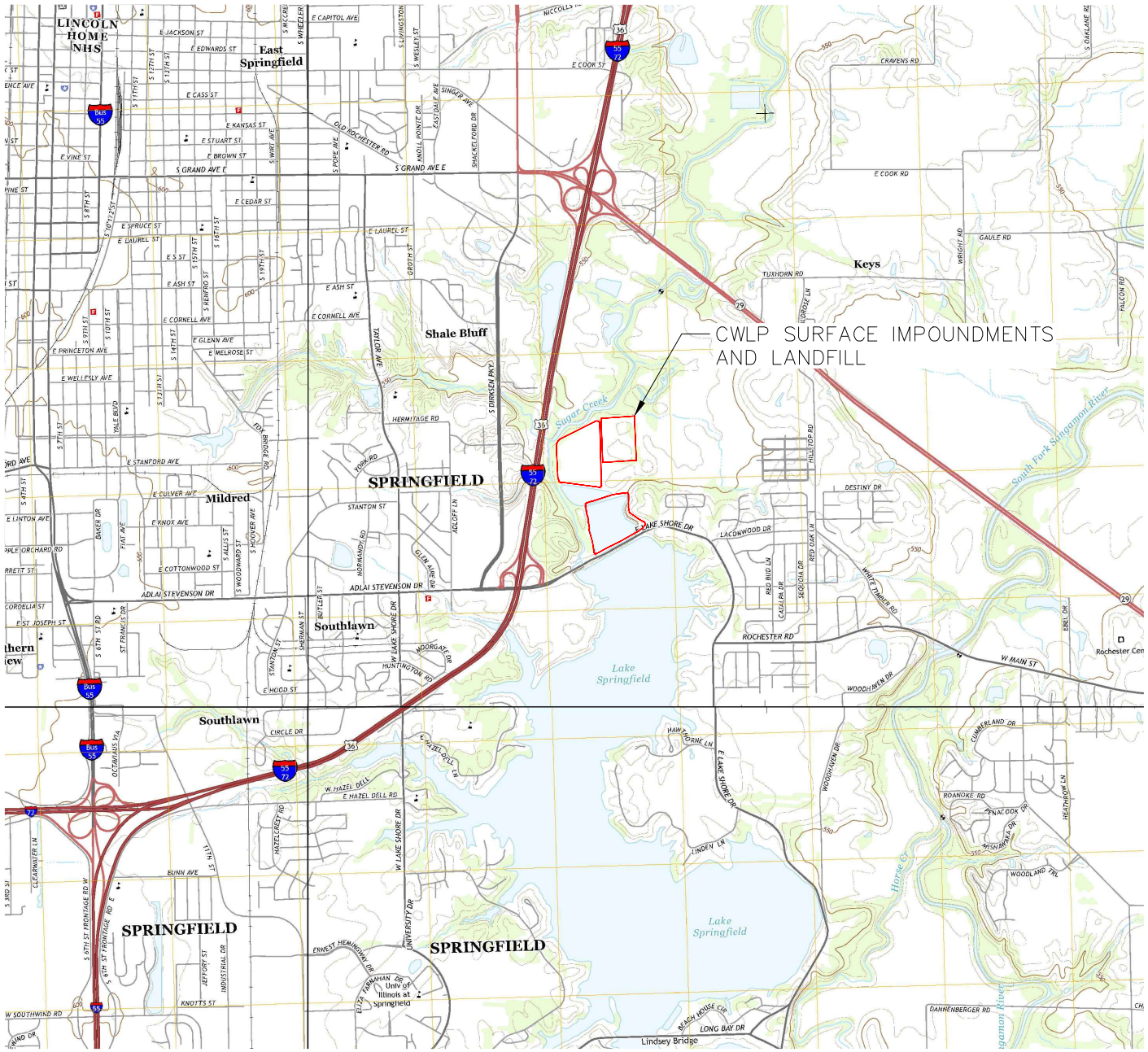
Table 2: Vertical Hydraulic Gradients
CWLP, Springfield, Illinois

Well	Easting (Site Coord)	Northing (Site Coord)	Middle of Screen (ft amsl)	GW Elev (ft amsl)	Vertical Hydraulic Gradient	Direction
AP6S	1702.3	5695.2	522.91	527.73	0.00100	Upward
AP6	1715.8	5766.6	503.755	527.80		
AP8S	1266.4	5413.4	524.61	527.53	0.304	Upward
AP8	1265.0	5420.9	503.31	534.40		
AP15S	1383.0	2925.3	517.245	537.42	-0.0859	Downward
AP15D	1383.4	2921.3	507.43	536.51		
P03S	2654.5	5671.3	520.75	522.79	0.108	Upward
P03D	2658.4	5671.1	498.75	525.19		
P06S North	2191.4	4725.7	516.65	523.62	0.0180	Upward
P06D Middle	2186.8	4717.0	495.05	524.04		
P06D Middle	2186.8	4717.0	495.05	524.04	0.0403	Upward
P06R South	2175.7	4718.1	484.05	524.67		
P07S West	2420.0	5340.0	514.35	522.14	0.0321	Upward
P07M East	2432.8	5337.0	507.85	522.62		
P07M East	2432.8	5337.0	507.85	522.62	0.0539	Upward
P07D North	2430.0	5345.0	497.45	523.34		
P09S West	2415.6	4447.3	517.85	524.77	0.0276	Upward
P09D East	2422.4	4446.3	496.95	525.38		
P103S	2654.4	5670.1	512.40	525.92	-0.0147	Downward
P103	2658.6	5670.2	506.78	525.82		
P104S	2309.8	5674.6	508.07	523.10	-0.0139	Downward
P104	2305.9	5685.0	502.05	522.93		
RW3S	1736.5	5614.9	523.59	528.93	-0.0427	Downward
RW3	1737.4	5613.3	500.87	527.96		

FIGURES

FIGURE 1:
SITE LOCATION

J:\S\Springfield CWLP\CWLP Ash Pond\DWG\2025\Site Map.dwg Tab: Layout1



NOTE:
BACKGROUND IMAGE COURTESY OF UNITED STATES GEOLOGICAL SURVEY.

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APPROVED BY: KWF | DESIGNED BY: KWF | DRAWN BY: BCK

SITE LOCATION

PLANS PREPARED FOR
CITY, WATER, LIGHT & POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:
FIG. 1

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FIGURE 2:
SITE FEATURES

DALLMAN ASH POND

FGDS DEVELOPMENT LANDFILL – UNIT 2 (ACTIVE)

FGDS DEVELOPMENT LANDFILL – UNIT 1 (CLOSED)

TREATMENT SLUDGE SETTLEMENT STRUCTURES

CLARIFICATION POND

LAKESIDE ASH POND

INTERSTATE 55

FORMER LIME SETTLING PONDS

SPAULDING DAM

LEGEND

POND/LANDFILL BOUNDARY

NOTE

1. AERIAL IMAGE FROM APRIL 7, 2024, FROM GOOGLE EARTH.

N

0 250 500 1000

SCALE: IN FEET

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SITE FEATURES

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FIG. 2

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Tab: FIGURE 2 NEW Last Saved: September 19, 2025, by Ben Korpus Plotted: Monday, September 22, 2025 12:08:48 PM
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FIGURE 3:
HISTORIC SITE PHOTO - 1936



NOTE

SITE PHOTO DATED JULY 3, 1936

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SITE PHOTO

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FIG. 3

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Tab: FIGURE 3 Last Saved: September 15, 2025, by Ben Karpus Plotted: Monday, September 15, 2025 11:29:59 AM
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FIGURE 4:
HISTORIC SITE TOPOGRAPHIC MAP - 1950

Tab: FIGURE 4 Last Saved: September 15, 2025, by Ben Karpus Plotted: Friday, September 19, 2025 4:09:01 PM
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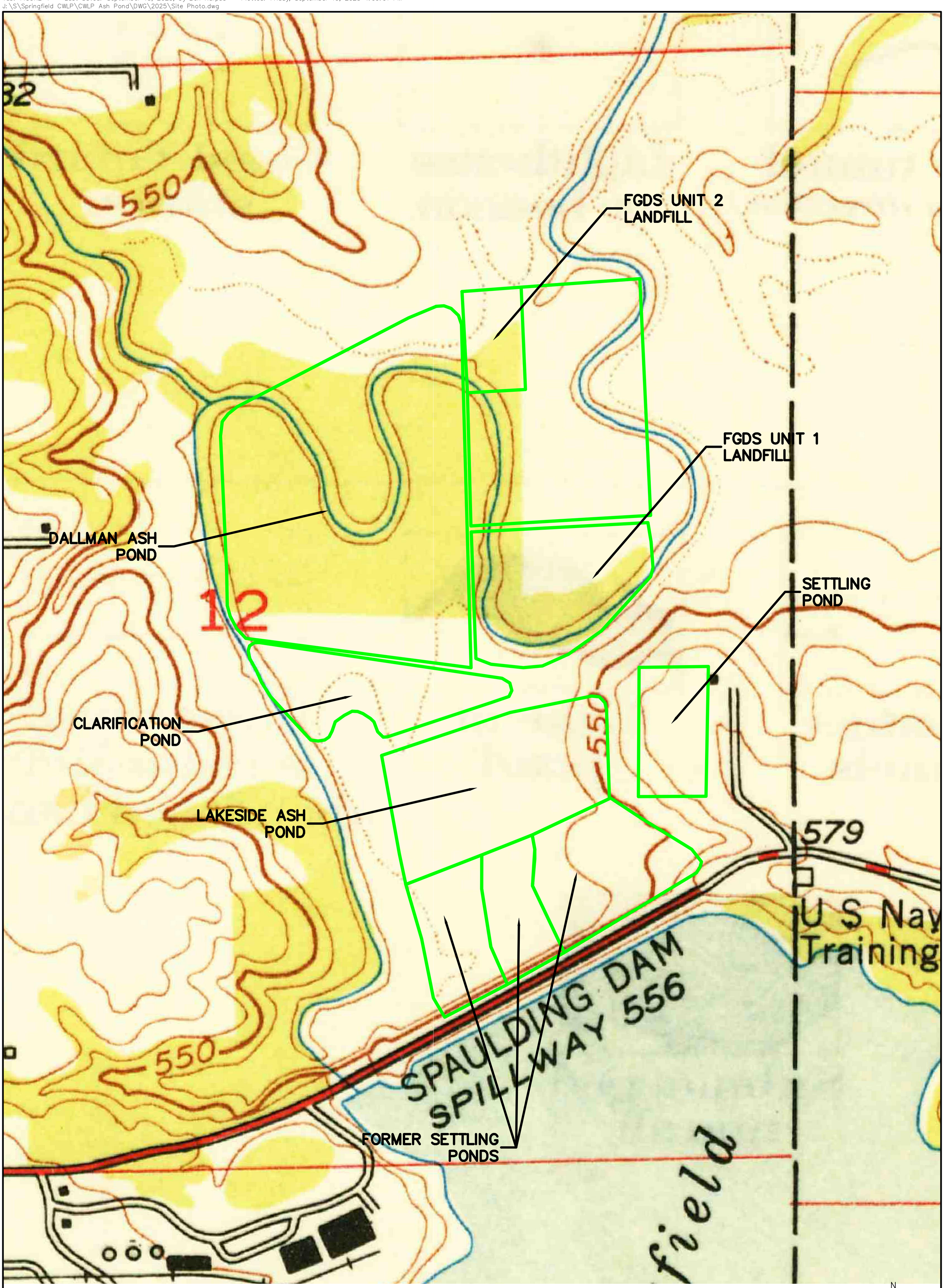

NOTE

SPRINGFIELD EAST, IL HISTORICAL MAP GEOPDF 7.5X7.5 GRID 2400–SCALE 1950

0 200 400 800

SCALE: IN FEET

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FIG. 4

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HISTORIC SITE TOPOGRAPHIC MAP – 1950

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FIGURE 5:
FORMER SUGAR CREEK CHANNEL

LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE

SOURCE: GRADING PLAN – DALLMAN ASH POND, BURNS & MCDONNELL (DRAWING NO. Y29, REV. 4, DATED AUGUST 13, 1976)

Notes:

1. Two 36" Corrugated Metal Pipe, 16 gauge, Bituminous coated, 2 2/3" x 1/2" corrugations, with 2 end sections required.
2. Excavate for Relocated Sugar Creek from Sta 2+00 to Sta 19+00 leaving excavation isolated from Sugar Creek waters until excavation and Rip Rap is completed between the above mentioned stations.
3. Area is susceptible to Flooding
4. Over excavate at least 4.0 feet under dike below exist channel banks and bottom. (See Cross sections.) Fill with cohesive material and compact to at least 90%
5. Form a greenbelt on both sides of Relocated Sugar Creek. Areas within Greenbelt which are cleared or disturbed during construction shall be topsoiled & seeded. Plant trees on 25ft. On ground above el. 540.0 10 trees shall be Hard Maple the rest shall be Sycamore. On ground that is below El. 540.0 10 trees shall be Pin Oak the rest shall be Sycamore. Do not plant trees on ash pond dike
6. Clearing Limits as shown outside of Purchasers property lines. Within Purchasers property clear as necessary for const. Keep clearing limits as close to work as possible
7. Waste area is north of Green Belt. Grade waste area to drain and to present a neat appearance. Seed and mulch Waste Area.
8. Borrow material for the Ash Pond Dikes shall come from center of pond and Relocated Sugar Creek. If in the opinion of the engineer material taken from the pond area is too wet to dry in a reasonable length of time the contractor will be permitted to borrow from the area directly north of Relocated Sugar Creek as long as the borrow area is topsoiled, seeded, and mulched, and graded to drain as directed by engineer.

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FORMER SUGAR CREEK CHANNEL

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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FIG. 5

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Tab: 4 Last Saved: September 22, 2025, by Ben Korpus Plotted: Monday, September 22, 2025 3:08:22 PM
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FIGURE 6:
BORING AND MONITORING WELL/PIEZOMETER LOCATIONS

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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- (B) BORING
- (P) PIEZOMETER
- PIEZOMETER IN ASH POND
- (V) VIBRATING WIRE

NOTES

1. FLIGHT DATE APRIL 2023.



FIG. 6

BORING AND MONITORING WELL/PIEZOMETER LOCATIONS

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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FIGURE 7:
BEDROCK SURFACE

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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 10 FEET.



FIG. 7	BEDROCK SURFACE	ANDREWS ENGINEERING 3300 GINGER CREEK DRIVE SPRINGFIELD, ILLINOIS 62711-7233 PH (217) 787-2334 WWW.ANDREWS-ENG.COM PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO	
SHEET NUMBER:	PREPARED FOR CITY WATER, LIGHT, AND POWER SPRINGFIELD, SANGAMON COUNTY, ILLINOIS	APPROVED BY: MTH / DESIGNED BY: MTH / DRAWN BY: BCK	NO. / DATE / REVISION DESCRIPTION / BY
PROJECT ID: 240338/0014			
DATE: SEPTEMBER 2025			

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FIGURE 8:
BASAL SAND SURFACE

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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE
- BASAL SAND ABSENT

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 10 FEET.

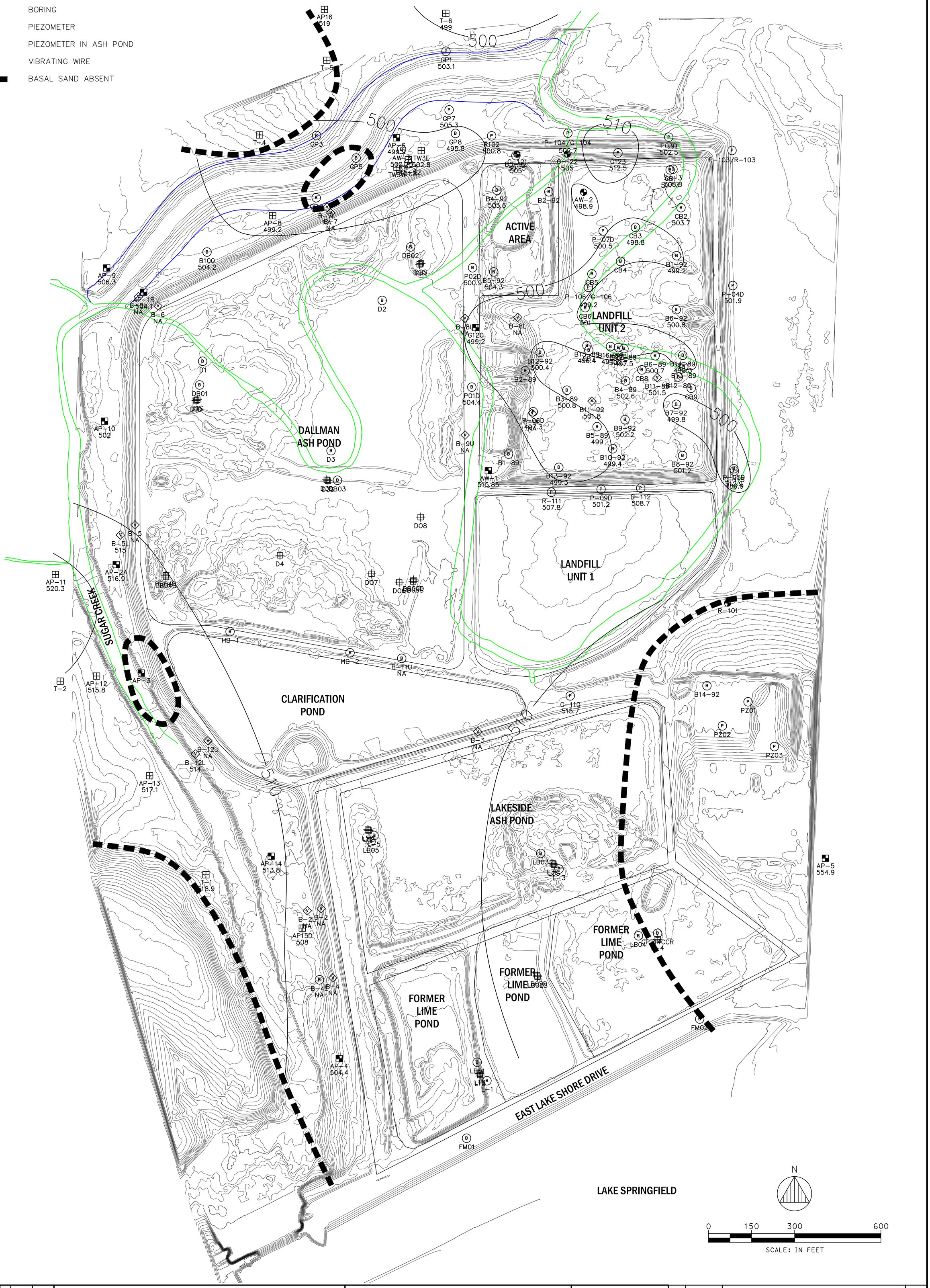

FIG. 8

BASAL SAND SURFACE

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

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FIGURE 9:
BASAL SAND ISOPACH

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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE
- BASAL SAND ABSENT

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.

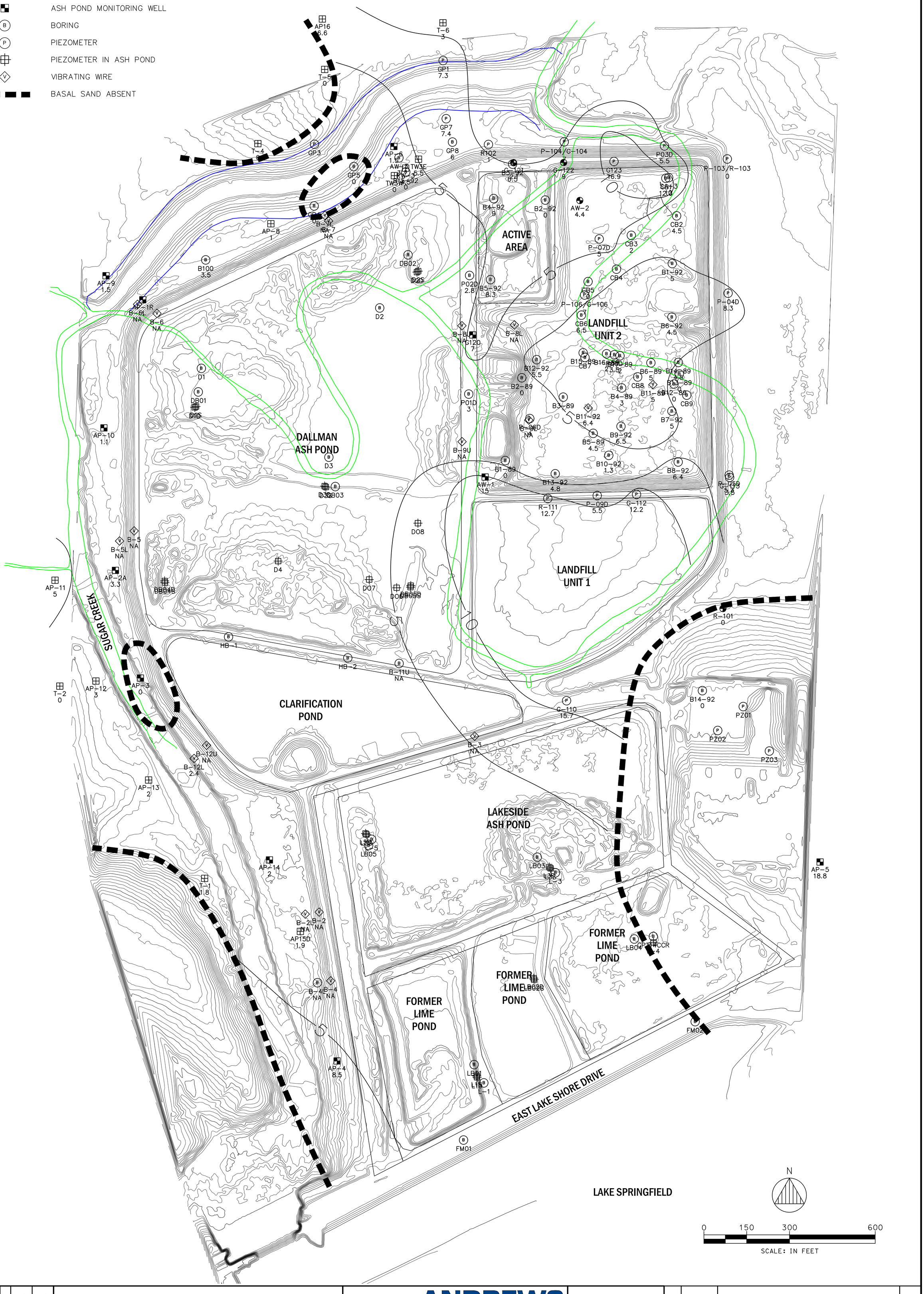

FIG. 9

BASAL SAND ISOPACH

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: SEPTEMBER 2025

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SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

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FIGURE 10:
LOWER COHESIVE DEPOSIT SURFACE

Tab: 10 – LOWER COHESIVE DEPOSIT SURFACE Last Saved: September 22, 2025, by Ben Karpus Plotted: Monday, September 22, 2025 3:15:06 PM
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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE
- LOWER COHESIVE DEPOSIT ABSENT

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.



FIG. 10	SHEET NUMBER:	PROJECT ID: 240338/0014	DATE: SEPTEMBER 2025

LOWER COHESIVE DEPOSIT SURFACE

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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FIGURE 11:
LOWER COHESIVE DEPOSIT ISOPACH

Tab: 11 – LOWER COHESIVE DEPOSIT ISOPACH Last Saved: September 22, 2025, by Ben Karpus Plotted: Monday, September 22, 2025 3:20:02 PM
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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE
- LOWER COHESIVE DEPOSIT ABSENT

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.



FIG. 11

LOWER COHESIVE DEPOSIT ISOPACH

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: SEPTEMBER 2025

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FIGURE 12:
SHALLOW SAND SURFACE

Tab: 12 – SHALLOW SAND SURFACE Last Saved: September 22, 2025, by Ben Karpus Plotted: Monday, September 22, 2025 2:33:32 PM
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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE
- SHALLOW SAND ABSENT

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 10 FEET.



FIG. 12

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: SEPTEMBER 2025

SHALLOW SAND SURFACE

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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FIGURE 13:
SHALLOW SAND ISOPACH

Tab: 13 – SHALLOW SAND ISOPACH Last Saved: September 22, 2025, by Ben Karpus Plotted: Monday, September 22, 2025 2:33:49 PM
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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE
- SHALLOW SAND ABSENT

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.



FIG. 13

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: SEPTEMBER 2025

SHALLOW SAND ISOPACH

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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FIGURE 14:
UPPER COHESIVE DEPOSIT SURFACE

Tab: 14 – UPPER COHESIVE DEPOSIT SURFACE Last Saved: September 22, 2025, by Ben Karpus Plotted: Monday, September 22, 2025 2:34:04 PM
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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE
- UPPER COHESIVE DEPOSIT ABSENT

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 10 FEET.



FIG. 14

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: SEPTEMBER 2025

UPPER COHESIVE DEPOSIT SURFACE

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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FIGURE 15:
UPPER COHESIVE DEPOSIT ISOPACH

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LEGEND

- TEMPORARY ASSESSMENT WELL
- LANDFILL MONITORING WELL
- ASH POND MONITORING WELL
- BORING
- PIEZOMETER
- PIEZOMETER IN ASH POND
- VIBRATING WIRE
- UPPER COHESIVE DEPOSIT ABSENT

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.



FIG. 15

UPPER COHESIVE DEPOSIT ISOPACH

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

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APPENDICES

APPENDIX A:
BORING LOGS

APPENDIX A1:
FGDS LANDFILL UNIT 2 INVESTIGATION

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-1

Project Name: FGD Sludge Facility - South Cell Date of Boring: May 30, 1989

Site: Springfield, Illinois Project No.: 020-95020

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE		1-AU	--	--	--	--	
Silty clay, trace sand, dark grey, stiff		2-SS	5	--	1.3	--	
	5	3-SS	4	--	1.0	--	
		4-SS	6	--	1.5	--	
	10	5-SS	5	--	0.8	--	
Silty clay, trace sand, light grey, firm to stiff		6-SS	4	--	0.8	--	
	15	7-SS	4	--	1.5	--	
		8-SS	4	--	1.0	--	
	20	9-SS	4	--	1.3	--	
End of boring							Dry upon completion

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-2

Project Name: FGD Sludge Facility - South Cell Date of Boring: May 30, 1989

Site: Springfield, Illinois Project No.: 020-95020

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
		1-AU	--	--	--	--	
Silty clay, trace sand, grey, mottled brown, firm		2-SS	8	--	0.8	--	
	5	3-SS	9	--	1.8	--	
Silty clay, trace sand, grey, stiff		4-SS	7	--	1.8	--	
	10	5-SS	2	--	--	--	
		6-SS	4	--	1.5	--	
Clayey silt, trace sand, grey, stiff	15	7-SS	4	--	1.3	--	
		8-SS	6	--	1.3	--	▽ While drilling
	20	9-SS	7	--	1.5	--	
End of boring							

City Water Light and Power
June 12, 1989
Page seven of ten

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-3

Project Name: FGD Sludge Facility - South Cell Date of Boring: May 30, 1989

Site: Springfield, Illinois Project No.: 020-95020

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, trace sand, grey, mottled brown, stiff		1-AU	--	--	--	--	
		2-SS	7	--	1.3	--	
	5	3-SS	4	--	1.5	--	
		4-SS	6	--	1.5	--	
	10	5-SS	4	--	1.3	--	
		6-SS	5	--	0.8	--	
	15	7-SS	4	--	1.5	--	
Clayey silt, trace sand, organics, grey, stiff		8-SS	5	--	1.0	--	While drilling ▽
	20	9-SS	4	--	1.3		
		10-SS	--	--	1.3	--	
	25	11-SS	9	--	--	--	
Sand, fine, some silt, grey, medium dense							*Note 1
Shale, grey, very stiff (weathered)	30	12-SS	50/6"	--	3.0	--	
End of boring							

*Note 1: Blow-in sand @27.5'

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-4

Project Name: FGD Sludge Facility - South Cell Date of Boring: May 30, 1989

Site: Springfield, Illinois Project No.: 020-95020

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
		1-AU	--	--	--	--	
Silty clay, trace sand, organics, mottled brown, stiff		2-SS	4	--	1.7	--	
	5	3-SS	4	--	1.0	--	
		4-SS	7	--	2.0	--	
Silty clay, trace sand, dark grey, stiff	10	5-SS	11	--	2.5	--	
Silty clay, trace sand, mottled brown, very stiff							
		6-SS	7	--	1.0	--	While drilling ▽
Clayey silt, trace sand, grey, firm to stiff	15	7-SS	5	--	0.8	--	
		8-SS	9	--	1.5	--	
*Note 1	20	9-SS	7	--	--	--	
End of boring							

*Note 1: Silty sand, some gravel, slightly compact

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-6

Project Name: FGD Sludge Facility - South Cell Date of Boring: May 30, 1989

Site: Springfield, Illinois Project No.: 020-95020

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
		1-AU	--	--	--	--	
Silty clay, trace sand, brown, stiff		2-SS	5	--	--	--	*Poor recovery on 2-SS
	5	3-SS	7	--	1.3	--	
		4-SS	8	--	1.5	--	
Silty clay, trace sand, mottled grey, stiff	10	5-SS	6	--	1.5	--	
		6-SS	6	--	1.0	--	
Clayey silt, trace sand, grey, stiff	15	7-SS	7	--	1.3	--	
		8-SS	7	--	1.8	--	▽ While drilling
	20	9-SS	9	--	1.8	--	

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-1

Project Name: Subsurface Exploration Date of Boring: September 28, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 525.36

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE						16	▽ 0 HR.
Clayey silt, trace sand, grey, mottled brown						19	
	5	1-SS (50%)				23	
		2-SS (20%)					
	10					16	
Silty clay, trace sand, gravel, some organics, dark brown, black		3-SS (10%)				19	
	15						
		4-SS (50%)				16	
	20						
		5-SS (40%0)				13	
Shale, grey							
End of Boring	25						

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-2

Project Name: Subsurface Exploration Date of Boring: September 28, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 525.28

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
*Note 1						14	
Silty clay, grey, mottled brown							
		1-SS (100%)				21	
Silty sand, fine to medium, brown	5					23	▽ 0 HR.
*Note 2							
		2-SS (50%)				25	
Silty sand, grey, brown	10	3-ST (30%)					
		4-SS (90%)					
Clayey silt, trace sand, grey	15	5-ST (100%)					
						24	
		6-SS (90%)				21	
	20	7-ST (80%)					
Sandy silt, grey							
		8-SS (90%)					
	25					18	
Shale, grey		9-SS (80%)					
	30						
End of Boring							

*Note 1: Silty clay, grey, mottled brown, some organics

*Note 2: 6.5'-6.8': Silt, grey, mottled brown
6.8'-7.0': Silty sand, brown, grey
7.0'-7.5': Clay, trace sand, brown, grey

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-3

Project Name: Subsurface Exploration Date of Boring: September 28, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 523.83

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, trace sand, grey, mottled brown	5	1-SS (95%)				14 23 23	▽ 0 HR.
Silty dand, fine to medium, grey, brown	10	2-SS (90%)				20	
Clayey silt, trace sand, gravel						25	
Sand, trace gravel, fine to coarse, grey	15	3-SS (10%)				18	
Sandy silt, grey	20	4-SS (90%)				19 20	
Sand and gravel, fine to coarse, grey	25	5-SS (95%)				19	
	30	6-SS (10%)					
End of Boring							

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-4

Project Name: Subsurface Exploration Date of Boring: September 29, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 522.61

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE						14	▽ 0 HR.
Silty clay with organics, black, dark brown	5	1-SS (5%)				23	
Silty clay, trace sand, grey, mottled brown		2-SS (90%)				22	
Silty clay to clayey silt, trace sand, grey	10	3-SS (90%)				21	
	15	4-SS (100%)				24	
Sand, fine, some silt, grey	20	5-SS (50%)				19	
Silty clay, some sand, grey	25	6-SS (30%)				12	
*Note 1							
End of Boring							

*Note 1: 27'-27.5' - Sand and gravel, grey
27.5'-28' - Shale, grey

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-5

Project Name: Subsurface Exploration Date of Boring: September 30, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 523.49

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Clayey silt, some organics, sand, brown, mottled grey	5	1-SS (80%)				19	
		2-ST (100%)				24	
	10	3-SS (95%)					
		4-ST (0%)					
Silty clay, trace sand, grey	15	5-SS (100%)				20	
		6-ST (0%)					
	20	7-SS (100%)				20	
		8-ST (0%)					
	25	9-SS (80%)				9	
Silty sand, grey		10-SS	28/52				
Sand with gravel, medium to coarse, grey		11-SS	35/42				
Shale, grey	30	12-SS	100/2"			9	
End of Boring							

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-6 (4' S. of 500+400)

Project Name: Subsurface Exploration Date of Boring: October 3, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 522.71

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, brown, black						17	
Silty clay, grey, mottled brown	5	1-SS (75%)				31	▽ 0 HR.
Silty clay, some organics, trace sand, grey	10	2-SS (50%)				27	
		3-SS (100%)					
	15					20	
		4-SS (75%)					
	20					24	
Sand, fine to medium, grey		5-SS (90%)					
Silty sand, fine to coarse, grey	25					22	
Shale, grey (Hard Drilling)							
End of Boring	30						

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-11

Project Name: Subsurface Exploration Date of Boring: September 29, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 522.49

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Clayey silt, some organics, black, dark brown						18	▽ 0 HR.
		1-SS (5%)					
	5					22	
Silty clay, trace sand, grey		2-SS (90%)					
	10					17	
		3-SS (100%)					
	15					19	
		4-SS (25%)					
	20					18	
Silty sand, grey		5-SS (15%)				22	
	25						
Sand with gravel, grey		6-SS	53/95-3"			21	
Shale, grey		7-SS				12	
End of Boring	30						

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-12 (Offset 36' west)

Project Name: Subsurface Exploration Date of Boring: October 3, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 522.22

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, trace sand, grey, brown							▽ 0 HR
Silty clay, trace sand, grey	5	1-SS (75%)				24	
		2-SS (100%)				26	
Silty clay, some organics, trace sand, gravel, grey	10	3-SS (100%)				25	
						21	
Silty clay to clayey silt, trace sand, grey	15	4-SS (50%)				23	
						21	
	20	5-SS (25%)				22	
						22	
	25	6-SS (50%)				21	
Shale, grey						9	
End of Boring	30						

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-13

Project Name: Subsurface Exploration Date of Boring: October 3, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 522.20

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay with organics, dark grey							▽ 0 HR
		1-SS (50%)				27	
	5	2-ST (50%)				37	
Silty clay, trace sand, grey							
		3-SS (25%)				38	
	10	4-ST (50%)				23	
Clayey silt with sand, fine, grey							
		5-SS (100%)				20	
	15	6-ST (60%)				27	
		7-SS (100%)				21	
	20						
		8-SS (40%)				18	
	25					21	
						17	
Shale, grey? (Hard Drilling)							
End of Boring							

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-14

Project Name: Subsurface Exploration Date of Boring: October 2, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 522.25

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, grey, mottled brown	5	1-SS (50%)				23	▽ 0 HR.
		2-SS (15%)				20	
Silty clay to clayey silt, some sand, fine, grey	10	3-SS (75%)				18	While Drilling ▽
	15	4-SS (75%)				21	
	20	5-SS (75%)				19	
Sand with gravel, fine to coarse, grey *Hard Drilling @28.5' (Shale?)	25	6-SS (80%)				15	
End of Boring	30						

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-15

Project Name: Subsurface Exploration Date of Boring: October 2, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 524.35

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, trace sand, grey, mottled brown	5	1-SS (90%)				18	▽0 HR.
		2-ST (100%)					
		3-SS (90%)				20	
	10					36	
		4-SS (100%)				25	
Silty clay to clayey silt, some sand, fine, grey	15					22	
		5-SS (100%)					
	20					21	
		6-SS (95%)				20	
						20	
	25					26	
		7-SS (50%)					
Sand with gravel, medium to coarse	30					15	
End of Boring							

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-16

Project Name: Subsurface Exploration Date of Boring: October 2, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 523.15

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, mottled brown						16	▽ 0 HR.
Silty clay, trace sand, dark grey, black	5	1-SS (75%)					
		2-ST (30%)					
Silty clay to clayey silt, some sand, fine, grey		3-SS (100%)					
	10	4-ST (100%)					
Sand, fine to coarse, grey		5-SS (50%)					
	15	6-ST (10%)				24	
Silty clay, trace sand, grey		7-SS (75%)				21	
	20	8-SS (50%)				17	
	25						
Sand with gravel, fine to coarse, grey							
Shale, grey (Hard Drilling @27.5')	30					16	
End of Boring							

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring B-17 (Offset 12' south of stake)

Project Name: Subsurface Exploration Date of Boring: October 2, 1989

Site: CWLP Ash Disposal Facility, Springfield, Illinois Project No.: 020-95039

Surface Elevation 522.50

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, brown, mottled black	5	1-SS (25%)				17	▽ 0 HR.
		2-SS (5%)					
	10					19	
Silty clay with organics, trace sand, grey		3-SS (95%)				30	
	15					21	
		4-SS (90%)				20	
Silty clay to clayey silt, sand, grey	20						
		5-SS (80%)				21	
	25						
Sand with gravel, fine to coarse, grey							
Shale, grey						14	
End of Boring							

PSI A-100-9

PROJECT CWLP Flue Gas Desulfurization Sludge Landfill

CLIENT Andrews Environmental Engineers, Inc.

BORING SA-3 DATE STARTED 11-16-93 DATE COMPLETED 11-16-93 JOB L - 30,161

ELEVATIONS

GROUND SURFACE 529.3

END OF BORING 498.6

N 5560 E 2673

WATER TABLE

▼ WHILE DRILLING Drilling Fluid

▽ AT END OF BORING Drilling Fluid

▼ 24 HOURS Grouted

DISTANCE BELOW SURFACE IN FEET

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	C_u	% DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
	1	SS	10	22.1	3.0*				Very stiff dark gray and dark brown silty CLAY, little sand (CL)
	2	SS	9	23.5	2.15 2.0*				
							4.0	525.3	
	3	SS	3	30.1		92.8			Soft to medium stiff gray silty CLAY, little sand, occasional wood fragments (CL)
	4	SS	3	30.5	0.50				
	A			27.9	0.55	95.0			LL = 28 PI = 13
	5	PS	Push				9.0	520.3	
	B			24.7	—		10.0	519.3	Loose gray silty SAND (SM)
	6	SS	2	28.0	0.21				Soft gray silty CLAY, little sand (CL)
	7	SS	2	25.2					
							14.0	515.3	
	8	SS	2	52.7		67.5			Soft gray ORGANIC CLAY, some sand, organic matter, wood fragments (OL) LL = 30 PI = 13
	9	PS	Push	54.8	0.40	71.4			
	A			84.9	–	49.0	16.0	513.3	
	10B	SS	2	–	–				Loose gray fine SAND, peat lens at 16.5' (SP)
	C			46.6	0.75*		17.5	511.8	
	A			31.6	–				Medium stiff ORGANIC CLAY, wood fragments (OL)
	11	SS	2	39.6	0.37		19.0	510.3	
	B			22.8			20.5	508.8	Soft gray silty CLAY, little sand (CL)
	12	SS	3						
	13	SS	3	22.8					Loose gray silty SAND, (clayey at top) (SM)
	14	SS	2						
							27.0	502.3	
	15	SS	17						
	A								Medium dense gray fine SAND (SP)
	16	SS	30/0.2						
	B						30.5	498.8	SHALE

End of Boring at 30.7'. Sampler refusal

Cu Indicates Undrained Shear Strength - ksf
x.xx = 1/2 Unconfined compressive strength;
x.xx = Torvane Value.
x.x* = 1/2 Calibrated Penetrometer Value

DRILL RIG NO. AEX

PATRICK ENGINEERING INC.

BORING NUMBER B-1 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,260.5 E 2,685.6

LOGGED BY KRR
GROUND ELEVATION 523.2

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
523.2	0.0		Brown silty clay, trace coarse to fine sand, stiff to very stiff, medium plasticity, wet CL	AU-1 0.0-2.0		27.3	
				SS-2 2.0-4.0 24"R	2 3 3 3	25.6	
				SS-3 4.0-6.0 24"R	2 3 3 4	28.8	
				3T-4 6.0-8.0 4"R		23.0	Low recovery.
515.2	8.0		Gray silty clay, trace to little fine sand, soft, medium plasticity, wet CL 1" fine sand lense at 9.5'	SS-5 8.0-10.0 24"R	1 1 1 1	26.7	
512.8	10.4		Gray clayey sand and silt, very loose, poorly graded, saturated SC	SS-6 10.0-12.0 24"R	WOH 1 1 1	19.5	Water level at 10.0' during drilling.
				SS-7 12.0-14.0 24"R	WOH WOH WOH WOH	20.0	SS-7: Gravel = 0% Sand = 50% Silt or Clay = 50%
509.2	14.0		Gray silty clay to clayey silt, trace fine sand, very soft to soft, low to medium plasticity, moist to wet CL/CL-ML Lense of fine sand at 15.0'	SS-8 14.0-16.0 24"R	1 1 1 1	24.8	
				SS-9 16.0-18.0 24"R	WOH WOH 1 1	25.4	SS-9: LL = 25 PL = 22 PI = 3
				SS-10A B 18.0-20.0 24"R	WOH WOH 2 2	23.4	
503.7	19.5						
503.2	20.0		Gray clayey fine sand, little silt, loose,			22.8	

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 6-1/4" I.D. HSA.
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 8/1/92 ENDED 8/1/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ 10.0' during drilling
▼
▼

PATRICK ENGINEERING INC.

BORING NUMBER **B-1** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,260.5 E 2,685.6**

LOGGED BY **KRR**
GROUND ELEVATION **523.2**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
503.2	20.0		poorly graded, saturated SC	SS-11AB 20.0-22.0 14"R	WOH WOH WOH WOH	✳ 22.8 24.9 23.7	
501.7	21.5		Gray fine sand, little silt, very loose, poorly graded, saturated SP-SM/SM				
			Gray silty clay, trace to little fine sand, soft, medium plasticity, moist CL	SS-12 22.0-24.0 2"R	WOH WOH WOH WOH		
499.2	24.0						Blow-in at 26.0'.
			Gray coarse to fine sand, trace to little fine gravel, little silt, dense, well graded, saturated SW-SM/SM	SS-13 24.0-26.0 24"R	3 8 11 13	15.5	
				SS-14 26.0-28.0 0"R			SS-14 could not be obtained due to blow-in.
494.2	29.0		Gray fine sand, trace silt from 28.0'-29.0'	SS-15AB 28.0-30.0 20"R	7 24 76 100+/3"	14.4 14.0 ✳	
			Gray silty clay to clay, hard, medium to high plasticity, moist to dry CL/CH				
490.2	33.0		Gray shale, massive, excellent	PQ-16 33.0-38.0 60"R			Hard clay; drilled to 33.0'. Auger refusal at 33.0'; switched to coring. RQD = 100%
485.2	38.0		End of Boring at 38.0'.				Borehole was tremie grouted immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/1/92** ENDED **8/1/92**

REMARKS
WOH = Weight of Hammer

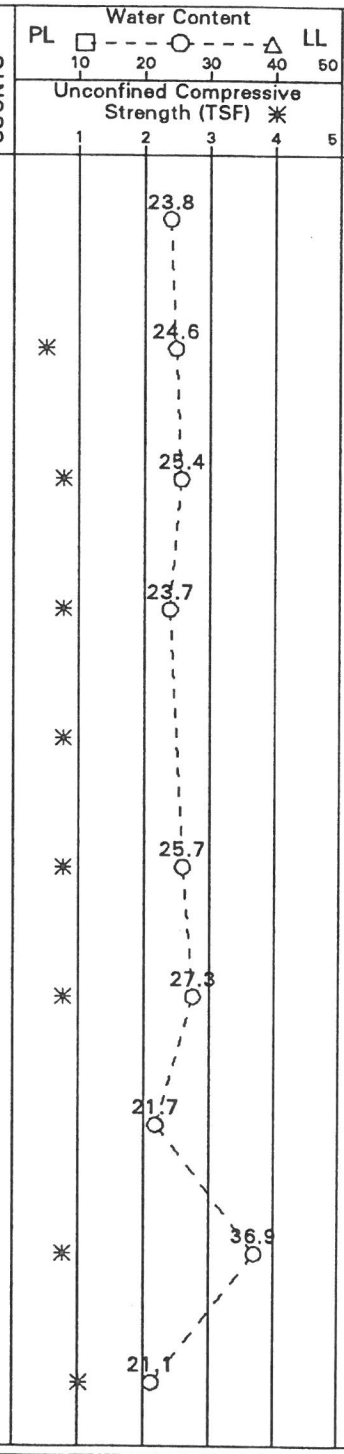
WATER LEVEL (ft.)
▽ **10.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-2** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,482.9 E 2,241.0**

LOGGED BY **KRR**
GROUND ELEVATION **526.7**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
526.7	0.0		Brown mottled silty clay, trace fine sand, soft to medium stiff, medium plasticity, wet CL	AU-1 0.0-2.0	
				SS-2 2.0-4.0 20"R	3 2 2 3
				SS-3 4.0-6.0 24"R	2 2 3 3
				SS-4 6.0-8.0 24"R	3 3 3 3
517.7	9.0		Gray silty clay, trace fine sand, medium stiff, medium plasticity, wet CL	3T-5 8.0-10.0 24"R	
				SS-6 10.0-12.0 24"R	1 1 2 3
			Little fine sand and trace shells in SS-7A 6" long wood in SS-7B	SS-7AB 12.0-14.0 24"R	2 2 2 3
512.7	14.0		Gray fine sand, little to some silt, loose, poorly graded, saturated SM	SS-8 14.0-16.0 24"R	1 1 2 4
510.7	16.0		Dark gray silty clay, trace fine sand, trace organics, medium stiff, medium plasticity, wet CL/OL	SS-9 16.0-18.0 24"R	2 2 2 4
508.7	18.0		Gray silty clay, trace fine sand, stiff, medium plasticity, wet CL	SS-10 18.0-20.0 24"R	3 3 5 5
506.7	20.0				



NOTES & TEST RESULTS

Water level at 14.0' during drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6 1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/29/92** ENDED **7/29/92**

REMARKS

WATER LEVEL (ft.)
▽ **14.0'** during drilling
▽ **14.2'** within augers prior to coring
▽

PATRICK ENGINEERING INC.

BORING NUMBER B-2 SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,482.9 E 2,241.0

LOGGED BY KRR
GROUND ELEVATION 526.7

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL–LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) (1 2 3 4 5)	NOTES & TEST RESULTS
506.7	20.0		Gray silty clay, trace fine sand, medium stiff, low to medium plasticity, moist to wet CL	SS-11 20.0-22.0 18"R	3 4 4 5		
				SS-12 22.0-24.0 24"R	2 2 2 2		
				SS-13 24.0-26.0 24"R	1 2 2 2		
			Clayey silt at 27.0'	3T-14 26.0-28.0 14"R			
498.7	28.0		Gray clayey silt to silt, extremely dense, dry CL-ML/ML	SS-15 28.0-30.0 24"R	2 13 23 72		
496.7	30.0		Gray shale, soft	SS-16 30.0-31.0 9"R	80 120+ /3"		Water level within augers at 14.2' prior to coring. Auger refusal at 31.0'. Switched to PQ rock coring.
				PQ-17 31.0-35.0 48"R			
491.7	35.0		End of Boring at 35.0'.				Borehole was tremie grouted using Volclay grout immediately after completion of drilling.

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 6 1/4" I.D. HSA.
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 7/29/92 ENDED 7/29/92

REMARKS

WATER LEVEL (ft.)
▽ 14.0' during drilling
▽ 14.2' within augers prior to coring
▽

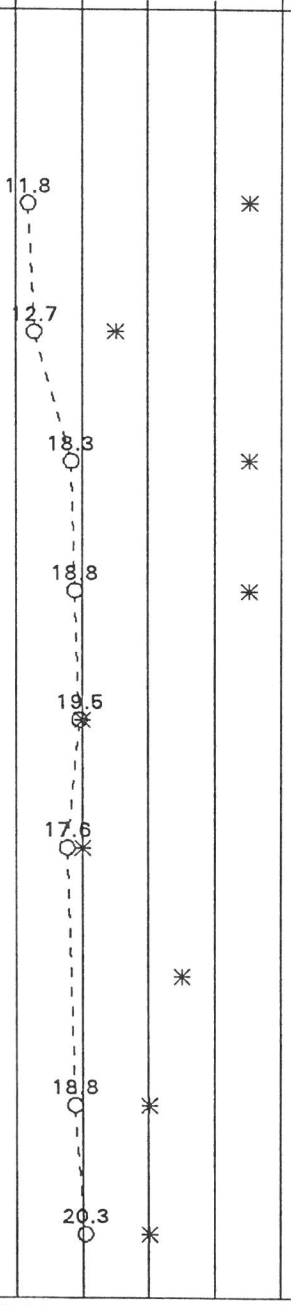
PATRICK ENGINEERING INC.

BORING NUMBER **B-3** SHEET **1** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION

LOGGED BY **SAS**
GROUND ELEVATION **553.0**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
553.0	0.0		Brown silty clay, trace fine sand, very stiff to hard, low plasticity, dry to moist, fill CL	AU-1 0.0-2.0	
				SS-2 2.0-4.0 6"R	3 4 5 8
			Dark gray streaks at 3.0'		
			Brown and dark gray from 4.0'	SS-3 4.0-6.0 12"R	5 8 5 8
				SS-4 6.0-8.0 18"R	- - 5 8
			Dark gray at 8.0', trace fine gravel	SS-5 8.0-10.0 16"R	3 5 6 8
				SS-6 10.0-12.0 14"R	3 7 8 8
			Dark gray, trace organic	SS-7 12.0-14.0 12"R	3 5 6 7
539.0	14.0		Gray silty clay, trace fine sand, very stiff, medium plasticity, moist to wet, fill	3T-8 14.0-16.0 20"R	
				SS-9 16.0-18.0 18"R	- 13 13 15
			Dark gray, trace organics at 18.0'	SS-10 18.0-20.0 18"R	3 5 7 12
533.0	20.0				

Water Content: PL □ - - - ○ - - - △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)



NOTES & TEST RESULTS

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-75/ATV**
DRILLING STARTED **7/24/92** ENDED **7/24/92**

REMARKS
WOH = Weight of Hammer.

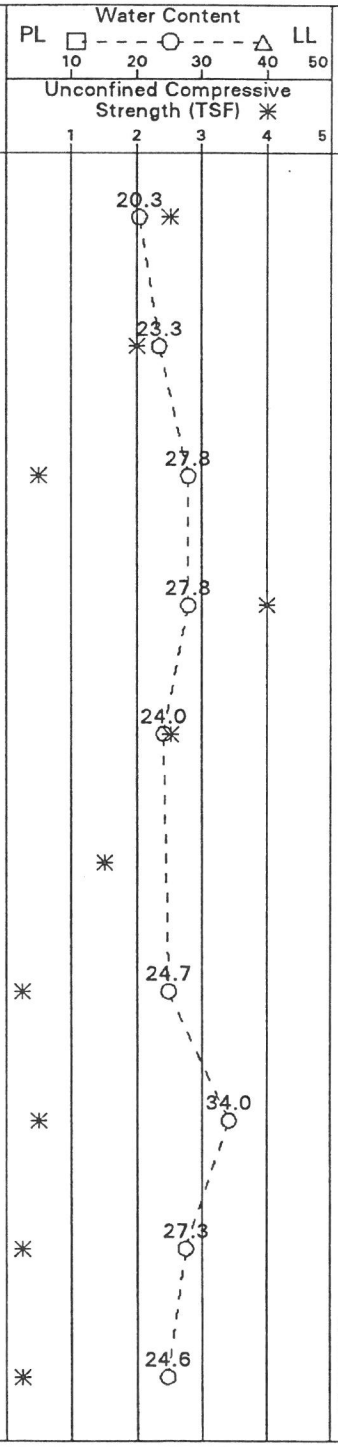
WATER LEVEL (ft.)
▽ **48'** during drilling
▽ **33.1'** end of drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-3** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION

LOGGED BY **SAS**
GROUND ELEVATION **553.0**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
533.0	20.0		Light gray, mottled silty clay, trace fine sand, very stiff, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	- 3 6 7
531.0	22.0		Brown mottled silty clay, trace fine sand, stiff, medium plasticity, wet CL	SS-12 22.0-24.0 24"R	- 3 5 7
528.3	24.7		Light brown silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-13 24.0-26.0 24"R	1 2 3 5
526.5	26.5		Gray silty clay, trace fine sand, stiff to hard, medium plasticity, wet CL	SS-14 26.0-28.0 24"R	- 3 5 9
			Sand Lenses	SS-15 28.0-30.0 24"R	3 4 5 5
				3T-16 30.0-32.0 24"R	
519.9	33.1			SS-17 32.0-34.0 24"R	1 1 2 2
519.0	34.0		Gray sandy clay, soft, medium plasticity, moist SC		
			Dark gray to brown silty clay, trace fine sand, very soft to soft, medium plasticity, wet CL	SS-18 34.0-36.0 24"R	3 2 2 3
				SS-19 36.0-38.0 24"R	- 1 1 2
				3T-20 38.0-40.0 24"R	
513.0	40.0				



NOTES & TEST RESULTS

3T-20:
Dry
Dens. = 104.2pcf
k = 8.2E-08 cm/s

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-75/ATV**
DRILLING STARTED **7/24/92** ENDED **7/24/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ **48'** during drilling
▽ **33.1'** end of drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER B-3 SHEET 3 OF 3
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION

LOGGED BY SAS
GROUND ELEVATION 553.0

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	NOTES & TEST RESULTS
513.0	40.0		Dark gray to brown silty clay, trace fine sand, very soft to soft, medium plasticity, wet	SS-21 40.0-42.0 16"R	WOH WOH WOH WOH	
			CL			
			Sand Lense at 40.8', very soft			
510.7	42.3		Gray silty clay to clayey silt, little to some sand, soft to stiff, medium plasticity, moist to wet	SS-22 42.0-44.0 24"R	1 1 2 2	
			CL			
			Sand Lense at 43.3' and 43.6'	SS-23 44.0-46.0 24"R	2 4 4 3	
				3T-24 46.0-48.0 24"R		
505.0	48.0		Gray clayey fine sand, some silt, very loose, saturated	SS-25 48.0-50.0 12"R	WOH WOH WOH WOH	Rod weight pushed sample.
			SC			
				SS-26 50.0-52.0 24"R	WOH WOH WOH WOH	
501.0	52.0		Gray fine sand, trace coarse to medium sand, trace silt, very loose, poorly graded, saturated	SS-27 52.0-54.0 3"R	WOH WOH WOH WOH	
			SP/SP-SM			
499.0	54.0					
498.5	54.5		Gray coarse to fine sand, little silt, trace fine gravel, loose, poorly graded, saturated	SS-26AB 54.0-56.0 9"R	2 80+/ 5"	Borehole was tremie grouted using Volclay grout immediately after drilling.
498.2	54.8		SM			
			Gray shale			
			End of Boring at 54.8'			

Water Content: PL □ - - - ○ - - - △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)
Test values: 20.8, 18.2, 16.9, 25.7, 20.4, 9.5

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME-75/ATV
DRILLING STARTED 7/24/92 ENDED 7/24/92

REMARKS
WOH = Weight of Hammer.

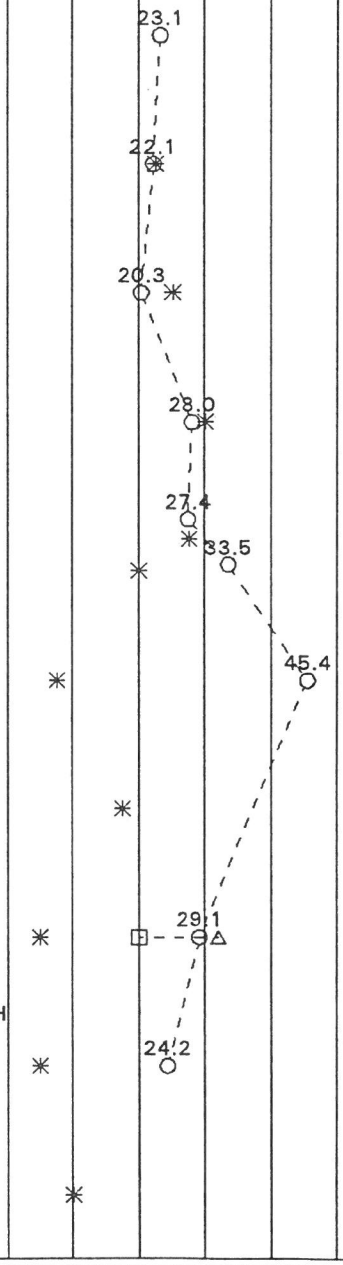
WATER LEVEL (ft.)
▽ 48' during drilling
▽ 33.1' end of drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER B-4 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 5,488.2 E 2,060.4

LOGGED BY KRR
GROUND ELEVATION 530.1

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
530.1	0.0		Brown mottled silty clay, trace fine sand, very stiff, medium plasticity, wet CL	AU-1 0.0-2.0		23.1	
				SS-2 2.0-4.0 24"R	5 5 5 4	22.1	
				SS-3 4.0-6.0 24"R	3 4 5 7	20.3	
				3T-4 6.0-8.0 24"R		28.0	3T-4: Dry Dens.=99pcf K=4.7 E--8cm/s
			Brown at 8.0'	SS-5AB 8.0-10.0 24"R	2 4 5 6	27.4 33.5	
520.6	9.5		Gray silty clay, trace fine sand, medium stiff to stiff, medium to high plasticity, wet CL/CH	SS-6 10.0-12.0 24"R	1 2 1 1	45.4	Soft clay from 10.5' to 11.0'.
				3T-7 12.0-14.0 24"R			
516.1	14.0		Dark gray silty clay, trace fine sand, soft to medium stiff, medium plasticity, wet CL	SS-8 14.0-16.0 24"R	1 1 1 1	29.1	SS-8: LL = 32 PL = 20 PI = 12 Gravel = 0% Sand = 8% Silt or Clay = 92%
				SS-9 16.0-18.0 24"R	WOH 1 1 2	24.2	
				3T-10 18.0-20.0 24"R			
510.1	20.0						



DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 7/23/92 ENDED 7/23/92

REMARKS
WOH = Weight of Hammer.

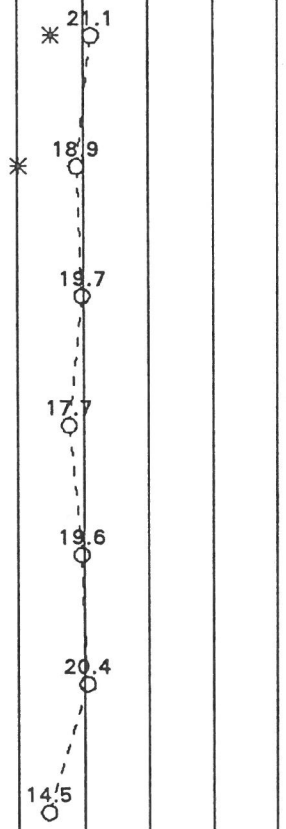
WATER LEVEL (ft.)
▽ 31.0' during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER B-4 SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,488.2 E 2,060.4

LOGGED BY KRR
GROUND ELEVATION 530.1

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
510.1	20.0		Dark gray silty clay, trace fine sand, stiff, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	1 2 1 1	21.1	
				SS-12 22.0-24.0 24"R	2 2 3 4	18.9	
505.6	24.5		Gray clayey fine sand, some silt, very loose to loose, poorly graded, moist to saturated SC	SS-13 24.0-26.0 24"R	1 2 1 1	19.7	
				SS-14 26.0-28.0 24"R	1 3 2 2	17.7	SS-14: Gravel = 0% Sand = 56% Silt or Clay = 44%
				SS-15 28.0-30.0 24"R	1 1 2 2	19.6	
				SS-16 30.0-32.0 24"R	1 1 1 1	20.4	Water level at 31.0' during drilling.
498.1	32.0		Gray coarse to fine sand, trace silt, trace fine gravel, medium dense, poorly graded, saturated SP	SS-17AB 32.0-34.0 24"R	8 10 13 126	14.5	Water level was observed to rise rapidly after retrieving SS-17.
496.6	33.5		Gray siltstone/shale				
495.6	34.5		End or Boring at 34.5'.	SS-18 34.0-34.5 0"R	82 100+/- 1"		Blow-in at 34.0' Water level within augers at 6.0' one hour after completion of drilling. Borehole was termie grouted using Volclay grout.



DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 7/23/92 ENDED 7/23/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ 31.0' during drilling
▼
▼

PATRICK ENGINEERING INC.

BORING NUMBER B-5 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,204.3 E 2,049.3

LOGGED BY KRR
GROUND ELEVATION 529.5

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50); Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
529.5	0.0		Brown silty clay, trace coarse to fine sand, soft to very stiff, low to medium plasticity, moist to wet CL	AU-1 0.0-2.0		13.4	
				SS-2 2.0-4.0 12"R	4 3 4 4	13.5 ✳	
			Mottled brown from 4.0'	SS-3 4.0-6.0 18"R	3 2 4 3	✳ 25.3	
				SS-4 6.0-8.0 20"R	3 4 4 4	✳ 22.9	
				SS-5 8.0-10.0 24"R	2 1 2 2	✳ 24.9	
			Little fine sand at 9.5'	SS-6 10.0-12.0 20"R	2 2 2 2	✳ 23.1	
517.2	12.3		Gray silty clay, trace fine sand, medium stiff, medium plasticity, wet CL	SS-7 12.0-14.0 22"R	2 1 1 2	✳ 28.3	
514.5	15.0		Gray fine sand, trace coarse to medium sand, trace silt, very loose, poorly graded, saturated SP	3T-8 14.0-16.0 24"R			Water level at 14.0' during drilling.
512.5	17.0		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-9AB 16.0-18.0 24"R	1 2 1 2	✳ 30.3	
509.5	20.0			SS-10 18.0-20.0 24"R	1 1 1 1	✳ 25.8	

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/24/92** ENDED **7/24/92**

REMARKS

WATER LEVEL (ft.)
▽ **14.0'** during drilling
▽ **6.8'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER B-5 SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,204.3 E 2,049.3

LOGGED BY KRR
GROUND ELEVATION 529.5

ELEVATION	DEPTH (FT)	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content (PL □ - - - ○ - - - △ LL; 10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
509.5	20.0	Gray silty clay, trace fine sand, stiff, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	3 2 2 2	26.4	
507.5	22.0	Gray clayey silt to silty clay, little fine sand, stiff, low plasticity, moist to wet CL-ML/CL	SS-12 22.0-24.0 24"R	1 2 3 2	17.4	
			SS-13AB 24.0-26.0 24"R	2 2 3 2	19.9	
504.3	25.2	Gray clayey sand, some silt, loose, poorly graded, saturated SC			20.6	
		Trace coarse to medium sand at 27.0'	SS-14 26.0-28.0 24"R	2 2 3 4		
501.0	28.5	Gray coarse to fine sand, little to some silt, trace fine gravel, loose to medium dense, poorly graded, saturated SP	SS-15 28.0-30.0 24"R	3 4 4 6		
			SS-16 30.0-32.0 24"R	3 3 4 4		
497.5	32.0	Gray fine sand, trace silt, loose to dense, poorly graded, saturated SP	SS-17 32.0-34.0 24"R	4 14 45 120/4"	10.2	Water level at 6.8' immediately after drilling prior to coring.
496.0	33.5	Gray shale, massive, good				Auger refusal at 34.0'. Changed to rock coring. Could not core from 34.0' to 37.0' due to problems with core barrel. RQD = 80%
			PQ-18 37.0-39.0 24"R			Borehole was tremie grouted using Volclay immediately after drilling.
490.5	39.0	End of Boring at 39.0'.				

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 6-1/4" I.D. HSA
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 7/24/92 ENDED 7/24/92

REMARKS

WATER LEVEL (ft.)
▽ 14.0' during drilling
▼ 6.8' after drilling
▼

PATRICK ENGINEERING INC.

BORING NUMBER B-6 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,072.9 E 2,588.6

LOGGED BY KRR
GROUND ELEVATION 530.8

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL–LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) (1 2 3 4 5)	NOTES & TEST RESULTS
530.8	0.0		Brown silty clay, trace coarse to fine sand, stiff, low plasticity, moist CL	AU-1 0.0-2.0		18.1	
				SS-2 2.0-4.0 10"R	3 4 4 4	14.8	
526.8	4.0		Dark gray silty clay, trace coarse to fine sand, stiff, medium plasticity, wet CL	SS-3 4.0-6.0 10"R	1 3 4 5	23.8	
				SS-4 6.0-8.0 24"R	2 2 2 3	23.6	
521.8	9.0		Brown silty clay, trace to little fine sand, soft to medium stiff, medium plasticity, wet CL	3T-5 8.0-10.0 20"R			
				SS-6 10.0-12.0 24"R		20.8	
			Lenses of fine sand in SS-6				
				SS-7 12.0-14.0 24"R	1 2 1 1	26.4	
			Lenses of fine sand in SS-7				
				SS-8 14.0-16.0 24"R	WOH 1 1 2	25.0	
514.8	16.0		Gray silty clay, trace coarse to fine sand, soft, low to medium plasticity, wet CL	SS-9 16.0-18.0 24"R	WOH 1 1 1	29.3	
				SS-10 18.0-20.0 24"R	WOH 1 1 2	23.5	SS-10: LL = 25 PL = 20 PI = 5
510.8	20.0						

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA.
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 8/3/92 ENDED 8/3/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ 22.0' during drilling.
▼ 9.0' after drilling.

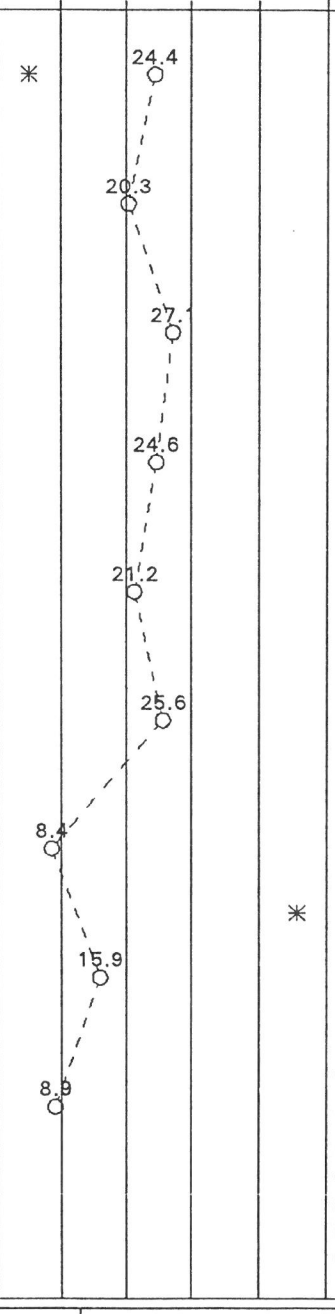
PATRICK ENGINEERING INC.

BORING NUMBER **B-6** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,072.9 E 2,588.6**

LOGGED BY **KRR**
GROUND ELEVATION **530.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	NOTES & TEST RESULTS
510.8	20.0		Gray silty clay, trace coarse to fine sand, soft, low to medium plasticity, wet, fill CL	SS-11 20.0-22.0 24"R	WOH 1 1 1	PI = 5
508.3	22.5		Gray clayey silt to clayey sand, very loose, poorly graded, saturated CL-ML/SC	SS-12 22.0-24.0 24"R	WOH WOH 1 2	Water level at 22.0' during drilling.
				SS-13 24.0-26.0 24"R	1 1 1 1	
				SS-14 26.0-28.0 24"R	1 1 1 1	SS-14 Gravel = 0% Sand = 44% Silt or clay = 56%
				SS-15 28.0-30.0 24"R	WOH 1 1 1	
500.8	30.0		Gray fine sand, trace coarse to medium sand, trace fine gravel, very loose, poorly graded, saturated SP	SS-16 30.0-32.0 24"R	1 1 1 1	
498.8	32.0		Gray coarse to fine sand, trace to little coarse to fine gravel, trace silt, medium dense to dense, well graded, saturated SW/SW-SM	SS-17 32.0-34.0 24"R	10 16 15 15	Blow-in at 32.0'.
496.3	34.5		Gray silty clay to clay, hard, medium to high plasticity, moist to dry CL/CH	SS-18 34.0-36.0 24"R	6 8 20 41	
				SS-19 36.0-38.0 14"R	40 62 100+ /2"	Hard drilling. Water level at 9.0' after drilling.
493.3	37.5					
492.8	38.0		Gray shale			Borehole was tremie grouted using Volclay grout immediately after drilling.
			End of Boring at 38.0'.			

Water Content: PL 10 20 30 40 LL 50
Unconfined Compressive Strength (TSF): 1 2 3 4 5



DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/3/92** ENDED **8/3/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ **22.0'** during drilling.
▼ **9.0'** after drilling.
▼

PATRICK ENGINEERING INC.

BORING NUMBER B-7 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 4,743.9 E 2,684.2

LOGGED BY KRR
GROUND ELEVATION 523.3

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
523.3	0.0		Brownish-gray to brown silty clay, trace coarse to fine sand, trace roots, very soft, medium plasticity, wet, fill CL	AU-1 0.0-2.0		25.9	
522.1	1.2		Gray silty clay, trace to little fine sand, very soft, medium plasticity, wet, fill CL	SS-2AB 2.0-4.0 24"R	WOH	27.3	
519.8	3.5		Gray clayey fine sand, little silt, very loose, poorly graded, saturated, fill SC	SS-3 4.0-6.0 4"R	WOH	22.8	
518.3	5.0		Gray silty clay, trace to little fine sand, very soft, mucky, medium plasticity, wet, fill. CL	SS-4 6.0-8.0 24"R	WOH	36.7	SS-4 Gravel = 0% Sand = 33% Silt or clay = 67%
				SS-5 8.0-10.0 18"R	WOH	24.4	
			Lenses of fine sand and wood fragments in SS-6.	SS-6 10.0-12.0 18"R	WOH WOH WOH 6	28.1	
510.8	12.5		Gray silty clay, trace to little fine sand, stiff, medium plasticity, wet CL	SS-7 12.0-14.0 20"R	WOH WOH 2 2	29.9	Water level at 12.0' during drilling.
508.3	15.0		Gray clayey silt and fine sand, loose, nonplastic, saturated CL-ML	SS-8 14.0-16.0 24"R	WOH WOH 2 3	24.1	
				SS-9 16.0-18.0 24"R	2 2 2 2	21.0	SS-9 Gravel = 0% Sand = 38% Silt or clay = 62%
				SS-10 18.0-20.0 24"R	1 2 1 2	18.2	
503.3	20.0					20.2	

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 6-1/4" I.D. HSA.
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 8/5/92 ENDED 8/5/92

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ 12.0' during drilling.
▼
▼

PATRICK ENGINEERING INC.

BORING NUMBER **B-7** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,743.9 E 2,684.2**

LOGGED BY **KRR**
GROUND ELEVATION **523.3**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
503.3	20.0		Gray clayey silt and fine sand, loose, nonplastic, saturated CL-ML/SC	SS-11 20.0-22.0 24"R	1 1 1 1	21.7 ○	
				3T-12 22.0-24.0 20"R			Gray fine sand at bottom of Shelby tube.
499.8	23.5		Gray fine sand, trace silt, medium dense to dense, poorly graded, saturated SP	SS-13 24.0-26.0 24"R	10 14 14 22		Artesian conditions.
496.8	26.5		Gray coarse to fine sand, trace coarse to fine gravel, trace silt, loose, well graded, saturated SW	SS-14 26.0-28.0 24"R	WOH		
494.8	28.5		Gray shale, massive, good	SS-15AB 28.0-30.0 16"R	10 52 100+ /"4	12.3 ○	Drilled to 30.0' then, switched to PQ coring.
				PQ-16 30.0-35.0 60"R			RQD = 80%
488.3	35.0		End of Boring at 35.0'.				Borehole was grouted using Volclay grout after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/5/92** ENDED **8/5/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **12.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-8** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,565.9 E 2,706.2**

LOGGED BY **KRR**
GROUND ELEVATION **523.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL–LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) (1 2 3 4 5)	NOTES & TEST RESULTS
523.8	0.0		Brown silty clay, trace fine sand, soft, medium plasticity, wet CL	AU-1 0.0-2.0		21.0	
				SS-2 2.0-4.0 24"R	1 1 2 2	✳ 30.7	
				3T-3 4.0-6.0 24"R		✳	
				SS-4 6.0-8.0 24"R	1 2 2 3	✳ 25.6	Water Level at 6.0' during drilling.
			Fine sand lenses in SS-4				
				SS-5 8.0-10.0 24"R	1 2 2 3	✳ 10.7	
			Trace coarse to fine sand and trace coal in SS-5				
513.3	10.5			SS-6 10.0-12.0 24"R	2 3 3 4	✳ 34.2	
			Gray and olive silty clay to clay, trace fine sand very soft to medium stiff, medium to high plasticity, wet CL/CH				
				3T-7 12.0-14.0 24"R		✳	
				SS-8 14.0-16.0 24"R	1 1 1 3	✳ 44.5	
			Mucky at 16.0'				
				SS-9 16.0-18.0 24"R	2 1 1 1	✳ 50.2	
			Mucky at 18.0'				
				SS-10 18.0-20.0 24"R	WOH WOH WOH WOH	✳ 46.8	
503.8	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/15/92** ENDED **8/15/92**

REMARKS
WOH = Weight of Hammer

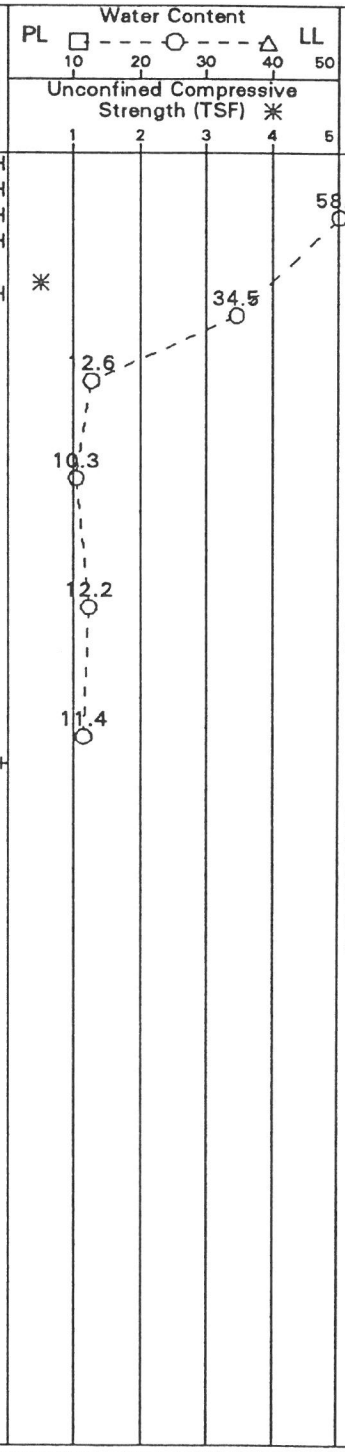
WATER LEVEL (ft.)
▽ **6.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-8** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,565.9 E 2,706.2**

LOGGED BY **KRR**
GROUND ELEVATION **523.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
503.8	20.0		Gray clay, trace silt, very soft, medium to high plasticity, wet CL/CH	SS-11 20.0-22.0 24"R	WOH WOH WOH WOH
501.8	22.0				
501.2	22.6		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-12ABC 22.0-24.0 24"R	WOH 5 6 15
500.6	23.2		Gray fine sand, little silt, medium to dense, poorly graded, saturated SM	SS-13 24.0-26.0 24"R	3 11 18 22
			Gray coarse to fine sand, trace coarse to fine gravel, trace to little silt, medium dense to dense, well graded, saturated SW-SM/SM	SS-14 26.0-28.0 24"R	6 9 19 17
				SS-15AB 28.0-30.0 24"R	5 12 23 100+
494.8	29.0		Gray shale, soft		
493.8	30.0		End of Boring at 30.0'		



NOTES & TEST RESULTS

Artesian conditions.

Borehole was tremie grouted using Volclay grout immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/15/92** ENDED **8/15/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **6.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER B-9 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 4,690.7 E 2,506.0

LOGGED BY KRR
GROUND ELEVATION 522.7

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL–LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) (1 2 3 4 5)	NOTES & TEST RESULTS
522.7	0.0		Brown silty clay, trace fine sand, soft, medium plasticity, wet CL	AU-1 0.0-2.0		19.8	
				SS-2 2.0-4.0 24"R	1 1 1 2	25.6	
				SS-3AB 4.0-6.0 24"R	WOH 1 2 1	26.4 24.6	
517.7	5.0		Brown silty clay to clayey fine sand, soft, low plasticity, wet CL/SC			26.1	
516.7	6.0		Brown and tan silty clay trace coarse to fine sand, soft, medium plasticity, wet CL	SS-4 6.0-8.0 24"R	2 3 2 4	27.7	
515.7	7.0		Gray silty clay to clayey silt, trace fine sand, medium soft, medium plasticity, wet CL	SS-5 8.0-10.0 24"R	WOH 1 1 2	45.9	
513.9	8.8		Gray fine sand, some silt, wood fragments present, very loose, poorly graded, saturated SM	SS-6 10.0-12.0 24"R	WOH 1 1 2	22.4	
512.7	10.0		Gray clayey sand, little silt, very loose, poorly graded, saturated SC				
510.3	12.4		Trace shells and fine gravel at 12.0' Gray silty clay, trace to little fine sand, soft, medium plasticity, wet CL	SS-7 12.0-14.0 24"R	WOH 1 1 1	26.2	
				SS-8 14.0-16.0 24"R	WOH WOH WOH WOH	24.6	SS-8: CEC = 10.7 meq/100gm
				3T-9 16.0-18.0 24"R			
			Fine sand lenses	SS-10 18.0-20.0 24"R	WOH WOH WOH WOH	22.9	

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME 55/ATV
DRILLING STARTED 8/14/92 ENDED 8/14/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ 9.0' after drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-9** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,690.7 E 2,506.0**

LOGGED BY **KRR**
GROUND ELEVATION **522.7**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
502.7 502.2	20.0 20.5		Gray silty clay, some fine sand, soft, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	WOH 1 1 2	19.8	
			Gray clayey fine sand and silt, very loose, poorly graded, saturated SC	SS-12 22.0-24.0 24"R	WOH WOH 1 2	22.2	
			Wood fragments and trace organics present in SS-12				
498.2	24.5		Gray coarse to fine sand, trace coarse to fine gravel, trace silt, medium dense, well graded, saturated SW-SM	SS-13 24.0-26.0 24"R	WOH WOH 13 5	12.2	
				SS-14 26.0-28.0 24"R	3 4 40 73	11.8	
495.7	27.0		Gray shale				
494.7	28.0		End of Boring at 28.0'				Water level at 9.0' immediately after drilling. Borehole was tremie grouted immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/14/92** ENDED **8/14/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **9.0'** after drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-10** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,589.2 E 2,463.3**

LOGGED BY **KRR**
GROUND ELEVATION **523.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
523.6	0.0		Brown silty clay, trace fine sand, soft to medium stiff, medium plasticity, wet CL	AU-1 0.0-2.0		24.3	
				SS-2 2.0-4.0 24"R	2 2 2 2	✳ 24.7	
				SS-3 4.0-6.0 24"R	1 2 3 3	✳ 25.7	
				3T-4 6.0-8.0 24"R		✳	
516.1	7.5		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-5 8.0-10.0 24"R	WOH 1 2 2	✳ 27.2	
			1" lense of fine sand at 9.0'	SS-6 10.0-12.0 24"R	WOH 1 2 1	✳ 25.1	
				SS-7 12.0-14.0 24"R	1 1 1 1	✳ 27.2	Water level at 12.0' during drilling.
			Mucky at 14.0'	SS-8 14.0-16.0 24"R	WOH 1 1 1	✳ 24.1	
				SS-9 16.0-18.0 24"R	WOH WOH WOH 1	✳ 25.5	
				SS-10 18.0-20.0 24"R	WOH 1 1 2	23.8	
503.6	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/15/92** ENDED **8/15/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **12.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-10** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,589.2 E 2,463.3**

LOGGED BY **KRR**
GROUND ELEVATION **523.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
503.6	20.0		Gray silty clay, trace to little fine sand, soft, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	WOH 1 1 2
				SS-12 22.0-24.0 24"R	WOH 1 1 3
499.4	24.2		Gray coarse to fine sand, trace coarse to fine gravel, trace silt, loose to medium dense, well graded, saturated SW-SM/SM	SS-13AB 24.0-26.0 24"R	6 7 4 4
498.1	25.5		Gray shale, soft Hard at 26.5'	SS-14 26.0-27.0 13"R	11 43 100+ /1"
496.6	27.0		End of Boring 27.0'		

Water Content: PL □ - - - ○ - - - △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)

Plotted values: 23.4, 20.8, 20.0, 10.5

NOTES & TEST RESULTS

Artesian conditions immediately after drilling.

Borehole was tremie grouted using Volclay grout immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/15/92** ENDED **8/15/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **12.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-11** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,775.2 E 2,391.2**

LOGGED BY **KRR**
GROUND ELEVATION **523.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
523.6	0.0		Brown silty clay, trace fine sand, soft to stiff, medium plasticity, wet CL	AU-1 0.0-2.0		21.4	
			Mottled at 2.0'	SS-2 2.0-4.0 24"R	2 1 2 3	✳ 21.9	
			Tan at 4.0'	SS-3 4.0-6.0 24"R	2 2 2 3	✳ 24.0	
				3T-4 6.0-8.0 22"R		✳	
515.2	8.4		Gray silty clay, trace fine sand, soft, medium plasticity, moist CL	SS-5 8.0-10.0 24"R	1 1 1 2	✳ 29.3	
				SS-6 10.0-12.0 24"R	1 2 2 2	✳ 26.8	
				3T-7 12.0-14.0 22"R		✳	
				SS-8 14.0-16.0 24"R	WOH 1 1 1	✳ 24.7	
				SS-9 16.0-18.0 24"R	WOH 1 2 2	✳ 23.7	Water level at 16.0' during drilling.
			Fine sand pockets in SS-10	SS-10 18.0-20.0 24"R	WOH 1 1 2	✳ 21.7	

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/14/92** ENDED **8/14/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **16.0' during drilling.**
▼
▼

PATRICK ENGINEERING INC.

BORING NUMBER **B-11** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,775.2 E 2,391.2**

LOGGED BY **KRR**
GROUND ELEVATION **523.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
503.6	20.0		Gray silty clay, trace to little fine sand, soft, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	1 2 2 3	✳ 18.7	
501.8	21.8		Gray fine sand and silty, loose to medium dense, poorly graded, saturated SM	SS-12AB 22.0-24.0 24"R	1 3 8 11	20.1	
500.4	23.2		Gray coarse to fine sand, little coarse to fine gravel, trace silt, medium dense, well graded, saturated SW-SM/SM	SS-13 24.0-26.0 24"R	14 13 15 15	11.2 12.7	
			Clayey at 26.0'	SS-14 26.0-28.0 24"R	5 6 16 12	9.9	
495.4	28.2		Gray shale, soft	SS-15 28.0-29.2 14"R	8 18 100+ /2"	14.0	Water level at ground surface immediately after drilling. Borehole was tremie grouted using Volclay grout immediately after completion of drilling.
494.4	29.2		End of Boring at 29.2'				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/14/92** ENDED **8/14/92**

REMARKS
WOH = Weight of Hammer

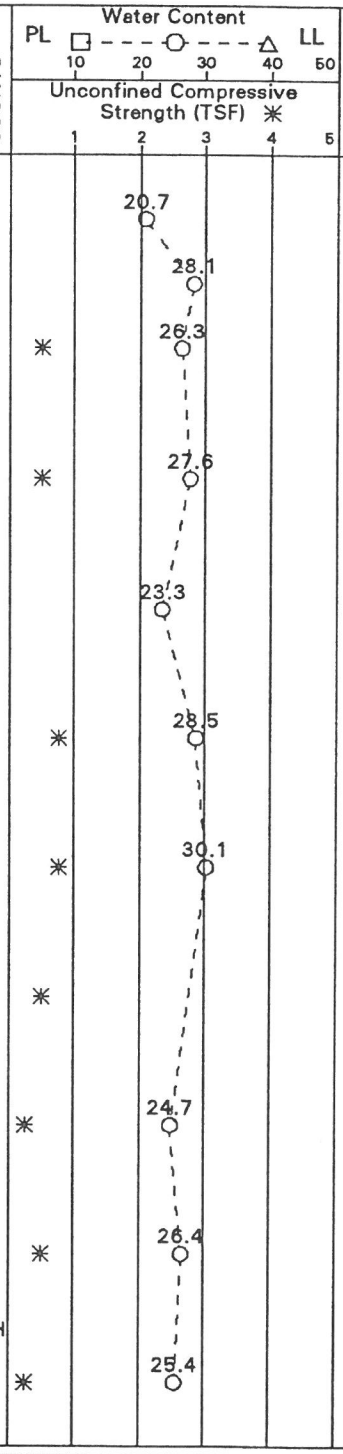
WATER LEVEL (ft.)
▽ **16.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-12** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,924.2 E 2,210.8**

LOGGED BY **KRR**
GROUND ELEVATION **524.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
524.9	0.0		Brown silty clay, trace fine sand, soft, medium plasticity, wet CL	AU-1 0.0-2.0	
522.6	2.3			SS-2AB 2.0-4.0 24"R	1 2 1 2
521.9	3.0		Brown clayey silt to silty sand, loose, poorly graded, saturated CL-ML/SM		
			Brown and tan silty clay, trace to little fine sand, soft, medium plasticity, wet CL	SS-3 4.0-6.0 22"R	1 2 2 2
518.9	6.0		Brown and tan clayey fine sand, little silt, very loose, poorly graded, saturated SC	SS-4 6.0-8.0 12"R	1 1 2 3
517.4	7.5		Gray silty clay, trace fine sand, soft to medium stiff, medium plasticity, wet CL	SS-5 8.0-10.0 22"R	1 1 1 2
			Lenses of fine sand in SS-5	SS-6 10.0-12.0 24"R	1 2 2 2
			Trace wood fragments in SS-6	3T-7 12.0-14.0 24"R	
				SS-8 14.0-16.0 24"R	1 1 1 1
				SS-9 16.0-18.0 24"R	1 1 2 3
				SS-10 18.0-20.0 24"R	WOH 1 1 1



NOTES & TEST RESULTS

Water level at 3.0' during drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D.**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/14/92** ENDED **8/14/92**

REMARKS
WOH = Weight of Hammer

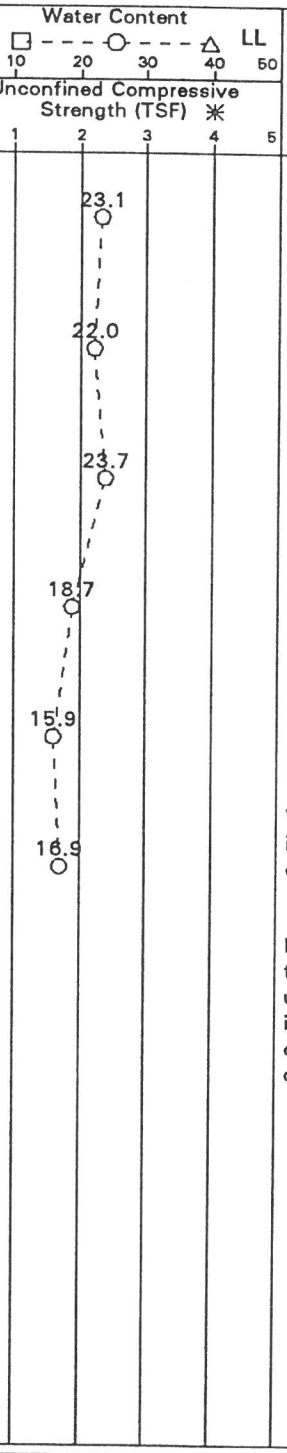
WATER LEVEL (ft.)
3.0' during drilling
4.3' immediately after drilling

PATRICK ENGINEERING INC.

BORING NUMBER **B-12** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,924.2 E 2,210.8**

LOGGED BY **KRR**
GROUND ELEVATION **524.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
504.9	20.0		Gray, silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	WOH 1 1 2
			Little to some fine sand from 23.0'	SS-12 22.0-24.0 24"R	WOH 1 1 2
500.4	24.5		Gray fine sand, some silt, very loose, poorly graded, saturated SM	SS-13 24.0-26.0 24"R	WOH WOH 1 2
498.9	26.0		Gray coarse to fine sand, trace to little coarse to fine gravel, trace silt, loose to medium dense, well graded, saturated SW-SM	SS-14 26.0-28.0 24"R	2 3 3 3
				SS-15 28.0-30.0 24"R	2 3 11 11
494.9	30.0		Gray shale, soft	SS-16 30.0-31.0 12"R	22 100+
493.9	31.0		End of Boring at 31.0'		



NOTES & TEST RESULTS

Water level at 4.3' immediately after drilling.

Borehole was tremie grouted using Volclay grout immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D.**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/14/92** ENDED **8/14/92**

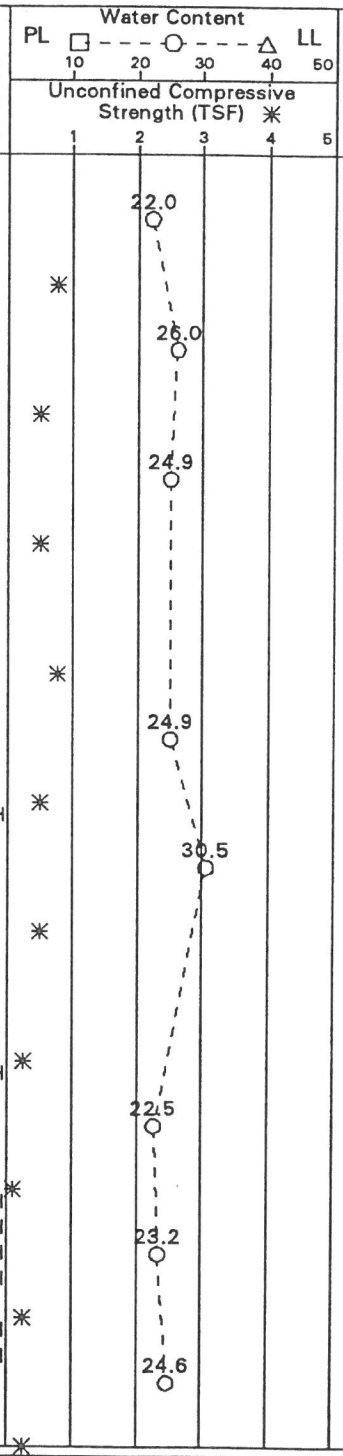
REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **3.0'** during drilling
▽ **4.3'** immediately after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-13** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,524.7 E 2,275.9**
LOGGED BY **KRR**
GROUND ELEVATION **523.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
523.8	0.0		Brown silty clay, trace coarse to fine sand, soft to medium stiff, medium plasticity, wet CL	AU-1 0.0-2.0	
			Brown and tan from 2.0'	SS-2 2.0-4.0 24"R	1 2 2 3
				SS-3 4.0-6.0 24'R	2 1 2 2
			Little fine sand in SS-3	3T-4 6.0-8.0 24"R	
516.8	7.0		Gray silty clay, trace coarse to fine sand, medium stiff, medium plasticity, wet CL	SS-5 8.0-10.0 24"R	2 2 2 2
				SS-6 10.0-12.0 24"R	WOH 1 2 3
				3T-7 12.0-14.0 24"R	
509.8	14.0		Gray silty clay, trace to little fine sand, very soft to soft, medium plasticity, wet CL	SS-8 14.0-16.0 24"R	WOH 1 1 1
				SS-9 16.0-18.0 24"R	WOH WOH WOH WOH
				SS-10 18.0-20.0 24"R	WOH WOH 1 1
503.8	20.0				



NOTES & TEST RESULTS

Water level at 7.0' during drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/4/92** ENDED **8/4/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **7.0'** during drilling.

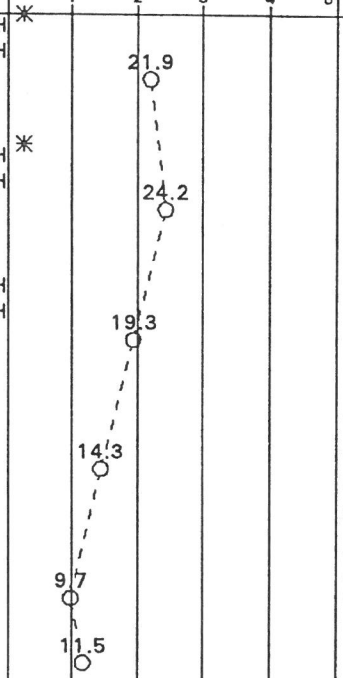
PATRICK ENGINEERING INC.

BORING NUMBER **B-13** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,524.7 E 2,275.9**

LOGGED BY **KRR**
GROUND ELEVATION **523.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
503.8	20.0		Gray silty clay, trace little fine sand, very soft to soft, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	WOH WOH 1 1
				SS-12 22.0-24.0 24"R	WOH WOH 1 1
499.3	24.5		Gray clayey fine sand, some silt, very loose, poorly graded, saturated SC	SS-13 24.0-26.0 24"R	WOH WOH 1 2
497.8	26.0		Gray coarse to fine sand, little coarse to fine gravel, little silt, medium dense to dense, well graded, saturated SM	SS-14 26.0-28.0 24"R	4 4 12 19
494.5	29.3		Gray shale, massive, excellent	SS-15AB 28.0-30.0 24"R	15 22 42 58
				PQ-16 30.0-35.0 60"R	
488.8	35.0		End of Boring at 35.0'		

Water Content: PL □ - - - ○ - - - △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)



NOTES & TEST RESULTS

SS-14:
Gravel = 16%
Sand = 65%
Silt or clay = 19%
Artesian conditions. Water found to overflow.

Auger refusal at 30.0'. Switched to PQ coring.
RQD = 100%

Borehole was tremie grouted using Volclay grout immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/4/92** ENDED **8/4/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **7.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-14** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 3,763.9 E 2,791.1**

LOGGED BY **KRR**
GROUND ELEVATION **572.7**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	NOTES & TEST RESULTS
572.7	0.0		Brown silty clay, trace fine sand, very stiff, low to medium plasticity, moist to wet CL	AU-1 0.0-2.0		
				SS-2 2.0-4.0 22"R	3 4 4 6	
			Trace coarse to medium sand, trace fine gravel from 4.0'	SS-3 4.0-6.0 24"R	4 6 9 11	
				SS-4 6.0-8.0 24"R	5 6 7 7	
				3T-5 8.0-10.0 24"R		
			Silty sand at 10.0' Little to some sand in SS-6	SS-6 10.0-12.0 24"R	4 6 6 4	
560.2	12.5		Dark gray to black organic silty clay, trace fine sand, very stiff, medium plasticity, wet OL	SS-7 12.0-14.0 24"R	4 7 9 15	
558.2	14.5		Coal	SS-8 14.0-16.0 24"R	7 18 32 34	
				SS-9 16.0-18.0 18"R	22 39 50+	SS-9 driven 18" only.
553.7	19.0		Gray shale	SS-10AB 18.0-20.0 24"R	12 10 16 18	
552.7	20.0					

Water Content: PL □ ---○--- △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)

Test results: 17.5, 14.2, 20.4, 20.3, 12.4, 40.5, 49.8, 22.7, 16.4, 13.4

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/17/92** ENDED **8/17/92**

REMARKS

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **B-14** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 3,763.9 E 2,791.1**

LOGGED BY **KRR**
GROUND ELEVATION **572.7**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
552.7	20.0		Gray shale.	SS-11 20.0-22.0 2"R	10 11 15 24		Auger refusal of 22.1'. Water was not encountered during or immediately after drilling. Borehole was grouted using Volclay grout immediately after completion of drilling.
550.7	22.0		End of Boring at 22.1'.	SS-12 22.0-22.1 2"R	100 +/2"		

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/17/92** ENDED **8/17/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-15** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,579.6 E 1,752.7**

LOGGED BY **KRR**
GROUND ELEVATION **536.7**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
536.7	0.0		Brown silty clay, trace coarse to fine sand, stiff, medium plasticity, wet CL	AU-1 0.0-2.0		12.1	
				SS-2 2.0-4.0 14"R	7 6 8 9	26.8	
				SS-3 4.0-6.0 24"R	4 6 6 9	25.5	
				3T-4 6.0-8.0 14"R			
			Brown and olive at 8.0'.	SS-5AB 8.0-10.0 24"R	2 2 4 5	27.0	
527.7	9.0		Brown fine sand, trace silt, loose, poorly graded, saturated SP-SM/SM	SS-6 10.0-12.0 18"R	WOH 2 2 2		Water level at 9.0' during drilling.
				SS-7A/B 12.0-14.0 24"R	WOH 2 2 2		
523.7	13.0		Dark gray and gray silty clay, trace organics, trace coarse to fine sand, soft, medium plasticity, wet CL/OL	SS-8AB 14.0-16.0 24"R	WOH 1 2 5	28.1 25.2	
521.7	15.0		Organics present in SS-8A. Brown and olive silty clay, trace coarse to fine sand, very stiff, low plasticity, moist CL	SS-9 16.0-18.0 24"R	5 6 6 4	17.2	
520.2	16.5		Brown and olive silty clay to clayey silt, trace to fine sand, hard, low plasticity, moist CL	SS-10AB 18.0-20.0 24"R	2 7 20 32	15.3 9.8	
516.7	20.0		Changed to brown from 19.0'.				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/21/92** ENDED **8/21/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **9.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-15** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,579.6 E 1,752.7**

LOGGED BY **KRR**
GROUND ELEVATION **536.7**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
516.7	20.0		Brown shale, soft.	SS-11 20.0-22.0 8"R	80 100 +/2"	9.7	
				SS-12 22.0-24.0 7"R	31 100 +/1"	7.8	
512.7	24.0		End of Boring at 24.5'.				Auger refusal at 24.5'. Borehole was tremie grouted using Volclay grout immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/21/92** ENDED **8/21/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **9.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **CB-1** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,559.1 E 2,663.1**

LOGGED BY **KRR**
GROUND ELEVATION **527.3**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
527.3	0.0		Dark gray silty clay, trace coarse to fine sand, very stiff, medium plasticity, wet, fill CL	AU-1 0.0-2.0		20.1	Grass and weeds at the surface.
				SS-2 2.0-4.0 16"R	6 4 4 5	19.2 ✳	
			Mottled at 4.0'	SS-3 4.0-6.0 20"R	3 4 8 15	✳ 30.3	
522.3	5.0		Dark gray organic silty clay, trace fine sand, trace roots and wood fragments, soft to stiff, medium plasticity, wet, fill OL	SS-4 6.0-8.0 24"R	1 1 2 2	✳ 30.2	
				3T-5 8.0-10.0 24"R		✳ ⊡ 29.4 △	3T-5: Dry Den. = 94pcf qu = 0.6tsf LL = 41 PL = 23 k = 1.5 E-07 cm/s
				SS-6 10.0-12.0 18"R	1 2 2 2	✳	
514.5	12.8			SS-7ABC 12.0-14.0 24"R	1 1 2 2	✳ 29.9 21.2 ✳	
513.8	13.5		Gray clayey fine sand, trace coarse to medium sand, trace fine gravel, loose, poorly graded, saturated, fill SC				
513.1	14.2		Dark gray to black organic silty clay, trace coarse to fine sand, wood fragments present, soft, medium plasticity, wet, fill OL	SS-8 14.0-16.0 24"R	1 2 1 1	35.4	
			Dark gray clayey fine sand, trace coarse to medium sand, trace organics, wood fragments present, very loose, poorly graded, saturated, fill SC	SS-9 16.0-18.0 24"R	1 1 1 1	36.3	
509.3	18.0						
508.3	19.0		Gray coarse to fine sand, trace silt, trace organics, very loose, poorly graded, saturated, fill SP-SM	SS-10AB 18.0-20.0 24"R	1 1 2 1	56.2	
507.3	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/23/92** ENDED **7/23/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **17.0'** during drilling
▽ **15.5'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER CB-1 SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,559.1 E 2,663.1

LOGGED BY KRR
GROUND ELEVATION 527.3

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
507.3	20.0		Dark to black organic silty clay, wood fragments present, soft, medium dense, wet, fill OL	SS-11 20.0-22.0 24"R	1 1 2 1		
505.3	22.0		Gray fine sand, trace coarse to medium sand, little to some silt, very loose, poorly graded, saturated SP-SM/SM	SS-12 22.0-24.0 24"R	1 2 1 2		
			Gray silty sand, little clay, very loose, poorly graded, saturated SM	SS-13 24.0-26.0 24"R	1 1 1 2		SS-13: Gravel = 0% Sand = 69% Silt or clay = 31%
499.3	28.0			SS-14 26.0-28.0 24"R	WOH 1 1 2		
			Gray fine sand, trace coarse to medium sand, trace silt, trace coarse to fine gravel, loose, poorly graded, saturated SP/SP-SM	SS-15 28.0-30.0 24"R	WOH 1 3 5		
			Little to some silt, little coarse to medium sand in SS-16	SS-16 30.0-32.0 24"R	3 3 4 6		
495.3	32.0						
495.0	32.3		Gray coarse to fine sand, trace coarse to fine gravel, dense, well graded, saturated SW	SS-17 32.0-34.0	28 100/1"	12.9 ○	Auger refusal at 32.5'.
494.8	32.5		Gray shale				
			End of Boring at 32.5'.				Borehole was tremie grouted immediately after completion of drilling.

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 7/23/92 ENDED 7/23/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ 17.0' during drilling
▽ 15.5' after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER CB-2 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,427.5 E 2,700.9

LOGGED BY KRR
GROUND ELEVATION 526.2

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
526.2	0.0		Brownish-gray silty clay, trace coarse to fine sand, medium stiff, medium plasticity, wet, fill CL	AU-1 0.0-2.0			
				SS-2 2.0-4.0 24"R	2 2 3 3	✳	
522.2	4.0		Dark gray silty clay, trace to little fine sand and very soft to soft, medium plasticity, wet to saturated, fill CL	SS-3 4.0-6.0 24"R	1 1 2 2	✳	
				3T-4 6.0-8.0 18"R		✳	
				SS-5 8.0-10.0 24"R	WOH WOH 1 2	✳	
				SS-6 10.0-12.0 24"R	WOH 1 1 2	✳	Water level at 10.0' during drilling.
			Trace organics at 13.0'.	SS-7 12.0-14.0 24"R	WOH 1 2 2	✳	
			Wood fragments in SS-8	SS-8 14.0-16.0 24"R	WOH 1 2 2	✳	
				3T-9 16.0-18.0 20"R		✳	3T-9: LL = 34 PL = 25 PI = 9 Dry dens. = 80pcf k = 2.4 E-07 cm/s
			Organics and wood traces at 18.3'	SS-10AB 18.0-20.0 24"R	WOH	✳	
506.7	19.5		Gray and olive silty clay to clay, trace			✳	

21.1, 26.9, 31.6, 28.8, 28.2, 20.5, 42.5, 37.8, 38.3, 29.3

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA.
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 8/2/92 ENDED 8/2/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ 10.0' during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER CB-2 SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,427.5 E 2,700.9

LOGGED BY KRR
GROUND ELEVATION 526.2

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
506.2	20.0		fine sand, soft, medium to high plasticity, moist CL/CH	SS-11 20.0-22.0 24"R	WOH 1 1 2
503.7	22.5		Gray clayey fine sand, little silt, very loose, poorly graded, saturated SC	SS-12 22.0-24.0 24"R	2 1 1 WOH
501.7	24.5		Gray coarse to fine sand, trace fine gravel, trace to little silt, medium dense, poorly graded, saturated SP-SM/SM	SS-13 24.0-26.0 24"R	1 2 7 15
499.2	27.0		Gray silty clay to clay, trace fine sand, hard, medium to high plasticity, dry to moist CL	26.0-27.5 SS-14 27.5-29.5 24"R	3 8 22 32
496.7	29.5		End of Boring at 29.5'		

Water Content: PL □ - - - ○ - - - △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)
34.9
21.4
16.6

NOTES & TEST RESULTS

SS-11:
LL = 47
PL = 22
PI = 25

Blow-in at 24.0' water level rose to approximately 3' below ground surface.

Boring was tremie grouted using Volclay grout immediately after drilling completed.

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA.
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 8/2/92 ENDED 8/2/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ 10.0' during drilling.

PATRICK ENGINEERING INC.

BORING NUMBER **CB-3** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,359.4 E 2,542.3**

LOGGED BY **KRR**
GROUND ELEVATION **525.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
525.8	0.0		Brown silty clay, trace coarse to fine sand, stiff, medium plasticity, wet, fill CL	AU-1 0.0-2.0			
				SS-2 2.0-4.0 20"R	2 2 3 4		
				SS-3 4.0-6.0 14"R	2 2 3 5		
			Dark gray at 4.0'				
519.8	6.0		Brown and tan clayey silt and fine sand, very loose, poorly graded, wet to saturated, fill CL-ML	SS-4 6.0-8.0 24"R	2 2 1 1		SS-4: Gravel = 0% Sand = 48% Silt or Clay = 52%
				SS-5 8.0-10.0 14"R	WOH 1 2 2		
515.5	10.3		Olive at 10.0'				
			Dark gray to black organic silty clay, trace coarse to fine sand, wood fragments present, soft, medium plasticity, wet	SS-6AB 10.0-12.0 18"R	2 2 2 3		
513.8	12.0		OL				
			Gray clayey silt and fine sand, very loose, poorly graded, saturated CL-ML	SS-7 12.0-14.0 24"R	WOH WOH WOH WOH		
				SS-8AB 14.0-16.0 24"R	WOH 1 2 3		Water level at 14.0' during drilling.
			Gray silty sand from 15.0' to 15.5'				
				SS-9 16.0-18.0 24"R	WOH 1 1 1		SS-9: Gravel = 0% Sand = 33% Silt or Clay = 67%
				SS-10 18.0-20.0 24"R	WOH WOH WOH WOH		
505.8	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/2/92** ENDED **8/2/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **14.0'** during drilling.
▽
▽

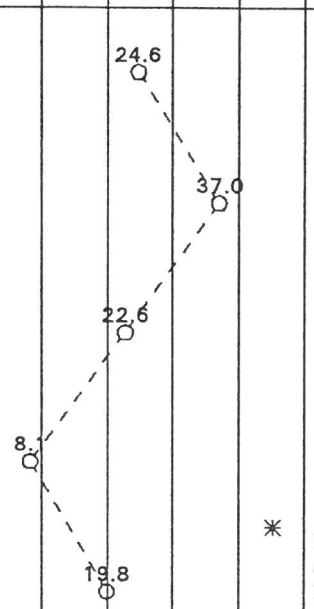
PATRICK ENGINEERING INC.

BORING NUMBER **CB-3** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,359.4 E 2,542.3**

LOGGED BY **KRR**
GROUND ELEVATION **525.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
505.8	20.0		Gray clayey silt and fine sand, very loose, poorly graded, saturated CL-ML/SC	SS-11 20.0-22.0 24"R	WOH 1 1 2
				SS-12 22.0-24.0 24"R	WOH WOH WOH WOH
				SS-13 24.0-26.0 24"R	WOH 1 2 2
				SS-14 26.0-28.0 24"R	WOH WOH 12 21
498.8	27.0		Gray coarse to fine sand, trace coarse to fine gravel, trace to little silt, medium dense to dense, well graded, saturated SW-SM	SS-15 28.0-30.0 24"R	4 4 14 29
496.8	29.0		Gray silty clay to clay, trace fine sand, hard, medium to high plasticity, dry to moist CL/CH		
495.8	30.0		End of Boring at 30.0'.		

Water Content: PL □ - - - ○ - - - △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)



NOTES & TEST RESULTS

Water level in augers at 4.7' immediately after completion of drilling.
Boring was grouted using Volclay grout after drilling completed.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/2/92** ENDED **8/2/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **14.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER CB-4 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,240.9 E 2,490.4

LOGGED BY KRR
GROUND ELEVATION 525.1

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
525.1	0.0		Dark gray silty clay, trace coarse to fine sand, roots present, trace organics, stiff, medium plasticity, wet, fill CL	AU-1 0.0-2.0		26.3	
				SS-2 2.0-4.0 12"R	3 3 4 4	27.8	
521.1	4.0		Dark gray to black organic silty clay, trace fine sand, soft, medium to high plasticity, wet to saturated, fill OL/OH	SS-3 4.0-6.0 "R	1 2 3 4	34.4	
			Wood fragments in SS-4	SS-4 6.0-8.0 10"R	1 2 2 2	40.9	
			Wood fragments in SS-5	SS-5 8.0-10.0 4"R	WOH WOH WOH 2	35.0	SS-5 driven on wood.
			Wood fragments in SS-6A	SS-6AB 10.0-12.0 10"R	1 1 1 1	96.4	
513.3	11.8		Gray silty clay to clayey silt, trace fine sand, soft to medium stiff, low to medium plasticity, wet CL/CL-ML	SS-7 12.0-14.0 24"R	1 1 1 1	31.3 25.1	Sample slipped from tube. Obtained a jar sample.
				3T-8 14.0-16.0 10"R		22.8	
				3T-9 16.0-18.0 24"R		23.8	3T-9: LL = 25 PL = 22 PI = 3 Dry dens. = 103pcf k = 4.3 E-07 cm/s
				SS-10 18.0-20.0 24"R	WOH WOH WOH 2	23.6 24.0	
505.1	20.0		1" fine sand lense at 19.5'				

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA.
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 8/3/92 ENDED 8/3/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **CB-4** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,240.9 E 2,490.4**

LOGGED BY **KRR**
GROUND ELEVATION **525.1**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
505.1	20.0		Gray silty clay to clayey silt, trace fine sand, soft, low to medium plasticity, wet. CL/CL-ML	SS-11 20.0-22.0 24"R	WOH WOH WOH 2	✳ ○ 23.9	Water was not encountered during drilling.
503.1	22.0		End of Boring at 22.0'.				Borehole was tremie grouted using Volclay grout immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/3/92** ENDED **8/3/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER CB-5 SHEET 1 OF 1
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 5,197.4 E 2,390.9

LOGGED BY KRR
GROUND ELEVATION 523.4

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
523.4	0.0		Brown and dark gray silty clay, trace coarse to fine sand, medium stiff, low plasticity, moist CL	AU-1 0.0-2.0		18.7	
				SS-2 2.0-4.0 10"R	3 3 3 4	✳	
520.4	3.0		Brown silty clay, trace fine sand, medium stiff, medium plasticity, wet CL			20.8	
				SS-3 4.0-6.0 20"R	2 2 2 3	✳	
						24.0	
				SS-4 6.0-8.0 24"R	2 2 2 3	✳	
						23.7	
515.6	7.8						
515.2	8.2		Brown silty sand, loose, poorly graded, saturated SM	SS-5AB 8.0-10.0 24"R	2 2 2 2	✳	Water level at 8.0' during drilling.
			Brown, gray and olive silty clay, trace fine sand, stiff, medium plasticity, wet CL			26.3	
				SS-6AB 10.0-12.0 24"R	2 3 2 3	24.4 ✳	
512.4	11.0		Gray and olive silty clay, trace fine sand, stiff, medium to high plasticity, wet CL/CH			28.2	
511.4	12.0			3T-7 12.0-14.0 24"R		✳ 38.9	
			Gray silty clay, trace fine sand, soft, medium plasticity, wet CL				
				SS-8 14.0-16.0 24"R	1 2 2 2	✳	
						25.0	
507.4	16.0		End of Boring at 16.0'.				Borehole was tremie grouted using Volclay grout immediately after drilling completed.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/3/92** ENDED **8/3/92**

REMARKS

WATER LEVEL (ft.)
▽ **8.0'** during drilling.
▽ ~~No water level after drilling.~~
▽

PATRICK ENGINEERING INC.

BORING NUMBER **CB-6** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,079.8 E 2,367.5**

LOGGED BY **KRR**
GROUND ELEVATION **527.0**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
527.0	0.0		Dark gray silty clay, trace coarse to fine sand, roots present, low plasticity, moist	AU-1 0.0-2.0		16.7 ○	
526.0	1.0		CL				
			Brown and dark gray silty clay, trace coarse to fine sand, very stiff, medium plasticity, wet to saturated	SS-2 2.0-4.0 18"R	4 5 6 5	18.4 ○ ✳	
			CL				
			Dark gray and trace organics from 4.0'	SS-3 4.0-6.0 20"R	6 4 5 7	22.5 ○ ✳	
				SS-4 6.0-8.0 8"R	3 2 4 4	34.0 ○	
518.8	8.2		Gray coarse to fine sand, trace fine gravel, little silt, trace coal, very loose, well graded, saturated	SS-5AB 8.0-10.0 18"R	2 1 1 1	✳ 24.4 ○	Water level at 8.0' during drilling
518.0	9.0		SM				
			Gray to light gray silty clay, trace fine sand, soft to medium stiff, medium plasticity, wet	SS-6 10.0-12.0 24"R	WOH 1 1 1	✳ 25.0 ○	
			CL				
			Trace organics and little fine sand in SS-5B	3T-7 12.0-14.0 24"R		✳ 26.4 ○	3T-7: dry dens. = 99pcf qu = 1.4 tsf k = 5.3 E-7 cm/s
				SS-8 14.0-16.0 24"R	WOH 1 1 2	✳ 27.0 ○	
				SS-9 16.0-18.0 24"R	WOH 1 1 1	✳ 25.1 ○	
				SS-10 18.0-20.0 24"R	1 1 1 1	✳ 27.0 ○	
507.0	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/25/92** ENDED **7/25/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **8.0'** during drilling
▽
▽

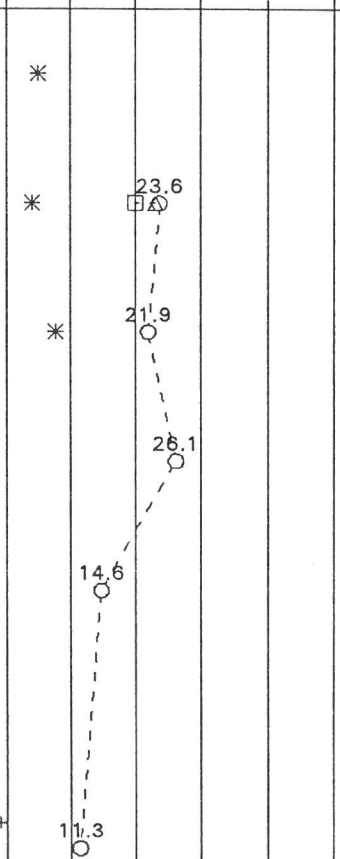
PATRICK ENGINEERING INC.

BORING NUMBER CB-6 SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 5,079.8 E 2,367.5

LOGGED BY KRR
GROUND ELEVATION 527.0

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
507.0	20.0		Gray silty clay, trace coarse to fine sand, soft, medium plasticity, wet CL	3T-11 20.0-22.0 24"R	
505.5	21.5		Gray silty clay to clayey silt, trace to little fine sand, soft, low plasticity, wet CL/CL-ML	SS-12 22.0-24.0 24"R	1 1 1 1
				SS-13 24.0-26.0 24"R	1 1 1 2
501.0	26.0		Gray clayey sand, some silt, very loose, poorly graded, saturated SC	SS-14 26.0-28.0 24"R	1 1 1 1
499.0	28.0		Gray fine sand, some silt, loose, poorly graded, saturated SM	SS-15 28.0-30.0 24"R	2 3 4 4
497.8	29.2		Gray coarse to fine sand, little fine gravel, little sand, loose, poorly graded, saturated SM	SS-16 30.0-32.0 24"R	6 6 8 8
497.0	30.0		Gray fine sand, trace coarse to medium sand, trace silt, medium dense, poorly graded, saturated SP	SS-17 32.0-34.0 8"R	13 100+ /2"
496.3	30.7		Gray coarse to fine sand, little fine gravel, trace silt, medium dense, well graded, saturated SW-SM		
494.5	32.5		Gray shale		
493.0	34.0		End of Boring at 34.0'.		

Water Content: PL □ - - - ○ - - - △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)



NOTES & TEST RESULTS

SS-12:
LL = 23
PL = 20
PI = 3

SS-14:
Gravel = 0%
Sand = 62%
Silt or clay = 38%

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 7/25/92 ENDED 7/25/92

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ 8.0' during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **CB-7** SHEET **1** OF **1**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,938.0 E 2,377.9**

LOGGED BY **KRR**
GROUND ELEVATION **523.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
523.8	0.0		Brown silty clay, trace fine sand, soft, medium plasticity, wet CL	AU-1 0.0-2.0	
				SS-2 2.0-4.0 10"R	2 3 3 2
			Mottled and tan from 4.0'	SS-3 4.0-6.0 12"R	1 2 3 4
				SS-4 6.0-8.0 20"R	2 2 3 3
515.0	8.8		Gray silty clay, trace coarse to fine sand, stiff, medium plasticity, wet CL	SS-5 8.0-10.0 24"R	WOH 2 3 2
			Trace fine sand only from 10.0'	3T-6 10.0-12.0 20"R	
				SS-7 12.0-14.0 24"R	WOH 1 2 2
				SS-8 14.0-16.0 24"R	1 1 2 2
507.8	16.0		End of Boring at 16.0'		

Water Content (PL 10 20 30 40 LL 50)
Unconfined Compressive Strength (TSF) (1 2 3 4 5)
22.2 28.8 25.6 25.1 23.6 25.9 26.4

NOTES & TEST RESULTS

Water was not encountered during or immediately after drilling. Borehole was tremie grouted using Volcaly grout immediately after drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/13/92** ENDED **8/13/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **CB-8** SHEET **1** OF **1**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,862.3 E 2,564.6**

LOGGED BY **KRR**
GROUND ELEVATION **522.7**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
522.7	0.0		Dark gray to black silty organic clay to clay, trace fine sand, soft, medium to high plasticity, wet to saturated, fill OL/OH	AU-1 0.0-2.0		26.7 ○	
				SS-2 2.0-4.0 4"R	2 2 3 3	✳ 30.3 ○	
				SS-3 4.0-6.0 10"R	1 2 2 1	✳ □ - - - ○ - - - △ 31.4	SS-3: LL = 35 PL = 21 PI = 14
			Trace wood fragments in SS-4.	SS-4 6.0-8.0 4"R	1 1 1 2	29.0 ○	
				SS-5AB 8.0-10.0 20"R	1 1 1 2	27.7 ○ ✳ 28.1 ○	
512.9	9.8		Trace wood fragements in SS-5B. Gray clayey fine sand, trace coarse to medium sand, little silt, very loose, poorly graded, moist SC	SS-6 10.0-12.0 8"R	WOH 1 1 1	23.0 ○	
510.7	12.0		Gray silty fine sand, very loose, poorly graded, moist SM	SS-7 12.0-14.0 20"R	1 1 1 2	18.3 ○	
508.9	13.8		Gray silty clay to clayey silt, trace coarse to fine sand, soft, medium plasticity, wet CL/CL-ML	SS-8 14.0-16.0 20"R	1 1 1 2	✳ 22.0 ○	Tube pushed at 18.0' but no recovery. Then pushed split spoon. No water during drilling. W.L immediately after completion of drilling. Borehole was grouted using volclay grout immediately after drilling.
				SS-9 16.0-18.0 22"R	1 1 2 2	✳ 24.1 ○	
				SS-10 18.0-20.0 20"R		✳ 22.3 ○	
502.7	20.0		End of Boring at 20.0'				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/12/92** ENDED **8/12/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **CB-9** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,799.8 E 2,736.2**

LOGGED BY **KRR**
GROUND ELEVATION **525.5**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
525.5	0.0		Brown and dark gray silty clay, trace coarse to fine sand, roots and wood fragments present, very stiff, medium plasticity, wet, fill CL	AU-1 0.0-2.0		23.6	
				SS-2 2.0-4.0 14"R	7 8 11 12	22.1 ✳	
520.7	4.8		Dark gray to black organic silty clay, trace fine sand, wood fragments present, soft to medium stiff, medium plasticity, wet, fill. OL	SS-3 4.0-6.0 6"R	4 3 2 3	29.9 ✳	SS-3: CEC = 18.1 meq/100g
				SS-4 6.0-8.0 6"R	2 3 3 4	30.7 ✳	
				SS-5 8.0-10.0 10"R	1 2 2 2	34.2 ✳	
				SS-6AB 10.0-12.0 20"R	1 1 1 1	29.2 20.2 ✳	
513.9	11.6						
513.5	12.0		Gray fine sand, trace coarse to medium sand, little silt, trace shells, very loose, poorly graded, fill SM	SS-7 12.0-14.0 24"R	WOH 1 2 2	29.9 ✳	
511.3	14.2		Dark gray organic silty clay, trace fine sand, wood fragments present, soft, medium plasticity, wet, saturated, fill SC	SS-8 14.0-16.0 18"R	WOH 1 1 1	30.3	Water level at 14.0' during drilling.
509.3	16.2		Gray clayey fine sand, little silt, very loose, poorly graded, saturated, fill SC	SS-9 16.0-18.0 20"R	WOH WOH 1 1	26.0 ✳	
			Gray silty clay, trace to little fine sand, soft, medium plasticity, wet CL	SS-10 18.0-20.0 22"R	WOH 1 2 2	28.2	

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55-ATV**
DRILLING STARTED **8/13/92** ENDED **8/13/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ **14.0'** during drilling.
▽ **5.0'** after drilling.
▽

PATRICK ENGINEERING INC.

BORING NUMBER **CB-9** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,799.8 E 2,736.2**

LOGGED BY **KRR**
GROUND ELEVATION **525.5**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
505.5	20.0		Gray silty clay, trace to little fine sand, medium stiff, medium plasticity, wet CL	3T-11 20.0-22.0 24"R		✳	
503.5	22.0		Gray silty fine sand, loose, poorly graded, saturated SM	SS-12 22.0-24.0 24"R	3 2 2 2		
501.0	24.5		Gray coarse to fine sand, trace fine gravel, trace to little silt, loose, poorly graded, saturated SP-SM/SM	SS-13 24.0-26.0 24"R	1 1 3 4	○ 21.8	Blow-in at 26.0'
499.5	26.0		End of Boring at 26.0'				Water level at 5.0' immediately after drilling.
							Borehole was tremie grouted using Volclay grout immediately after completion of drilling.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55-ATV**
DRILLING STARTED **8/13/92** ENDED **8/13/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **14.0'** during drilling
▽ **5.0'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER P-1D SHEET 1 OF 3
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill-Hydrogeo. Invest. - 496B
LOCATION N 4,806.1 E 1,973.1

LOGGED BY KRR
GROUND ELEVATION 553.4

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
553.4	0.0		Brown and dark gray silty clay, some coarse to fine sand, trace fine gravel, very stiff, medium plasticity, moist to wet, fill	AU-1 0.0-2.0		14.7	
			CL				
			Trace coarse to fine sand from 2.0' Trace roots in SS-2	SS-2 2.0-4.0 14"R	1 2 3 5	19.4	
			Light olive at 4.0'	SS-3 4.0-6.0 16"R	2 4 6 10	20.5	
						21.6	
546.9	6.5		Dark gray to black organic silty clay, trace coarse to fine sand, very stiff, medium plasticity, moist to wet, fill	SS-4ABC 6.0-8.0 18"R	4 4 9 10	22.7	
			OL				
				SS-5 8.0-10.0 20"R	3 6 4 6	20.4	SS-5: LL = 46 PL = 20 PI = 26
				SS-6 10.0-12.0 20"R	3 3 5 6	25.3	
			Mottled at 11.0'				
541.4	12.0		Dark gray to black organic clay to silty clay, trace wood fragments and coal, trace fine sand, very stiff, medium plasticity, wet, fill	SS-7 12.0-14.0 24"R	2 3 5 6	26.1	
			OL				
				SS-8 14.0-16.0 24"R	3 3 5 6	22.3	
				SS-9 16.0-18.0 19"R	4 5 8 8	23.8	
535.2	18.2					22.7	
534.4	19.0		Brown silty clay, trace coarse to fine sand, trace fine gravel, stiff, medium plasticity, wet, fill	SS-10ABC 18.0-20.0 24"R	1 2 4 5	22.0	
			CL				
533.4	20.0					23.7	

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME-55/ATV
DRILLING STARTED 7/20/92 ENDED 7/20/92

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ 39.0' during drilling
▽ 38.0' after drilling
▽

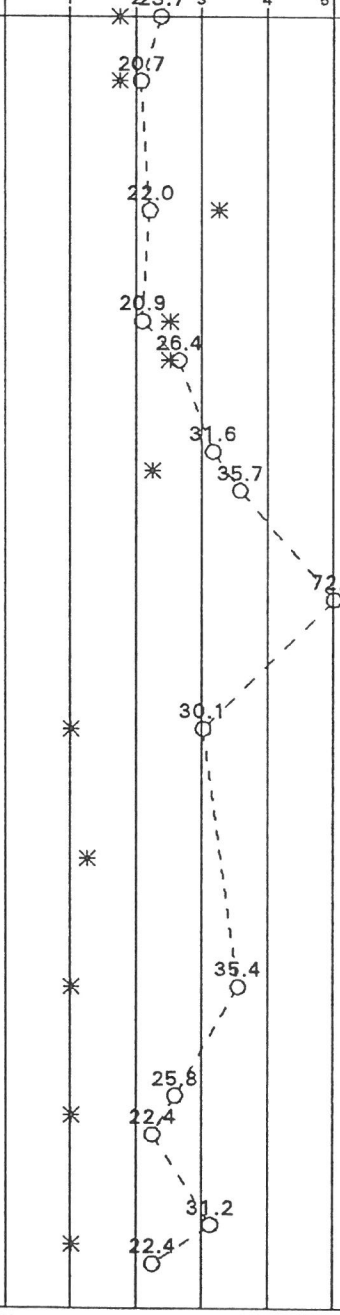
PATRICK ENGINEERING INC.

BORING NUMBER **P-1D** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,806.1 E 1,973.1**

LOGGED BY **KRR**
GROUND ELEVATION **553.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	NOTES & TEST RESULTS
533.4	20.0		Dark gray organic silty clay, trace wood and coal fragments, stiff, medium plasticity, wet OL	SS-11 20.0-22.0 24"R	2 7 7 9	
			Dark gray to black organic silty clay, trace fine sand, trace wood fragments and coal, stiff, medium plasticity, wet, fill OL	SS-12 22.0-24.0 24"R	2 6 7 9	
			Brownish-gray, olive and black from 23.0'-23.5' and 24.0'-25.0'	SS-13AB 24.0-26.0 24"R	3 3 6 7	
			Changed to dark gray and black from 25.0'			
526.4	27.0		Trace wood fragments in SS-14A	SS-14AB 26.0-28.0 24"R	4 5 8 8	
525.4	28.0		Black to dark gray organic silty clay to clayey silt, trace to little fine sand, medium dense, moist, fill OL/CL-ML	SS-15 28.0-30.0 2"R	1 2 3 3	Disturbed sample.
			Black to dark gray organic clay to silty clay, roots present, trace fine sand, medium stiff, medium to high plasticity, wet, fill OL/OH	SS-16 30.0-32.0 24"R	2 2 2 2	
				3T-17 32.0-34.0 24"R		
			Wood fragments in SS-18	SS-18 34.0-36.0 24"R	1 3 3 3	
			Wood fragments in SS-19	SS-19 36.0-38.0 24"R	1 2 3 3	
514.9	38.5		Brownish-gray and olive clayey sand, trace fine gravel, loose, well graded, saturated SC	SS-20 38.0-40.0 24"R	2 2 2 3	Water level at 39.0' during drilling.
513.9	39.5					
513.4	40.0					

Water Content: PL □ ---○--- △ LL; 10 20 30 40 50
Unconfined Compressive Strength (TSF) ✳: 1 2 3 4 5



DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/20/92** ENDED **7/20/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **39.0'** during drilling
▽ **38.0'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-1D** SHEET **3** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,806.1 E 1,973.1**

LOGGED BY **KRR**
GROUND ELEVATION **553.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
513.4	40.0		Gray silty clay, trace fine sand, medium stiff, medium plasticity, wet CL	SS-21 40.0-42.0 24"R	WOH 1 2 2	22.1	
			Gray silty clay, trace fine sand, medium stiff, medium plasticity, wet CL Gray and olive from 42.0'	SS-22 42.0-44.0 24"R	2 3 4 4		
				SS-23 44.0-46.0 24"R	2 2 2 2	21.0	Ceased drilling on 07/20/92.
			Little fine sand in 3T-24	3T-24 46.0-48.0 24"R			Resumed drilling on 07/21/92.
504.4	49.0			SS-25AB 48.0-50.0 24"R	1 1 3 4	21.8 20.8	SS-25B: Gravel = 0% Sand = 64% Silt or clay = 36%
502.6	50.8		Gray clayey fine sand, little silt, loose, poorly graded, saturated SC	SS-26AB 50.0-52.0 24"R	WOH 2 2 1		
501.9	51.5		Gray fine sand, some silt, trace coarse to medium sand, trace coarse to fine gravel, very loose, poorly graded, saturated. SM				
501.4	52.0						
500.9	52.5		Gray coarse to fine sand, trace silt, very loose, poorly graded, saturated SP	SS-27 52.0-52.5 7"R	41 120/1"	11.2	Auger refusal at 52.5'.
			Gray Shale				Water level at 38.0' immediately after drilling.
			End of Boring at 52.5'.				
							Piezometer was installed after completion of drilling. See as-built diagram P-6D for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/20/92** ENDED **7/20/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **39.0'** during driling
▼ **38.0'** after drilling
▼

PATRICK ENGINEERING INC.

BORING NUMBER **P-1S** SHEET **1** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,821.3 E 1,973.9**

LOGGED BY **KRR**
GROUND ELEVATION **553.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
553.4	0.0		Drilled to 36.0' without sampling (See Boring Log P-1D for soil conditions from 0' to 36')				

DRILLING CONTRACTOR **Patrick Drillling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/21/92** ENDED **7/21/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-1S** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,821.3 E 1,973.9**

LOGGED BY **KRR**
GROUND ELEVATION **553.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
533.4	20.0		Drilled to 36.0' without sampling (See Boring Loag P-1D for soil conditions from 0' to 36')				
517.4	36.0		Black to dark gray organic silty clay, trace wood fragments, trace coarse to fine sand, stiff, medium plasticity, wet, fill	SS-1 36.0-38.0 20"R	2 3 3 5	✳ ○ 32.2	Water in SS-2A
515.4	38.0		OL				SS-2A: Gravel = 2% Sand = 65% Silt or clay = 33%
514.7	38.7		Gray clayey fine sand, little silt, trace coarse to medium sand, loose, poorly graded, saturated	SS-2AB 38.0-40.0 24"R	2 1 2 2	✳ ○ 18.7 ○ 23.5	
			SC				

DRILLING CONTRACTOR **Patrick Drillling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/21/92** ENDED **7/21/92**

REMARKS

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **P-1S** SHEET **3** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,821.3 E 1,973.9**

LOGGED BY **KRR**
GROUND ELEVATION **553.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
513.4	40.0		Gray silty clay, trace fine sand, medium stiff to stiff, medium plasticity, wet CL	SS-3 40.0-42.0 24"R	3 3 4 5	✳ 22.6 ○	No water immediately after drilling. Piezometer P-1S was installed after completion of drilling. Refer to as-built diagram P-1S for details.
511.4	42.0		End of Boring at 42.0'.				

DRILLING CONTRACTOR **Patrick Drillling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/21/92** ENDED **7/21/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER P-2D SHEET 1 OF 3
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 5,256.0 E 1,975.9

LOGGED BY KRR
GROUND ELEVATION 553.9

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
553.9	0.0		Brown coarse to fine sand, some silt, well graded, dry, fill	AU-1AB 0.0-2.0	
552.9	1.0		SM		
			Dark gray to black silty clay, trace fine sand, trace organics, very stiff, low plasticity, moist, fill	SS-2 2.0-4.0 10"R	5 7 9 9
			CL		
549.9	4.0		Mottled brown silty clay, trace coarse to fine sand, trace fine gravel, very stiff, medium plasticity, wet, fill	SS-3 4.0-6.0 12"R	3 4 4 6
			CL		
				SS-4 6.0-8.0 16"R	4 5 8 10
545.9	8.0		Dark gray silty clay, trace organics, trace coarse to fine sand, very stiff, medium plasticity, wet, fill	SS-5 8.0-10.0 14"R	2 4 6 7
543.9	10.0		OL		
			Brown and dark gray silty clay, trace coarse to fine sand, very stiff, medium plasticity, wet, fill	SS-6 10.0-12.0 14"R	3 4 6 7
			CL		
			Brown and gray at 12.0'	SS-7 12.0-14.0 20"R	2 4 4 7
			Mottled brown from 14.0'	3T-8 14.0-16.0 20"R	
				SS-9 16.0-18.0 22"R	4 6 9 10
				SS-10 18.0-20.0 22"R	2 3 6 6
533.9	20.0		Dark brown from 19.0'		

Water Content: PL □ - - - ○ - - - △ LL (10 20 30 40 50)
Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)

Unconfined Compressive Strength (TSF): 4.8, 16.2, 16.7, 20.7, 22.5, 21.9, 20.5, 24.5, 23.9, 16.4

NOTES & TEST RESULTS

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/22/92** ENDED **7/22/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **28.0'** during drilling
▽
▼

PATRICK ENGINEERING INC.

BORING NUMBER **P-2D** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,256.0 E 1,975.9**

LOGGED BY **KRR**
GROUND ELEVATION **553.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
533.9	20.0		Dark brown silty clay, trace to little fine sand, very stiff, medium plasticity, wet, fill	SS-11 20.0-22.0 22"R	6 5 7 8	19.9	
532.9	21.0		CL				
			Dark gray silty clay, trace fine sand, trace wood fragments and roots, very stiff, medium plasticity, wet, fill	SS-12 22.0-24.0 24"R	2 3 3 5	22.7 23.5	
530.7	23.2		CL/OL				
			Changed to brownish-gray and olive at 22.0'	SS-13 24.0-26.0 24"R	2 2 2 3	26.4	
			Dark brown silty clay, trace coarse to fine sand, soft to stiff, medium plasticity, wet, fill	SS-14 26.0-28.0 24"R	2 3 4 3	26.6	
			CL				
			Mottled from 25.0'	3T-15 28.0-30.0 24"R		25.9	3T-15: Dry Dens=99.1pcf k=7.3E-07 cm/s
				SS-16 30.0-32.0 24"R	WOH 1 1 1	27.6	
			Mucky at 32.0'	SS-17 32.0-34.0 24"R	1 2 2 2	25.6	
				SS-18 34.0-36.0 24"R	1 2 2 2	24.9	
				SS-19ABC 36.0-38.0 24"R	2 2 3 4	24.0 22.5	
516.9	37.0						
516.4	37.5		Brown clayey fine sand, some silt, loose, poorly graded, saturated			27.3	
			SC				
			Dark gray silty clay, trace coarse to fine sand, trace fine gravel, trace shells, very stiff, medium plasticity, wet	SS-20 38.0-40.0 24"R	2 2 3 6	18.1	
513.9	40.0		CL				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/22/92** ENDED **7/22/92**

REMARKS
WOH - Weight of Hammer.

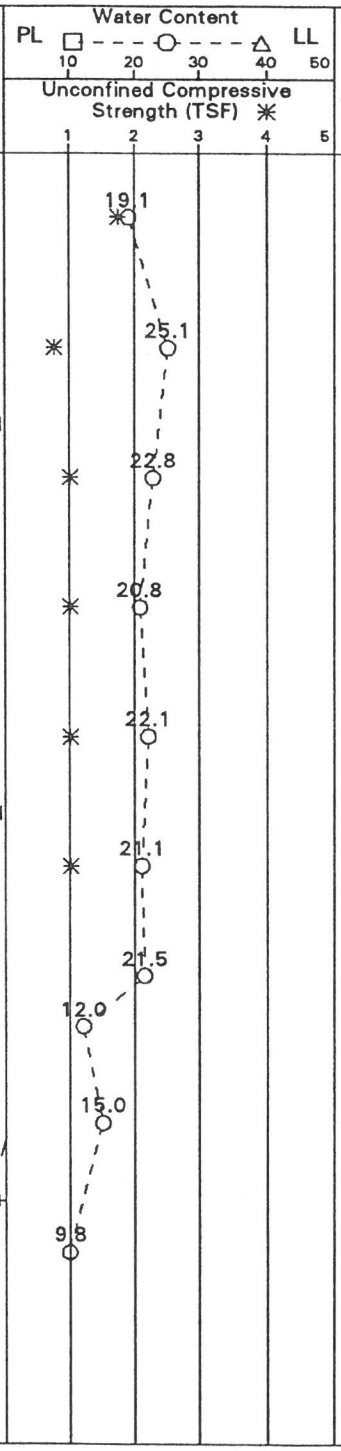
WATER LEVEL (ft.)
▽ **28.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-2D** SHEET **3** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,226.0 E 1,975.9**

LOGGED BY **KRR**
GROUND ELEVATION **553.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
513.9	40.0		Dark gray to gray silty clay, trace fine sand, medium to stiff, medium plasticity, wet CL	SS-21 40.0-42.0 24"R	2 4 4 5
				SS-22 42.0-44.0 24"R	2 2 2 3
			Pockets of sand at 43.6' Light gray and olive from 44.0'	SS-23 44.0-46.0 24"R	WOH 1 3 3
				SS-24 46.0-48.0 24"R	2 1 4 4
			Little fine sand in SS-25 1" fine sand lense at 48.5	SS-25 48.0-50.0 24"R	1 2 2 2
				SS-26 50.0-52.0 24"R	WOH
			Gray and little to some fine sand from 51.0'	SS-27AB 52.0-54.0 24"R	5 8 8 8
500.9	53.0		Gray clayey coarse to fine sand, little silt, medium dense, well graded, saturated SC		
499.9	54.0			SS-28ABC 54.0-56.0 20"R	4 7 40 18+/ 2"
499.4	54.5		Gray coarse to fine sand, trace silt, medium dense, well graded, saturated SW		
498.9	55.0				
498.1	55.8		Gray coarse to fine sand, trace silt, medium dense, poorly graded, saturated SP/SP-SM		
497.4	56.5			SS-29 56.0-57.3 6"R	100+
			Gray clayey coarse to fine sand, little silt, trace coarse to fine gravel, dense, well graded, saturated SC		
			Gray siltstone/shale		
			End of Boring at 56.5'.		



NOTES & TEST RESULTS

SS-28A:
Gravel = 3%
Sand = 91%
Silt or clay = 6%

Piezometer P-2D was installed after completion of drilling. Refer to as-built diagram P-2D for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/22/92** ENDED **7/22/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **28.0' during drilling**
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-2S** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,237.1 E 1,976.3**

LOGGED BY **KRR**
GROUND ELEVATION **533.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
533.9	0.0		Drilled to 26.0' without sampling. See Boring Log P-2D for details on soils encountered from 0' to 26'				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/22/92** ENDED **7/22/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-2S** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,237.1 E 1,976.3**

LOGGED BY **KRR**
GROUND ELEVATION **533.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
513.9	20.0		Drilled to 26.0' without sampling. See Boring Log P-2d for details on soils encountered from 0' to 26'				
507.9	26.0		Brown silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-1 26.0-28.0 24"R	3 3 4 5	✳	25.9 ○
				SS-2 28.0-30.0 24"R	1 1 2 3	✳	27.0 ○
503.9	30.0		End of Boring at 30.0'.				Piezometer P-2S was installed immediately after completion of drilling. Refer to as-built diagram P-2S for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/22/92** ENDED **7/22/92**

REMARKS

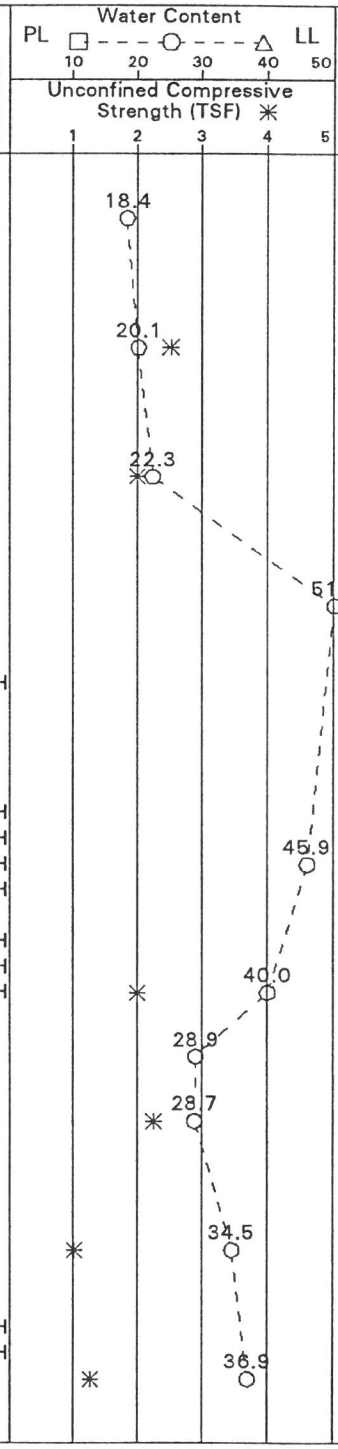
WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-3D** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,672.5 E 2,645.4**

LOGGED BY **KRR**
GROUND ELEVATION **530.5**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
530.5	0.0		Brownish gray silty clay, trace coarse to fine sand, very stiff, low plasticity, moist, fill CL	AU-1 0.0-2.0	
			Dark gray and brown at 3.0', trace fine gravel and coal in SS-2	SS-2 2.0-4.0 20"R	4 5 5 7
			Trace coal and organics in SS-3	SS-3 4.0-6.0 14"R	3 4 4 5
524.0	6.5		Dark gray to black clayey sand to silty sand, trace organics, loose, poorly graded, saturated, fill SC/SM	SS-4 6.0-8.0 8"R	2 2 3 3
				SS-5 8.0-10.0 0"R	WOH 1 1 1
				SS-6 10.0-12.0 6"R	WOH WOH WOH WOH
518.5	12.0		Dark gray organic silty clay, trace fine sand, wood fragments present, medium to high plasticity, wet to saturated, fill OL	SS-7AB 12.0-14.0 24"R	WOH WOH WOH 3
517.0	13.5		Brown to brownish gray silty clay, trace coarse to fine sand, stiff to very stiff, medium to high plasticity, wet CL	SS-8 14.0-16.0 24"R	2 3 3 4
				3T-9 16.0-18.0 20"R	
				SS-10 18.0-20.0 24"R	WOH WOH 2 2
510.5	20.0				



NOTES & TEST RESULTS

Water level at 8.0' while drilling.

3T-9:
Dry dens = 89.2 pcf
k = 1.3E-08 cm/s

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/17/92** ENDED **8/17/92**

REMARKS
WOH - Weight of Hammer.

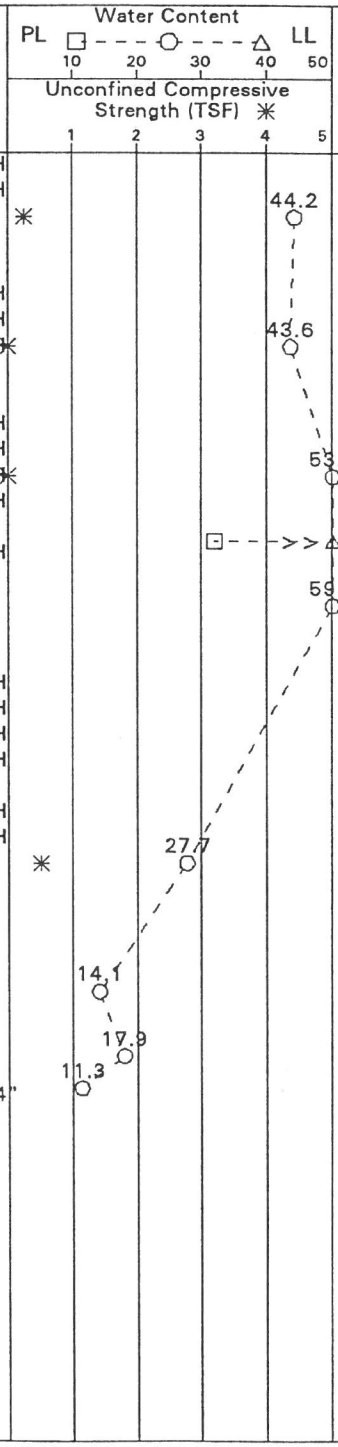
WATER LEVEL (ft.)
▽ **8.0'** during drilling
▽ **14.0'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER P-3D SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 5,672.5 E 2,645.4

LOGGED BY KRR
GROUND ELEVATION 530.5

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
510.5	20.0		Brownish-gray silty clay, trace coarse to fine sand, stiff, medium plasticity, wet	SS-11 20.0-22.0 24"R	WOH WOH 2 2
509.5	21.0		CL		
			Gray clay to silty clay, trace fine sand, very soft to soft, mucky, medium to high plasticity, wet to saturated	SS-12 22.0-24.0 24"R	WOH WOH WOH 1
			CH	SS-13 24.0-26.0 24"R	WOH WOH WOH WOH
				SS-14 26.0-28.0 24"R	WOH 1 1 1
502.5	28.0		Gray silty fine sand, very loose, poorly graded, saturated	SS-15 28.0-30.0 24"R	WOH WOH WOH WOH
			SM		
500.5	30.0		Gray silty clay to clayey silt, little fine sand, soft, low to medium plasticity, wet	SS-16 30.0-32.0 24"R	WOH WOH 1 1
498.5	32.0		CL/CL-ML		
			Gray fine sand, little silt, very loose, poorly graded, saturated	SS-17AB 32.0-34.0 24"R	1 1 7 10
497.5	33.0		SM		
497.0	33.5		Gray coarse to fine sand and silt, trace coarse to fine gravel, medium dense, well graded, saturated	SS-18 34.0-35.0 10"R	42 100/4"
495.5	35.0		SM		
			Gray shale		
			End of Boring at 35.0'		



NOTES & TEST RESULTS

SS-17B:
Gravel = 0%
Sand = 58%
Silt or Clay = 42%

Water level at 14.0' immediately after drilling. Piezometer was installed immediatley after drilling. Refer to As-Built Diagram P-3D for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/17/92** ENDED **8/17/92**

REMARKS
WOH - Weight of Hammer.

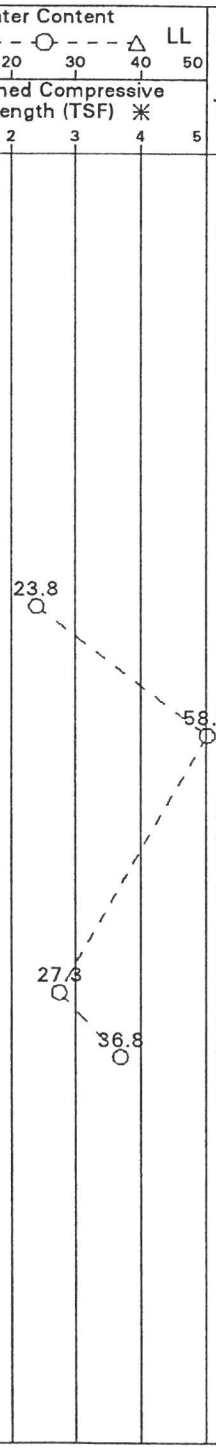
WATER LEVEL (ft.)
▽ **8.0'** during drilling
▽ **14.0'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER P-3S SHEET 1 OF 1
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 5,672.5 E 2,651.4

LOGGED BY KRR
GROUND ELEVATION 530.5

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
530.5	0.0		Drilled without sampling to 6.0'. Refer to Boring Log P-3D for soil conditions from 0' to 6'.		
524.5	6.0		Brown and dark gray silty clay, trace coarse to fine sand, trace fine gravel, trace coal, trace organics, soft, medium plasticity, wet CL/OL	SS-1 6.0-8.0 14"R	2 2 2 3
522.5	8.0		Dark gray to black silty sand, trace organics, wood fragments present, very loose, poorly graded, saturated SM	SS-2 8.0-10.0 24"R	WOH 1 1 1
				SS-3 10.0-12.0 24"R	WOH WOH WOH WOH
518.5	12.0		Gray and olive silty clay, trace to fine sand, trace organics, soft, medium plasticity, wet CL	SS-4AB 12.0-14.0 24"R	WOH 1 2 3
517.5	13.0		Brown silty clay, trace to fine sand, stiff, medium plasticity, wet to saturated CL		
516.5	14.0		End of Boring at 14.0'		



NOTES & TEST RESULTS

Soil conditions were consistent with soil conditions encountered in P-3D based on soil cuttings.

SS-3:
Gravel = 0%
Sand = 55%
Silt or Clay = 45%

Piezometer was installed immediately after drilling. Refer to As-Built Diagram P-3S for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/17/92** ENDED **8/17/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **P-4** SHEET **1** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,156.3 E 2,880.7**

LOGGED BY **KRR**
GROUND ELEVATION **535.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
535.9	0.0		Brown silty clay, trace coarse to fine sand, stiff to very stiff, medium plasticity, wet CL	AU-1 0.0-2.0		25.3	
				SS-2 2.0-4.0 24"R	3 4 5 5	✳ 24.6	
			Mottled from 4.0'	SS-3 4.0-6.0 20"R	2 2 3 4	✳ 29.6	
				3T-4 6.0-8.0 24"R		✳	
				SS-5 8.0-10.0 24"R	3 3 4 8	20.5	
			Brownish gray at 10.0'	SS-6 10.0-12.0 24"R	3 4 6 10	26.5	
				SS-7 12.0-14.0 24"R	4 4 6 8	25.0 ✳	
				3T-8 14.0-16.0 24"R		✳	
519.9	16.0			SS-9 16.0-18.0 24"R	4 4 5 7	✳ 33.9	
			Gray clay to silty clay, trace fine sand, very soft to stiff, medium to high plasticity, wet to saturated CH/CL	SS-10 18.0-20.0 24"R	1 2 2 3	✳ 40.2	

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/16/92** ENDED **8/16/92**

REMARKS
WOH = Weight of Hammer

WATER LEVEL (ft.)
▽ **34.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER P-4 SHEET 2 OF 3
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 5,156.3 E 2,880.7

LOGGED BY KRR
GROUND ELEVATION 535.9

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
515.9	20.0		Gray clay, trace silt, mucky, very soft, high plasticity, moist to wet CH	3T-11 20.0-22.0 24"R		✳	3T=11: Dry Dens.=78.2 pcf k=2.9 E-08cm/s
			Very mucky at 22.0'	SS-12 22.0-24.0 24"R	WOH WOH WOH 1	✳	50.4
				SS-13 24.0-26.0 24"R	WOH WOH WOH 2	✳	34.4
			Silty clay lenses at 26.0'	SS-14 26.0-28.0 24"R	WOH WOH WOH 1	✳	46.6
				SS-15 28.0-30.0 24"R	WOH WOH 1 1	✳	52.6
				SS-16 30.0-32.0 24"R	WOH WOH WOH 1	✳	SS-16: LL = 67 52.6 PL = 30 PI = 37
				SS-17 32.0-34.0 24"R	WOH WOH WOH 1	✳	52.6
501.9	34.0		Gray coarse to fine sand, some fine gravel, trace silt, trace coal, medium dense to dense, poorly graded, saturated SW-SM	SS-18 34.0-36.0 24"R	WOH 6 11 27		Water level at 34.0' during drilling.
				SS-19 36.0-38.0 24"R	7 8 7 7		Blow-in 36.0' washed off with water. SS-19: Gravel = 23% Sand = 69% Silt or Clay = 8%
				SS-20 38.0-40.0 24"R	8 7 7 8		

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/16/92** ENDED **8/16/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ **34.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-4** SHEET **3** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,156.3 E 2,880.7**

LOGGED BY **KRR**
GROUND ELEVATION **535.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
495.9	40.0		Gray coarse to fine sand, some fine gravel, trace silt, medium dense, well graded, saturated SW-SM	SS-21 40.0-42.0 24"R	6 7 8 8	○ 15.1	Piezometer was installed immediately after completion of drilling. Refer to as-built diagram P-4 for more details.
493.6	42.3		Gray shale, soft	SS-22 42.0-43.0 10"R	11 100 +/4"		
492.9	43.0		End of Boring at 43.0'				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/16/92** ENDED **8/16/92**

REMARKS
WOH = Weight of Hammer.

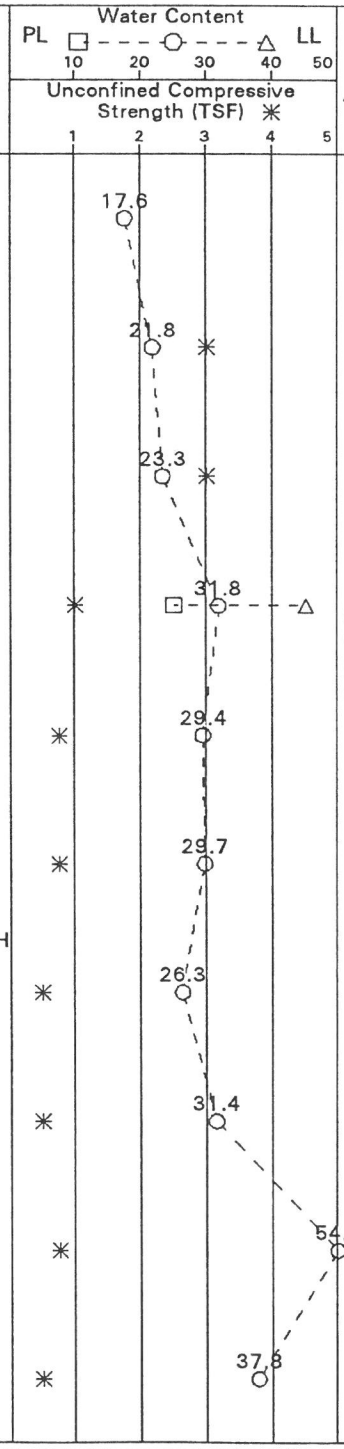
WATER LEVEL (ft.)
▽ **34.0'** during drilling
▼
▼

PATRICK ENGINEERING INC.

BORING NUMBER P-5D SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 4,516.7 E 2,885.0

LOGGED BY KRR
GROUND ELEVATION 534.9

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
534.9	0.0		Brown silty clay, trace fine sand, soft, low plasticity, moist, fill CL	AU-1 0.0-2.0	
532.4	2.5		Dark gray to black organic silty clay, trace coarse to fine sand, trace roots, soft to very soft, medium to high plasticity, wet to saturated, fill OL	SS-2 2.0-4.0 20"R	3 4 6 9
				SS-3 4.0-6.0 24"R	3 6 11 12
				SS-4 6.0-8.0 24"R	3 4 5 5
				SS-5 8.0-10.0 24"R	2 3 2 4
				SS-6 10.0-12.0 24"R	2 3 3 2
			Changed from organic silty clay to organic clayey silt from 12.0'.	SS-7 12.0-14.0 24"R	WOH 2 3 2
				SS-8 14.0-16.0 22"R	1 2 2 3
			Wood fragments in SS-9	SS-9 16.0-18.0 24"R	2 2 2 3
				SS-10 18.0-20.0 18"R	1 1 2 2
514.9	20.0				



NOTES & TEST RESULTS

SS-4:
LL = 45
PL = 25
PI = 20

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/16/92** ENDED **8/16/92**

REMARKS
WOH = Weight of Hammer.

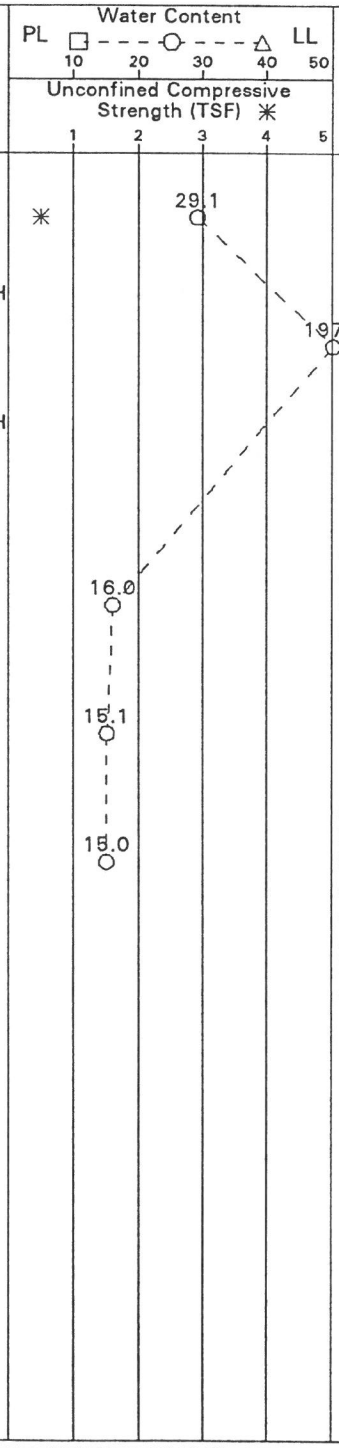
WATER LEVEL (ft.)
▽ **22.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-5D** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,516.7 E 2,885.0**

LOGGED BY **KRR**
GROUND ELEVATION **534.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
514.9	20.0		Dark gray to black organic silty clay, trace coarse to fine sand, soft, medium to high plasticity, wet to saturated, fill OL	SS-11 20.0-22.0 24"R	2 2 3 4
512.9	22.0		Little coarse to fine sand, trace fine gravel and wood fragments present in SS-11	SS-12AB 22.0-24.0 24"R	WOH 1 1 1
			Gray fine sand, little to some silt, very loose, poorly graded, saturated SM		
			Wood in SS-12B	SS-13 24.0-26.0 24"R	WOH 1 3 2
509.9	25.0		Gray coarse to fine sand, some fine gravel, little silt, loose, well graded, saturated SM	SS-14AB 26.0-28.0 24"R	1 3 5 6
507.6	27.3		Gray shale, soft	SS-15 28.0-30.0 20"R	10 12 14 15
				SS-16 30.0-32.0 22"R	16 18 22 26
502.9	32.0		End of Boring at 32.0'		



NOTES & TEST RESULTS

Water level at 22.0' during drilling.

SS-14A
Gravel = 29%
Sand = 54%
Silt or clay = 17%

Piezometer was installed immediately after completion of drilling. Refer to As-Built Diagram P-5D for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/16/92** ENDED **8/16/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ **22.0'** during drilling
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-5S** SHEET **1** OF **1**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,510.7 E 2,887.0**

LOGGED BY **KRR**
GROUND ELEVATION **534.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
534.9	0.0		Drilled to 8.0' without sampling. Refer to Boring Log P-5D for soil conditions from 0.0' to 8.0'.				Soil conditions are consistent with soil conditions encountered in P-5D based on soil cuttings.
526.9	8.0		Dark gray to black organic silty clay, trace fine sand, soft, medium to high plasticity, wet to saturated, fill OL	SS-1 8.0-10.0 10"R	2 2 2 3	✳	3T-2: Dry den. = 95.2 pcf k = 7.6 E-08 cm/s
				3T-2 10.0-12.0 16"R		✳ ○ 26.0 ○ 35.2	
522.9	12.0		End of Boring at 12.0'				No water was found during or immediately after drilling. Piezometer was constructed immediately after drilling. Refer to As-Built Diagram P-5S for more details.

DRILLING CONTRACTOR **Patrick Engineering**
DRILLING METHOD **3-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/16/92** ENDED **8/16/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-6D** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,717.0 E 2,186.8**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
524.8	0.0		Brown silty clay, trace to little fine sand, soft, medium plasticity, wet CL	AU-1 0.0-2.0		22.2	
			Mottled at 2.0'	SS-2 2.0-4.0 18"R	2 1 2 3	✳ 21.2	
				SS-3 4.0-6.0 20"R	1 1 2 2	✳ 21.7	
518.3	6.5			SS-4AB 6.0-8.0 18"R	1 2 2 2	✳ 22.0	
517.3	7.5		Brown, clayey, fine sand, little to some silt, loose, poorly graded, saturated SC			25.4	Water level at 6.0' during drilling.
			Brown mottled silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-5 8.0-10.0 10"R	1 1 2 2	✳ 21.7	Wood fragments in SS-5.
514.8	10.0		Gray silty clay, trace fine sand, soft to medium stiff, medium plasticity, wet CL	SS-6 10.0-12.0 20"R	3 1 1 1	✳ 29.8	
				SS-7 12.0-14.0 20"R	2 2 2 2	✳ 28.3	
				SS-8 14.0-16.0 22"R	1 2 4 3	✳ 24.1	
				SS-9 16.0-18.0 24"R	2 2 2 2	✳ 24.7	
				3T-10 18.0-20.0 24"R		✳	
504.8	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/12/92** ENDED **8/12/92**

REMARKS
WOH = Weight of Hammer

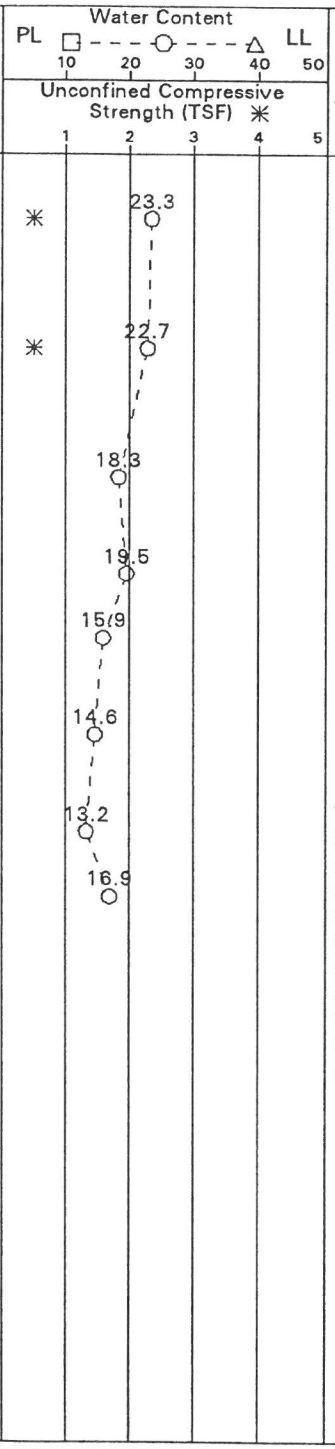
WATER LEVEL (ft.)
▽ **6.0'** during drilling
▽ **1.0'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-6D** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,717.0 E 2,186.8**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
504.8	20.0		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-11 20.0-22.0 24"R	1 2 2 1
				SS-12 22.0-24.0 24"R	WOH 1 2 1
501.8	23.0		Little fine sand in SS-12		
			Gray clayey silt, trace fine sand, loose, wet to saturated CL-ML/ML	SS-13 24.0-26.0 24"R	2 3 4 4
				SS-14AB 26.0-28.0 24"R	4 4 7 10
497.3	27.5				
496.8	28.0		Gray fine sand, trace coarse to medium sand, some silt, medium dense, poorly graded, saturated SM	SS-15 28.0-30.0 24"R	7 7 18 9
			Gray coarse to fine sand, trace coarse to fine gravel, some silt, medium dense, well graded, saturated SM	SS-16AB 30.0-32.0 22"R	13 16 17 100 +
493.3	31.5				
492.8	32.0		Gray shale		
			End of Boring at 32.0'		



NOTES & TEST RESULTS

Water level at 1.0' immediately after drilling.
Piezometer was installed immediatley after completion of drilling.
Refer to As-Built Diagram P-6D for more information.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/12/92** ENDED **8/12/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **6.0'** during drilling.
▽ **1.0'** after drilling.
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-6S** SHEET **1** OF **1**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,725.7 E 2,191.4**

LOGGED BY **KRR**
GROUND ELEVATION **524.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
524.9	0.0		Drilled to 4.0' without sampling. Refer to Boring Log P-6D for soil conditions from 0.0' to 4.0'.				Brown silty clay based on soil cuttings up to 4.0'.
520.9	4.0		Brown silty clay, trace to little fine sand, medium stiff, medium plasticity, wet CL	3T-1 4.0-6.0 14"R		✳	SS-2A: Gravel = 0% Sand = 14% Silt or clay = 86%
518.4	6.5		Gray clayey fine sand, some silt, loose, poorly graded, saturated SC	SS-2AB 6.0-8.0 24"R	2 1 1 2	✳ 23.4 22.6	Water level at 7.0' during drilling
517.4	7.5		Brown and tan silty clay to clayey silt, little fine sand, soft to medium stiff, medium plasticity, wet CL/CL-ML	SS-3AB 8.0-10.0 20"R	2 2 1 2	✳ 21.0 28.2	Water level at 3.0' immediately after drilling.
515.4	9.5		2" fine sand lense at 8.5'			27.6	Piezometer was installed immediately after completion of drilling. Refer to As-Built Diagram P-6S for more details.
514.9	10.0		Gray silty clay, trace fine sand, medium stiff, medium plasticity, wet CL				
			End of Boring at 10.0'				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/12/92** ENDED **8/12/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **7.0'** during drilling.
▽ **3.0'** after drilling.
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-6R** SHEET **1** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,719.5 E 2,175.7**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
524.8	0.0		Drilled to top of bedrock at 32.5 feet without sampling. Refer to Boring Log P-6D for soil conditions above top of bedrock.				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/5/92** ENDED **8/6/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-6R** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,719.5 E 2,175.7**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
504.8	20.0		Drilled to top of bedrock at 32.5 feet without sampling. Refer to Boring Log P-6D for soil conditions above top of bedrock.				
							Ceased drilling at 32.5' on 8/5/92. Switched to PQ coring and cored on 8/6/92.
492.3	32.5		Gray shale, massive, excellent	PQ-1 32.5-38.5 72"R			RQD = 100%
				PQ-2 38.5-42.5 48"R			RQD = 100%

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/5/92** ENDED **8/6/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-6R** SHEET **3** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,719.5 E 2,175.7**

LOGGED BY **KRR**
GROUND ELEVATION **524.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
484.8	40.0		Gray shale, massive, excellent				
482.3	42.5		End of Boring at 42.5'.				Piezometer P-6R was installed immediately after completion of drilling. Refer to as-built diagram P-6R for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **8/5/92** ENDED **8/6/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-7D** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,342.8 E 2,432.5**

LOGGED BY **KRR**
GROUND ELEVATION **526.5**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
526.5	0.0		Brown silty clay, trace fine sand, stiff to very stiff, medium plasticity, wet CL	AU-1 0.0-2.0		19.2	
			Mottled from 2.0'.	SS-2 2.0-4.0 24"R	3 3 4 5	17.6	SS-3: LL=33 PL=19 PI=14
				SS-3 4.0-6.0 24"R	2 3 4 4	21.7	
				SS-4 6.0-8.0 24"R	5 5 5 6	25.3	SS-4: CEC = 16.5 meq/100g
				3T-5 8.0-10.0 24"R		22.6	3T-5: Dry dens=101pcf k=2.0 E-07 cm/s
				SS-6AB 10.0-12.0 24"R	2 1 2 2	24.8	SS-6B: Gravel = 0% Sand = 52% Silt or Clay = 48%
515.0	11.5						
514.5	12.0		Brown clayey fine sand, little silt, loose, poorly graded, moist SC	SS-7 12.0-14.0 24"R	2 2 3 3	23.1 28.9	
			Gray silty clay, trace fine sand, soft to stiff, low to medium plasticity, wet CL	SS-8 14.0-16.0 24"R	WOH 1 1 1	26.9	SS-8: LL = 29 PL = 22 PI = 7
				SS-9 16.0-18.0 24"R	2 2 2 2	25.1	
				SS-10 18.0-20.0 24"R	WOH 1 1 1	23.6	
506.5	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/30/92** ENDED **7/30/92**

REMARKS
WOH - Weight of Hammer.

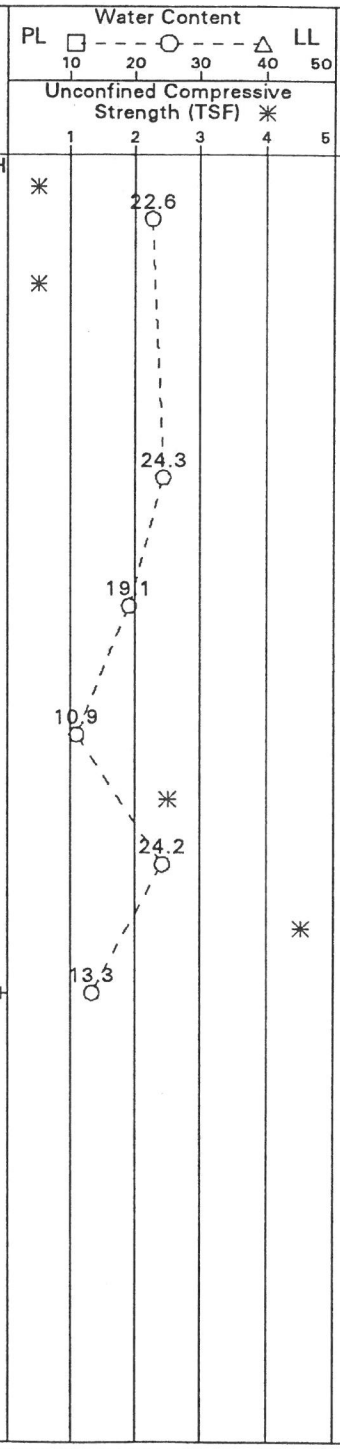
WATER LEVEL (ft.)
▽ **20.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-7D** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 5,342.8 E 2,432.5**

LOGGED BY **KRR**
GROUND ELEVATION **526.5**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS
506.5	20.0		Gray silty clay, trace fine sand, soft, low to medium plasticity, wet CL	SS-11 20.0-22.0 24"R	WOH 1 1 1
				3T-12 22.0-24.0 20"R	
502.5	24.0		Gray clayey silt, some fine sand, loose, poorly graded, saturated CL-ML	SS-13 24.0-26.0 24"R	1 2 1 3
500.5	26.0		Gray fine sand, some silt, very loose, poorly graded, saturated SM	SS-14 26.0-28.0 18"R	1 1 1 1
				SS-15 28.0-30.0 20"R	1 1 1 3
497.5	29.0		Gray coarse to fine sand, some coarse to fine gravel, little silt, loose, well graded, saturated SW-SM/SM	SS-16 30.0-32.0 20"R	2 2 4 11
495.5	31.0		Gray silty clay to clay, trace fine sand, very stiff to hard, medium to high plasticity, moist CL/CH	SS-17 32.0-34.0 15"R	28 115 200+ /3"
494.0	32.5				
493.3	33.2		Gray shale		
			End of Boring at 33.2'.		



NOTES & TEST RESULTS

Water level at 20.0' during drilling.

SS-13:
Gravel = 0%
Sand = 34%
Silt or Clay = 66%

SS-16:
Gravel = 27%
Sand = 59%
Silt or clay = 14%

Piezometer was installed immediately after completion of drilling.
Refer to as-built diagram P-7D for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/30/92** ENDED **7/30/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **20.0'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-7S** SHEET **1** OF **1**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,337.1 E 2,426.3**

LOGGED BY **KRR**
GROUND ELEVATION **526.3**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
526.3	0.0		Drilled to 10.0' without sampling. Refer to Boring Log P-7D for soil conditions from 0' to 10'.				Soil conditions from 0' to 10' were consistent with the soil conditions encountered at P-7D based on soil cuttings.
516.3	10.0						
515.8	10.5		Brown mottled silty clay, trace fine sand, stiff, medium plasticity, wet	SS-1ABC 10.0-12.0 24"R	3	✳	SS-1B: Gravel = 0% Sand = 43% Silt or Clay = 57%
515.3	11.0		CL		2		
			Gray clayey silt to clayey sand, loose, poorly graded, moist		2	✳ 24.3 ○	
514.1	12.2		SC/ML		2	✳	
			Brown silty clay, trace fine sand, stiff, medium plasticity, wet	SS-2 12.0-14.0 24"R	2		Water was not encountered during or immediately after drilling.
			CL		3		
512.3	14.0		Gray silty clay, medium fine sand, stiff, medium plasticity, wet		3	28.1 ○	
			CL		4		Piezometer P-6S was installed after completion of drilling. Refer to as-built diagram P-6S for details.
			End of Boring at 14.0'.				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/30/92** ENDED **7/30/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-7M** SHEET **1** OF **1**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,337.0 E 2,432.8**

LOGGED BY **KRR**
GROUND ELEVATION **525.9**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
525.9	0.0		Drilled to 16.0' without sampling. Refer to Boring Log P-6D for soil conditions from 0' to 16'.				Soil conditions from 0' to 16' were consistent with soil conditions in P-6D based on soil cuttings.
							3T-2: Dry dens. = 101 pcf k = 1.5 E-07 cm/s
509.9	16.0		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-1 16.0-18.0 24"R	1 1 1 2	✳	Piezometer P-7M was installed immediately after completion of drilling. Refer to as-built diagram P-7M for more details.
				3T-2 18.0-20.0 20"R		✳	
505.9	20.0		End of Boring at 20.0'.				

Unconfined Compressive Strength (TSF): 22.0, 20.1, 22.5

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/30/92** ENDED **7/30/92**

REMARKS

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **P-7R** SHEET **1** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,326.9 E 2,424.5**

LOGGED BY **KRR**
GROUND ELEVATION **525.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
525.4	0.0		Drilled to 34.0' (auger refusal) without sampling. Refer to Boring Log P-7D for soil conditions from 0' to 34'.				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/31/92** ENDED **7/31/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-7R** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,326.9 E 2,424.5**

LOGGED BY **KRR**
GROUND ELEVATION **525.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
505.4	20.0		Drilled to 34.0' (auger refusal) without sampling. Refer to Boring Log P-7D for soil conditions from 0' to 34'.				Soil conditions are consistent with soil conditions encountered at P-7D based on soil cuttings.
491.4	34.0		Gray shale, massive, strongly cemented, excellent	PQ-1 34.0-39.0 60"R			Changed to PQ coring from 34.0'. RQD = 100%
				PQ-2 39.0-44.0			

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/31/92** ENDED **7/31/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-7R** SHEET **3** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 5,326.9 E 2,424.5**

LOGGED BY **KRR**
GROUND ELEVATION **525.4**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
485.4	40.0		Gray shale, massive, stongly cemented, excellent	60"R			RQD = 100%
481.4	44.0		End of Boring at 44.0'.				Piezometer was installed immediately after completion of coring. Refer to as-built diagram P-7R for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **6-1/4" I.D. HSA.**
DRILLING EQUIPMENT **CME-55/ATV**
DRILLING STARTED **7/31/92** ENDED **7/31/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER P-8D SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 4,939.7 E 2,482.7

LOGGED BY KRR
GROUND ELEVATION 522.7

ELEVATION	DEPTH (FT)	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
522.7	0.0	Brown to brownish-gray silty clay, trace fine sand, stiff, medium plasticity, wet, fill CL	AU-1 0.0-2.0		25.3	
			SS-2 2.0-4.0 8"R	2 2 3 3	✳ 19.3	
518.2	4.5	Dark gray organic silty clay, trace fine sand, wood fragments present, soft, medium plasticity, wet to saturated, fill OL	SS-3 4.0-6.0 10"R	1 2 1 1	✳ 34.3	
		Chunks of wood in SS-4	SS-4 6.0-8.0 8"R	1 2 1 1	25.3	SS-4: LL = 37 PL = 21 PI = 16
514.7	8.0	Gray silty sand, little clay, loose, poorly graded, moist, fill SM	SS-5AB 8.0-10.0 24"R	2 1 2 2	21.3	
513.9	8.8	Gray clayey sand, little silt, loose, poorly graded, moist, fill SC			27.7	
513.2	9.5	Dark gray to black organic silty clay, wood fragments present, medium to high plasticity, wet to saturated, fill OL/OH	SS-6 10.0-12.0 20"R	1 1 1 2	47.3	Water level at 10.0' during drilling.
510.5	12.2	Chunks of wood and lenses of sand in SS-6	SS-7 12.0-14.0 24"R	1 1 2 1	495.7 ✳	
		Gray silty clay, trace fine sand, soft, medium plasticity, wet CL	SS-8 14.0-16.0 24"R	1 1 1 1	✳ 24.8	
			3T-9 16.0-18.0 20"R		✳ 22.8	
			3T-10 18.0-20.0 0"R			Tube pushed but no recovery.

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME 55/ATV
DRILLING STARTED 8/13/92 ENDED 8/13/92

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ 10.0' during drilling
▼ 8.0' after drilling

PATRICK ENGINEERING INC.

BORING NUMBER P-8D SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 4,939.7 E 2,482.7

LOGGED BY KRR
GROUND ELEVATION 522.7

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
502.7	20.0		Gray silty clay, trace to little fine sand, soft, medium plasticity, wet CL	3T-11 20.0-22.0 14"R			
500.7	22.0						
499.9	22.8		Gray silty fine sand, very loose, poorly graded, saturated SM	SS-12AB 22.0-24.0 24"R	WOH WOH WOH		SS-13A Gravel = 34% Sand = 50% Silt or clay = 16%
			Gray coarse to fine sand and coarse to fine gravel, little silt, medium dense, well graded, saturated SW-SM/SM	SS-13AB 24.0-26.0 24"R	13 15 16 12 12	✳	
497.2	25.5		Gray silty clay, trace fine sand, hard, medium to high plasticity, moist CL/CH	SS-14 26.0-27.0 6"R	10 28 100+	18.2 ○ / 13/8 ○	
496.2	26.5						
495.7	27.0		Gray shale				
			End of Boring at 27.0'				Auger refusal at 27'. Water level at 8.0' immediately after drillling. Piezometer was installed immediately after drilling. Refer to As-Built Diagram P-8D for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/13/92** ENDED **8/13/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽ **10.0'** during drilling
▽ **8.0'** after drilling
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-8S** SHEET **1** OF **1**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,933.1 E 2,486.0**

LOGGED BY **KRR**
GROUND ELEVATION **522.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
522.8	0.0		Drilled to 6.0' without sampling. Refer to Boring Log P-8D for soil conditions from 0.0' to 6.0'.				
516.8	6.0		Dark gray silty clay, trace fine sand, organics and wood fragments present, soft, medium plasticity, wet, fill OL	SS-1 6.0-8.0 8"R	1 1 1 1	27.6	
514.8	8.0		Gray clayey fine sand, little silt, loose, poorly graded, moist SC	SS-2AB 8.0-10.0 14"R	1 2 1 2	24.7	
513.3	9.5		Dark gray to black organic silty clay, trace medium to fine sand, wood fragments present, soft, medium plasticity, wet to saturated OL	SS-3 10.0-12.0 16"R	1 2 1 2	89.0 41.0	SS-3: Gravel = 0% Sand = 12% Silt or clay = 26%
510.8	12.0		End of Boring at 12.0'				Water was not encountered during or immediately after drilling. Piezometer was installed after completion of drilling. Refer to As-Built Diagram P-8S for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 55/ATV**
DRILLING STARTED **8/13/92** ENDED **8/13/92**

REMARKS
WOH - Weight of Hammer.

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-9D** SHEET **1** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,446.3 E 2,422.4**

LOGGED BY **KRR**
GROUND ELEVATION **553.2**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
553.2	0.0		Dark brown silty clay, trace fine sand, low plasticity, moist, fill				
			CL				
551.7	1.5		Brown mottled silty clay, trace fine sand, stiff to hard, medium plasticity, moist, fill	AU-1 1.0-1.5		14.8	
			CL	SS-2 2.0-4.0 12"R	2 2 4 5	18.1	
			Trace sulfur waste	SS-3 4.0-6.0 12"R	3 4 5 7	16.1	
				SS-4 6.0-8.0 18"R	3 3 6 10	15.1	
				SS-5 8.0-10.0 18"R	4 5 6 8	15.4	
				SS-6 10.0-12.0 18"R	4 5 5 7	20.5	
				SS-7 12.0-14.0 4"R	2 2 4 5	16.4	
				3T-8 14.0-16.0 24"R			3T-8: Dry Den. = 102.3 pcf k = 1.3 E-08 cm/s
				SS-9 16.0-18.0 18"R	3 4 6 6	19.5	
534.7	18.5			SS-10 18.0-20.0 12"R	4 6 9 11	18.7	
			Dark brown silty clay, trace fine sand, very stiff, low to medium plasticity, moist to wet, fill				
533.2	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 75**
DRILLING STARTED **8/18/92** ENDED **8/18/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ **32.5'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **P-9D** SHEET **2** OF **3**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,446.3 E 2,422.4**

LOGGED BY **KRR**
GROUND ELEVATION **553.2**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
533.2	20.0		CL Dark brown silty clay, trace fine sand, very stiff, low to medium plasticity, moist to wet, fill	SS-11 20.0-22.0 18"R	7 10 14 16	19.9	
			CL	SS-12 22.0-24.0 12"R	3 3 4 8	22.7	
				SS-13 24.0-26.0 18"R	2 3 4 6	22.7	
526.9	26.3		Brown silty clay, trace fine sand, stiff, medium plasticity, wet CL	SS-14 26.0-28.0 20"R	2 3 3 4	25.0	
				SS-15 28.0-30.0 24"R	1 2k 2 3	24.6	
				SS-16 30.0-32.0 24"R	WOH WOH 2 3	25.6	
521.2	32.0		Gray silty clay, trace fine sand, medium stiff, medium plasticity, wet CL	SS-17 32.0-34.0 24"R	WOH WOH WOH WOH	28.3	Water level at 32.5 feet during drilling.
				SS-18 34.0-36.0 24"R	WOH WOH 1 3	23.9	
				SS-19 36.0-38.0 24"R	WOH WOH 1 2	26.9	
514.6	38.6		Gray silty clay to clayey silt and medium to fine sand, very soft, medium plasticity, wet	SS-20 38.0-40.0 24"R	WOH WOH 2 3	32.8	
513.2	40.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME 75**
DRILLING STARTED **8/18/92** ENDED **8/18/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ **32.5'** during drilling.
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER P-9D SHEET 3 OF 3
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 4,446.3 E 2,422.4

LOGGED BY KRR
GROUND ELEVATION 553.2

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
513.2	40.0		CL/CL-ML Gray silty clay to clayey silt and medium to fine sand, very soft, medium plasticity, wet CL/CL-ML	SS-21 40.0-42.0 24"R	WOH WOH WOH 1	29.6	
				SS-22 42.0-44.0 24"R	WOH WOH WOH 2	✳ 24.1	
				SS-23 44.0-46.0 24"R	WOH WOH WOH WOH	24.9	
				SS-24 46.0-48.0 24"R	WOH WOH WOH WOH	✳ 24.4	
				SS-25 48.0-50.0 24"R	WOH WOH 1 2	✳ 21.3	
				SS-26 50.0-52.0 24"R	WOH WOH WOH WOH	✳ 20.7	SS-26: Gravel = 0% Sand = 33% Silt = 53% Clay = 14%
501.2	52.0		Gray silty sand, very loose, poorly graded, saturated SM	SS-27 52.0-54.0 24"R	WOH WOH 1 1		SS-29A Gravel = 22% Sand = 66% Silt or clay = 12%
				SS-28 54.0-56.0 24"R	WOH WOH 3 7		
497.9	55.3		Gray coarse to fine sand, some fine gravel, very loose to loose, poorly graded, saturated SP-SM/SM	SS-29AB 56.0-58.0 24"R	6 9 17 32		
495.7	57.5		Gray shale				Piezometer was installed immediately after drilling. Refer to As-built Diagram P-9D for details.
495.2	58.0		End of Boring at 58.0'				

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" I.D. HSA
DRILLING EQUIPMENT CME 75
DRILLING STARTED 8/18/92 ENDED 8/18/92

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽ 32.5' during drilling.
▼
▼

PATRICK ENGINEERING INC.

BORING NUMBER **P-9S** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill-Hydrogeo. Invest. - 496B**
LOCATION **N 4,447.3 E 2,415.6**

LOGGED BY **SAS**
GROUND ELEVATION **553.1**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
553.1	0.0		Drilled to 34' without sampling. See Boring Log P-9D for details.				

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" ID HSA**
DRILLING EQUIPMENT **CME 75**
DRILLING STARTED **8/19/92** ENDED **8/19/92**

REMARKS

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER P-9S SHEET 2 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 4,447.3 E 2,415.6

LOGGED BY KRR
GROUND ELEVATION 553.1

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
533.1	20.0						
519.1	34.0		Gray silty clay, trace fine sand, medium stiff, medium plasticity, moist to wet CL	3T-1 34.0-36.0 24"R		✳ 24.1 ○	3T-1: Dry dens. = 101.2 pcf k = 1.3 E-06cm/s
516.1	37.0		End of Boring at 37.0'				

DRILLING CONTRACTOR Patrick Drilling
DRILLING METHOD 4-1/4" ID HSA
DRILLING EQUIPMENT CME 75
DRILLING STARTED 8/19/92 ENDED 8/19/92

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)

PATRICK ENGINEERING INC.

BORING NUMBER **LP-1** SHEET **1** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,326.5 E 2,639.9**

LOGGED BY **JSV**
GROUND ELEVATION **564.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
564.6	0.0		Intermediate cover, fill				
563.6	1.0		Light gray sludge, fill				
551.6	13.0		Gray sludge, dry, fill	SS-1 13.0-15.0 19"R	4 7 8 6		
544.6	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4" I.D. HSA**
DRILLING EQUIPMENT **CME-75/ATV**
DRILLING STARTED **7/25/92** ENDED **7/25/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **LP-1** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,326.5 E 2,639.9**

LOGGED BY **JSV**
GROUND ELEVATION **564.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
544.6	20.0		Dark gray sludge, saturated, fill	SS-2 20.0-22.0 22"R	6 10 7 6		
542.6	22.0		End of Boring at 22.0'.				Leachate piezometer was installed immediatelt after completion of drilling. Refer to as-built diagram LP-1 for details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4" I.D. HSA**
DRILLING EQUIPMENT **CME-75/ATV**
DRILLING STARTED **7/25/92** ENDED **7/25/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER LP-2 SHEET 1 OF 2
CLIENT City of Springfield CWLP
PROJECT & NO. FGDS Landfill - Hydrogeo Invest. - 496B
LOCATION N 4,257.5 E 2,365.8

LOGGED BY JSV
GROUND ELEVATION 568.2

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
568.2	0.0		Intermediate cover, fill				
567.2	1.0		Light gray sludge, fill				
555.2	13.0		Light gray sludge, dry, fill	SS-1 13.0-15.0 15"R	9 34 60		
548.2	20.0						

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-75/ATV**
DRILLING STARTED **7/25/92** ENDED **7/25/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽
▽
▽

PATRICK ENGINEERING INC.

BORING NUMBER **LP-2** SHEET **2** OF **2**
CLIENT **City of Springfield CWLP**
PROJECT & NO. **FGDS Landfill - Hydrogeo Invest. - 496B**
LOCATION **N 4,257.5 E 2,365.8**

LOGGED BY **JSV**
GROUND ELEVATION **568.2**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content PL □ - - - ○ - - - △ LL (10 20 30 40 50) / Unconfined Compressive Strength (TSF) ✳ (1 2 3 4 5)	NOTES & TEST RESULTS
548.2	20.0		Light gray sludge, saturated, fill	SS-2 20.0-22.0 19"R	9 10 12 26		
546.2	22.0		End of Boring at 22.0'.				Leachate piezometer was installed immediately after completion of drilling. Refer to as-built diagram LP-2 for more details.

DRILLING CONTRACTOR **Patrick Drilling**
DRILLING METHOD **4-1/4" I.D. HSA**
DRILLING EQUIPMENT **CME-75/ATV**
DRILLING STARTED **7/25/92** ENDED **7/25/92**

REMARKS
WOH = Weight of Hammer.

WATER LEVEL (ft.)
▽
▽
▽

APPENDIX A2:
FGDS UNIT 2 LANDFILL MONITOR WELL LOGS

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-101

Project Name: Monitoring Well Installations Date of Boring: January 15, 1990

Site: CWLP Ash Disposal Facility Project No.: 020-05001

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
*Note 1							
Silty clay to clayey silt, light brown, light grey	5	1-SS	35%				
		2-SS	100%				
	10						
13.0'-13.2': Brown sand, fine to medium		3-SS	75%				While Drilling
Silty clay, grey, mottled brown	15						
		4-SS	100%				
Silt to clayey silt, grey, brown, some sand, fine to medium	20						
		5-SS	100%				
	25						
		6-SS	100%				
	30						
Shale, grey, brown (weathered)		7-SS	100%				
End of Boring							
*Note 1: 0"-6" Brown silty clay with organics							

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-102

Project Name: Monitoring Will Installations Date of Boring: January 11, 1990

Site: CWLP Ash Disposal Facility Project No.: 020-05001

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
*Note 1							
Clayey silt, light brown, light grey	5	1-SS	100%				
		2-SS	80%				
Silty clay, grey, mottled brown	10	3-SS	100%				
Clayey silt to silt, dark grey, some sand, fine	15	4-SS	100%				
	20	5-SS	75%				▽ While Drilling
	25	6-SS	100%				
	30	7-SS	75%				
	35						
Sand, fine to medium, grey		8-SS	100%				
Shale, grey, weathered							
End of Boring							

*Note 1: Dark brown silty clay with organcis

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-103

Project Name: Monitoring Well Installations Date of Boring: January 13, 1990

Site: CWLP Ash Disposal Facility Project No.: 020-05001

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
*Note 1							
Clayey silt, light brown, light grey, with white streaks	5	1-SS	100%				
	10	2-SS	100%				
		3-SS	100%				
	15						While Drilling ▽
19'-19.5' - Grey sand, fine		4-SS	100%				
Silty clay, some sand, fine, organics, grey	20	5-SS	100%				
(Coal fragments from 22'-29')	25	6-SS	100%				
Shale, grey, weathered	30	7-SS	100%				
End of Boring							

*Note 1: Black silty clay with organcis

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring G-104

Project Name: Monitoring Well Installations Date of Boring: January 12, 1990

Site: CWLP Ash Disposal Facility Project No.: 020-05001

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Clayey silt with coal fragments, organics, mottled brown	5	1-SS	100%				
		2-SS	100%				
	10						
Silty clay, black to dark brown, some organics to 16'		3-SS	75%				
	15						
		4-SS	100%				While Drilling ▽
	20						
Grey sand, fine to coarse		5-SS	60%				
Silty clay, trace sand, grey	25						
		6-SS	100%				
Silty sand, grey, fine to medium	30						
		7-SS	60%				
	35						
Shale, grey, weathered		8-SS	100%				
End of Boring							

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring G-105

Project Name: Monitoring Well Installations Date of Boring: January 9, 1990

Site: CWLP Ash Disposal Facility Project No.: 020-05001

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay to clayey silt, trace organics, brown (fill)	5	1-SS	20%				
	10	2-SS	35%				
		3-SS	25%				
Silty clay, drak grey to black, some organics	15						
Silty clay to clay, grey, mottled brown, trace sand	20	4-SS	100%				
		5-SS	40%				
Silty clay with sand, fine to medium, brown	25	6-SS	35%				
	30						▽ While Drilling
		7-SS	40%				
	35	8-SS	100%				
Silty clay, trace sand, dark grey, fine	40	9-SS	100%				
	45						

PSI A-100-9

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring G-105 (Continued)

Project Name: Monitoring Well Installations Date of Boring: January 9, 1990

Site: CWLP Ash Disposal Facility Project No.: 020-05001

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
Silty clay, some sand, fine, dark grey	45	10-SS	100%				
48'-48.7': Grey sand, fine to medium	50	11-SS	80%				
Shale, grey, weathered							
End of Boring							

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring G-106

Project Name: Monitoring Well Installations Date of Boring: February 23, 1990

Site: CWLP Ash Disposal Facility Project No.: 020-05001

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
Silty clay, brown, moist, trace organics	5	1-SS	75%			24	▽ 0 HR
Silty clay, grey, mottled brown		2-SS	100%			26	
Sand, fine to course, brown, wet	10	3-SS	100%			37	
Silty clay to clayey silt, grey, trace sand, fine	15					25	
		4-SS	100%			27	
	20	5-SS	100%			23	
	25						
Sand, fine to medium, trace silt, grey, wet		6-SS	70%				
	30						
		7-SS	50%				
Shale, grey, hard						9	
END OF BORING	35						

PSI A-100-9

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Coordinates
Northing: 3728.6
Easting: 2315.7

Boring Information:
Boring No.: G110
Well No.: G110
Surf. Elev.: 554.5
Depth Information:
Total: 59.5
Auger: 59.5
Rotary: N/A
Dates:
Start: 7/12/93
Finish: 7/12/93

Drilling Contractor:
Name: AE Exploration Corp.
City: Springfield, IL
Equipment: CME 55

Personel:
Geologist: B. Hunsberger
Driller: M. Moore
Helper (s): R. Smith

Sample Type: ▯ - Continuous Barrel ☒ - Split Spoon ⧄ - Shelby Tube ▮▮ - Core ▭ - Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	$q_u/[q_s]$ (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
										Gravel backfill-*access road.*		554.5
	1		1A	3.2'		3.5		Concrete Plug		Dark gray silty CLAY, little sand and gravel, with rootlets.		
5	2		2A			2.75						549.5
			2B			2.8 2.5				Dark gray-black clayey SILT, some fine sand, rootlets.		
			2C	5.0'		0.8				Dark gray-black silty CLAY, soft, with rootlets, some fine sand.		
10	3			1.4'								544.5
	4		4A			0.7 0.5		Cement/Bentonite Grout				
			5A	2.8'		0.65 3.25				Dark gray, very moist silty CLAY-clayey SILT, numerous plant and wood fragments *(appears to be original grade).*		
15	5					2.75						539.5
			5B			2.25 2.0						
				4.8'		2.8						
	6					1.8 2.2						
20						1.8						534.5

NOTE: ▽ = groundwater encountered while drilling.

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Helper (s): R. Smith

Sample Type: ▯ – Continuous Barrel ⊠ – Split Spoon ⁄ – Shelby Tube ▯▯ – Core ▯ – Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_u / [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
												534.5
	6		6A			1.7				Dark gray silty CLAY, moist, trace fine sand, little organics.		
			6B	5.0'		1.8						
	7									Gray mottled light gray-brown silty CLAY, little fine sand, some plant roots.		
25				2.0'								529.5
			8A			0.7						
	8					2.0						
			8B			1.2						
				3.0'		1.3						
						2.2						
			9A			2.2						
30												524.5
	9					2.2				Gray mottled brown silty CLAY, trace fine sand, little organics.		
						2.75						
						2.75						
			9B	5.0'		1.75						
						0.75						
			10A			0.3						
35												519.5
						0.2						
	10					0.2						
						*				Gray clayey SILT.		
						*						
				5.0'		*						
										Gray CLAY, very soft, some organic clay strata present. *(* The clay was too soft for the pocket penetrometer).*		
	11		11A									
40												514.5

Cement/Bentonite Grout

Bentonite Seal

NOTE: ▽ = groundwater encountered while drilling.

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Easting: 2315.7

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City: Springfield, IL
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Personel:
Geologist: B. Hunsberger
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Helper (s): R. Smith

Sample Type: ▯ – Continuous Barrel ☒ – Split Spoon ▨ – Shelby Tube ▮▮ – Core ▭ – Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	$q_u/[q_s]$ (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
								Bentonite Seal				514.5
	11		11B	5.0'						Gray fine silty SAND, little clay.		
45												509.5
	12		12A									
			12B	5.0'				Filter Pack and/or Formation Sand		Gray, fine clayey SAND, some silt.		
50												504.5
	13		13A									
				5.0'								
55												499.5
	14							Bentonite Seal		Gray shale with muscovite mica. *(Since there was no recovery in Run # 14, the bedrock contact was determined at the depth the down pressure increased from 300 psi to 1500 psi on the auger column.)*		
				0.0'								
	15	☒	15A		10							
			15A	0.7'	31							
60										E.O.B.=59.5 feet		494.5

NOTE: ▽ = groundwater encountered while drilling.

Andrews Environmental Engineering, Inc.
3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 4,445.0
Easting: 2,249.0

Boring Information:
Boring No.: G-111
Well No.: G-111
Surf. Elev.: 553.6
Depth Information:
Total: 59.60
Auger: 59.60
Rotary: 0.00
Dates:
Start: 7/20/93
Finish: 7/21/93

Drilling Contractor:
Name: AE Exploration Corp.
City: Springfield, IL
Equipment: CME 45 – 4¼" HSA /w 5 foot continuous barrel sampler.

Personel:
Geologist: R. Hasenyager
Driller: A. Weisenhofer
Helper (s): K. Doetzel

Sample Type: – Continuous Barrel – Split Spoon – Shelby Tube – Core – Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	$q_u/[q_s]$ (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
								Concrete Plug		Very dark brown, slightly moist, clayey SILT with roots, other organic matter, and trace sand.		553.6
	1									Brown, soft, slightly moist, silty CLAY, with trace sand.		
5				0.0								548.6
	2					3.25						
						4.50						
10				5.0				Cement/Bentonite Grout				543.6
	3					(1.50) 1.75				Dark brown, moist, plastic, silty CLAY, with trace sand.		
						0.75						
15				5.0						Brown, moist, plastic, silty CLAY, with trace sand.		538.6
	4			1.3						Brown mottled gray, moist, plastic, silty CLAY, With trace sand and organic matter.		
	5					1.75 (1.10) 1.00				Black dry, friable, clayey SILT, with no sand or pebbles.		
20				3.0								533.6

NOTE: ▽ = water level 13 hours after completion.
Torvane values are actual dial readings.

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

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AEEI No.: 93-118

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Coord. System: Site Grid
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Boring No.: G-111
Well No.: G-111
Surf. Elev.: 553.6
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Total: 59.60
Auger: 59.60
Rotary: 0.00
Dates:
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Finish: 7/21/93

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Name: AE Exploration Corp.
City: Springfield, IL
Equipment: CME 45 - 4¼" HSA /w 5 foot continuous barrel sampler.

Personel:
Geologist: R. Hasenyager
Driller: A. Weisenhofer
Helper (s): K. Doetzel

Sample Type: - Continuous Barrel - Split Spoon - Shelby Tube - Core - Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	$q_u/[q_s]$ (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
								Cement/Bentonite Grout				533.6
	6			2.0		[3.40]				Brown mottled gray, moist, plastic, silty CLAY,with trace sand and organics. *Soil sample contained 1,170 ppm sulfate.*		
	7											
25				3.0		2.10						528.6
	8											
30				5.0						▽-- *Free water during drilling* Brown, very moist, clayey SILT with some sand (fine-grained). *Very thin SAND (fine-grained) seam at 30.1'*		523.6
	9									Brown, mottled gray, very moist, clayey SILT, with some sand (fine- grained) and trace organics.		
35				5.0								518.6
	10			2.0		[0.85]				Gray, very moist, sandy SILT.		
	11					0.50				Reddish brown, moist clayey SILT, with trace organics.		
						0.75				Gray, very moist, clayey SILT, with sand (very fine- to fine- grained). *Sandier zones at 38.2'-38.3' and 38.5'-38.8'*		
40				3.0								513.6

NOTE: ▽= water level 13 hours after completion.
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Well No.: G-111
Surf. Elev.: 553.6
Depth Information:
Total: 59.60
Auger: 59.60
Rotary: 0.00
Dates:
Start: 7/20/93
Finish: 7/21/93

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Name: AE Exploration Corp.
City: Springfield, IL
Equipment: CME 45 - 4¼" HSA /w 5 foot continuous barrel sampler.

Personel:
Geologist: R. Hasenyager
Driller: A. Weisenhofer
Helper (s): K. Doetzel

Sample Type: - Continuous Barrel - Split Spoon - Shelby Tube - Core - Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Recov.	Blow Count	q_u /[q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
										Roots at 39.3'		513.6
	12			2.0						Gray, saturated, clayey SILT, with some sand (very fine-grained).		
	13					0.25 [0.35] 0.25						
45				5.0								508.6
										Gray, saturated, silty SAND (very fine- to fine-grained).		
	14									Gray, saturated, sandy SILT.		
										Gray, saturated, silty SAND (very fine- to fine-grained).		
50				5.0								503.6
										Gray, saturated, SAND (very fine- to fine-grained), with some silt.		
										Gray, saturated, silty SAND (very fine- to fine-grained).		
	15									Gray, very moist, interbedded clayey SILT, with some sand (very-fine grained) and silty SAND (very fine- to fine-grained).		
55				4.0	32					Gray, saturated, silty SAND (fine- to coarse-grained) and PEBBLE (very fine- to medium-grained).		498.6
	16				41							
					27							
				2.0	17							
	17				6					*Shale and sandstone fragments more abundant in lower 1.0'*		
					14							
				1.7	12							
	18				60+					Gray, slightly moist, hard, massive, SHALE. *Bedrock*		
60										*E.O.B. = 59.6 feet*		493.6

Borehole Detail: Cement/Bentonite Grout; Bentonite Seal; Filter Pack

NOTE: ▽ = water level 13 hours after completion.
Torvane values are actual dial readings.

SKS ENGINEERS, INC.
2900 N. MARTIN LUTHER KING JR. DRIVE
DECATUR, ILLINOIS 62526

SOIL BORING LOG

Date 05/26/2009

SKS Project No. 911607

ROUTE _____ DESCRIPTION CWLP / Landfill Well Replacement LOGGED BY T. Mathias/EK/AL

SECTION N/A LOCATION Springfield, IL SEC. ____ TWP. _____ RNG. _____ PM

COUNTY Sangamon DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Safety Hammer

STRUCT. NO. _____
Station _____

BORING NO. R111
Station _____
Offset _____
Ground Surface Elev. _____ ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft.
Upon Completion _____ ft
After _____ Hrs _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
GRASS							
BLIND DRILLED TO 44.5 FT.							
-5				-25			
-10				-30			
-15				-35			
-20				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

SKS ENGINEERS, INC.
2900 N. MARTIN LUTHER KING JR. DRIVE
DECATUR, ILLINOIS 62526

SOIL BORING LOG

Date 05/26/2009

SKS Project No. 911607

ROUTE _____ DESCRIPTION CWLP / Landfill Well Replacement LOGGED BY T. Mathias/EK/AL

SECTION N/A LOCATION Springfield, IL SEC. ____ TWP. _____ RNG. _____ PM

COUNTY Sangamon DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Safety Hammer

STRUCT. NO. _____
Station _____

BORING NO. R111
Station _____
Offset _____
Ground Surface Elev. _____ ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
BLIND DRILLED TO 44.5 FT.							
44.5 Gray, Saturated Sandy Silt				2" Groundwater Monitor Well Installed			
46.5 Saturated, Silty Fine Sand							
49.5 Gray, Saturated, Silty Fine Sand							
54.5 Gray, Saturated, Silty Fine Sand, with Gravel							
59.5 END OF BORING @ 59.5 FT.							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 4,450.9
Easting: 2,560.6

Boring Information:
Boring No.: G-112
Well No.: G-112
Surf. Elev.: 552.7
Depth Information:
Total: 57.80
Auger: 57.80
Rotary: 0.00
Dates:
Start: 7/21/93
Finish: 7/23/93

Drilling Contractor:
Name: AE Exploration Corp.
City: Springfield, IL
Equipment: CME 45 – 4¼" HSA /w 5 foot continuous barrel sampler.

Personel:
Geologist: R. Hasenyager
Driller: A. Weisenhofer
Helper (s): K. Doetzel

Sample Type: – Continuous Barrel – Split Spoon – Shelby Tube – Core – Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_u /[q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
										Very dark brown, slightly moist, clayey SILT with roots, other organic matter, and trace sand.		552.7
	1			0.0				Concrete Plug		Brown, soft, slightly moist, silty CLAY, with trace sand.		
5												547.7
	2			1.3								
10								Cement/Bentonite Grout				542.7
	3			5.0		1.25				Dark brown, slightly moist, plastic, silty CLAY, with trace sand.		
						1.00				Brown, moist, plastic, silty CLAY, with trace sand.		
15												537.7
	4			1.7		1.75				Brown mottled gray, moist, plastic, silty CLAY, with trace sand and organic matter.		
	5			3.0		1.50						
						4.25				Black, moist, friable, clayey SILT, with no sand or pebbles.		
20												532.7

NOTE: $\dot{\nabla}$ = water level 14 hours after completion.
Torvane values are actual dial readings.

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												532.7
	6			5.0		4.00 2.75 [1.00] 1.50		Cement/Bentonite Grout		Brown mottled gray, slightly moist, plastic, silty CLAY, with trace sand and organics.		
25	7			2.0								527.7
	8			3.0		0.50 0.50				Brown mottled gray, slightly moist, plastic, silty CLAY, with trace sand and organic matter. ▽-- *Free water during drilling*		
30	9			5.0		0.75 [0.38] [0.30] 0.50 0.75						522.7
35	10			5.0		[0.60] 1.25 1.25 [0.47]				Dark gray, moist, clayey SILT, with trace sand. Reddish brown, moist, clayey SILT, with trace organic matter. Greenish gray, very moist, silty CLAY, with trace sand. *High-angle, dry, parting surfaces at 38.7', 39.1', and 39.5'*		517.7
40												512.7

NOTE: ▽ = water level 14 hours after completion.
Torvane values are actual dial readings.

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Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	$q_u/[q_s]$ (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
												512.7
	11			3.0		0.50		Cement/Bentonite Grout		*Wood chips and small twigs at 41.4'*		
						0.25 [0.10]				Gray, very moist, clayey SILT, with trace sand. *Small (2-3 mm.)* Bivalvia *and* Gastropoda *throughout bed.*		
	12			2.0						Gray, saturated, soft, sandy SILT.		
45												507.7
	13			3.0		0.25 [0.22] 0.25				Gray, saturated, silty SAND (very fine- to fine-grained). Gray, very moist, plastic, sandy SILT.		
	14			2.0						Gray, saturated, silty SAND (very fine- to fine-grained). SAND (fine-grained) seams at 46.5' and 46.8'.		
50												502.7
	15			4.5		[0.35] 0.50 [0.30] 0.50 0.50		Bentonite Seal / Filter Pack		Gray, very moist, clayey SILT, with organics and trace sand. Thin SAND (fine-grained) seams at 53.7' and 53.9'. *Decreasing organic content with depth. No organics lower 0.5'.*		
55										Gray, very moist, sandy SILT.		497.7
	16			1.5						Gray, saturated, silty SAND (fine- to coarse-grained) and PEBBLE (very fine- to medium-grained). *Shale and sandstone fragments upper 0.3'*		
	17									Gray, slightly moist, hard, massive, SHALE. *Bedrock*		
60										*E.O.B. = 57.8 feet*		492.7

NOTE: ▼ = water level 14 hours after completion.
Torvane values are actual dial readings.

RAPPS

ENGINEERING and APPLIED SCIENCE

BORING LOG

821 SOUTH DURKIN – SPRINGFIELD IL 62704 – (217)787-2118

Site Name: FGDS Development Landfill — Boring No: AW-1

Drilling Firm: Reynolds Drilling Corp. — Drilling Method: HSA — Surface Elev: 552.85

Logged By: KJM — Checked By: KJM — Date Started: 12/29/08 — Completed: 12/30/08

DEPTH	Material Description Classification System	Sampling Tube No.	Type	% Rec.	Tests OVM (ppm)	Qu t/sf PEN	Moist	Comments	Well	DEPTH
0	Fill (not sampled)		5' CONTINUOUS SAMPLER					Blind drilled to 15'		0
15	Gray to brown silty clay fill; Moist; Soft to firm; Sand, pebbles & coal fragments	1		100						15
20	Plant debris	2		100						20
25	Dk. brown to gray clayey silt; Moist; Firm to hard; Laminated	3		100				Base of fill @ 23.6'		25
30										30

Water Level_____ after_____ hrs.

RAPPS

ENGINEERING and APPLIED SCIENCE

821 SOUTH DURKIN – SPRINGFIELD IL 62704 – (217)787-2118

BORING LOG

Site Name: FGDS Development Landfill — Boring No: AW-1

Drilling Firm: Reynolds Drilling Corp. — Drilling Method: HSA — Surface Elev: 552.85

Logged By: KJM — Checked By: KJM — Date Started: 12/29/08 — Completed: 12/30/08

DEPTH	Material Description Classification System	Sampling Tube No.	Type	% Rec.	Tests OVM (ppm)	Qu t/sf PEN	Moist	Comments	Well	DEPTH
30	Trace fine sand; Mottled	4	5' CONTINUOUS SAMPLER	100				Wet seam @ 32.2' Wet seam @ 33.3'		30
35	Softer	5		100						35
	Gray fine to coarse sand; Moist to wet; Clayey and silty zones; Trace gravel	6		90						
40										40
45		7		80						45
50	Pebbles									50
	Dark gray shale; Weathered/broken	8		25				Increased resistance		
55	End of boring @ 54.34'							Refusal		55
60										60

Water Level_____ after_____ hrs.

RAPPS

ENGINEERING and APPLIED SCIENCE

821 SOUTH DURKIN – SPRINGFIELD IL 62704 – (217)787-2118

BORING LOG

Site Name: FGDS Development Landfill — Boring No: AW-2

Drilling Firm: Reynolds Drilling Corp. — Drilling Method: HSA — Surface Elev: 526.68

Logged By: KJM — Checked By: KJM — Date Started: 1/2/09 — Completed: 1/2/09

DEPTH	Material Description Classification System_____	Sampling Tube No.	Type	% Rec.	Tests OVM (ppm)	Qu t/sf PEN	Moist	Comments	Well	DEPTH
0	Dark brown silty clay; Moist; Firm	1	5' CONTINUOUS SAMPLER	100						0
5	Sandy	2		100				Water on bit		5
10	Lt. brown to gray mottled clayey silt; Moist; Firm; Trace sand; Fe oxidation stains	3		100						10
	Dark gray silt; Moist; Firm									
15	Softer; Trace sand	4		100						15
20	Sandy	5		100				Wet seam @ 19' Wet seam @ 20.7'		20
25										25
	Gray fine to medium sand	6		100						
30										30

Water Level_____after_____hrs.

RAPPS

ENGINEERING and APPLIED SCIENCE

821 SOUTH DURKIN – SPRINGFIELD IL 62704 – (217)787-2118

BORING LOG

Site Name: FGDS Development Landfill — Boring No: AW-2

Drilling Firm: Reynolds Drilling Corp. — Drilling Method: HSA — Surface Elev: 526.68

Logged By: KJM — Checked By: KJM — Date Started: 1/2/09 — Completed: 1/2/09

DEPTH	Material Description Classification System	Sampling: Tube No.	Sampling: Type	Sampling: % Rec.	Tests: OVM (ppm)	Tests: Qu tsf PEN	Tests: Moist	Comments	Well	DEPTH
30	Gravelly @ base		5' CONTINUOUS SAMPLER							30
	End of Boring @ 32.22'	7		100				Refusal Broken shale in bit		
35										35
40										40
45										45
50										50
55										55
60										60

Water Level_____ after_____ hrs.

RAPPS

ENGINEERING and APPLIED SCIENCE

821 SOUTH DURKIN – SPRINGFIELD IL 62704 – (217)787-2118

BORING LOG

Site Name: FGDS Development Landfill — Boring No: AW-3

Drilling Firm: Reynolds Drilling Corp. — Drilling Method: HSA — Surface Elev: 537.75

Logged By: KJM — Checked By: KJM — Date Started: 12/30/08 — Completed: 12/31/08

DEPTH	Material Description Classification System	Sampling Tube No.	Type	% Rec.	Tests OVM (ppm)	Qu t/sf PEN	Moist	Comments	Well	DEPTH
0	Dark brown clayey silt; Moist; Firm; Organic debris & plant roots									0
	Gray to brown mottled silty clay; Moist; Firm; Trace sand; Laminated; Fe oxidation stains	1	5' CONTINUOUS SAMPLER	100						
5		2		100						5
10		3		95				Wet seam @ 11.5'		10
15	Gray sandy clay; Moist; Firm; Finely laminated	4		95				Water on rods		15
20										20
	Dark gray sandy silt; Moist; Soft to firm; Some clay	5		80						
25		6		30				No recovery 26.5'–30'		25
30										30

Water Level_____ after_____ hrs.

RAPPS

ENGINEERING and APPLIED SCIENCE

821 SOUTH DURKIN – SPRINGFIELD IL 62704 – (217)787-2118

BORING LOG

Site Name: FGDS Development Landfill — Boring No: AW-3

Drilling Firm: Reynolds Drilling Corp. — Drilling Method: HSA — Surface Elev: 537.75

Logged By: KJM — Checked By: KJM — Date Started: 12/30/08 — Completed: 12/31/08

DEPTH	Material Description Classification System	Sampling Tube No.	Type	% Rec.	Tests OVM (ppm)	Qu t/sf PEN	Moist	Comments	Well	DEPTH
30	Dark gray silt; Trace sand	7	5' CONTINUOUS SAMPLER	100						30
35	Sandy									35
	Gray fine to medium silty sand; Wet; Gravelly @ base	8		100						
40	Gray shale							Broken shale in bit No recovery past 40'		40
	End of Boring @ 41.83'	9		0				Refusal		
45										45
50										50
55										55
60										60

Water Level _____ after _____ hrs.

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power - FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,612.8
Easting: 2,130.0

Weather:
Sunny, calm, warm (hi-80's)

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 - 4¼" HSA /w 5 foot continuous barrel sampler.

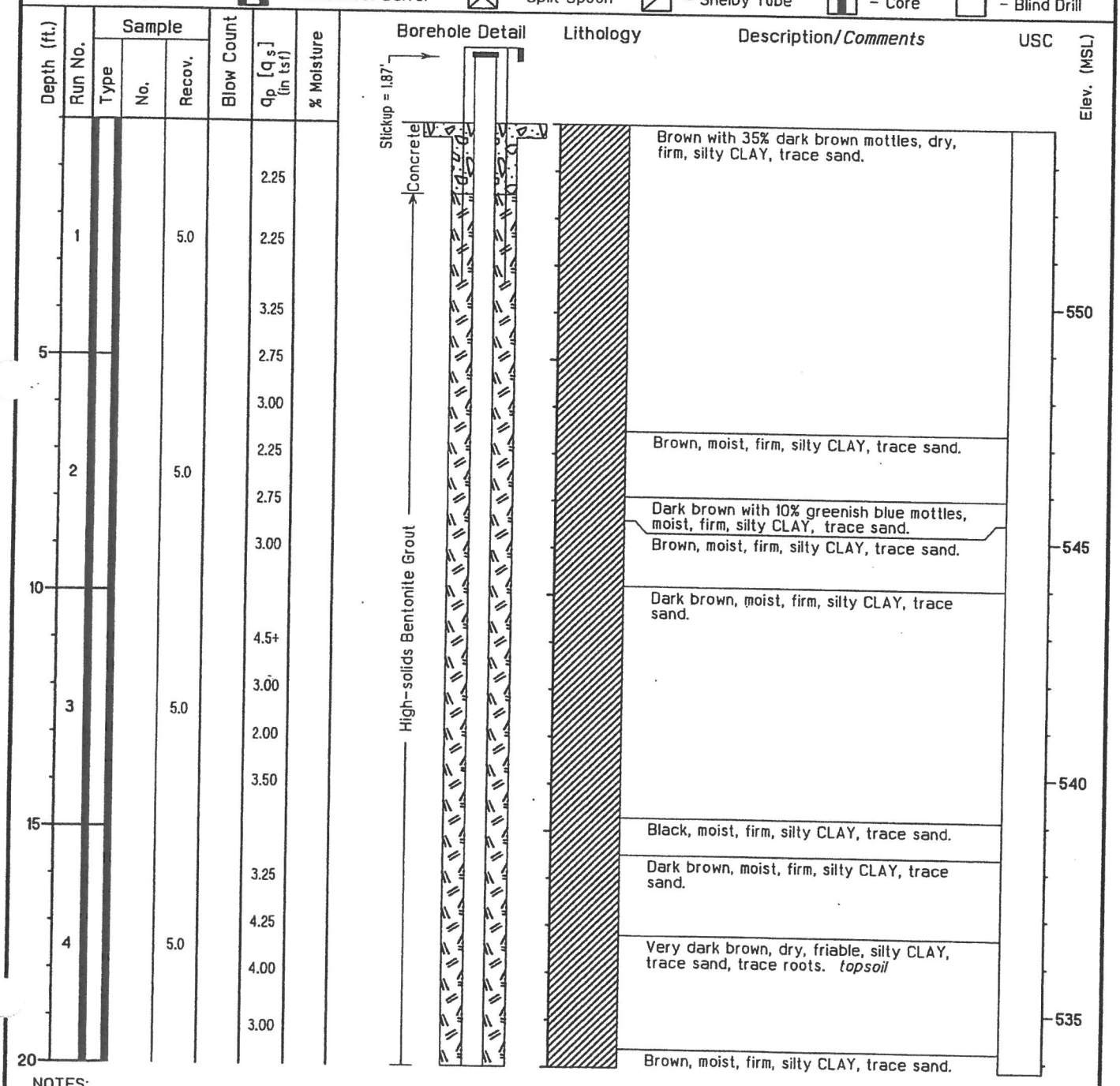
Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Boring Information:
Boring No.: B96-1
Well No.: G-121
Surf. Elev.: 553.80

Depth Information:
Total: 56.70
Auger: 56.70
Core: 0.00

Dates:
Start: 05/17/96
Finish: 05/17/96

Sample Type: ▮ - Continuous Barrel ⊠ - Split Spoon ⧄ - Shelby Tube ▮ - Core □ - Blind Drill



NOTES:

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power – FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,612.8
Easting: 2,130.0

Weather:
Sunny, calm, warm (hi-80's)

Boring Information:
Boring No.: B96-1
Well No.: G-121
Surf. Elev.: 553.80

Depth Information:
Total: 56.70
Auger: 56.70
Core: 0.00

Dates:
Start: 05/17/96
Finish: 05/17/96

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 – 4¼" HSA /w 5 foot continuous barrel sampler.

Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Sample Type: – Continuous Barrel – Split Spoon – Shelby Tube – Core – Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Molsture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
						3.00				Brown, moist, firm, silty CLAY, trace sand.		
	5			5.0		2.00						
						1.75				Brown with 40% greenish brown mottles, moist, soft, silty CLAY, trace sand, trace roots.		
						0.75				Greenish brown, very moist, soft, silty CLAY, trace sand.		530
25						<.50				Light brown with 15% greenish brown mottles, very moist, firm, silty CLAY, trace sand.		
	6			5.0		2.50						
						2.50						
						2.00						525
						2.50						
30						2.00						
						<.50				Light brown with 20% light gray mottles, very moist, soft, silty CLAY, trace sand.		
	7			5.0		1.25						
						1.75						
						3.75				Gray, moist, hard, silty CLAY, with sand.		520
35						1.00				Very dark brown, moist, soft, clayey SILT, trace plant fragments.		
						<.50				Dark gray, moist, soft, clayey SILT, trace plant fragements. *more clayey with depth*		
	8			5.0		<.50				Very dark gray, moist, soft, silty CLAY, with very fine-grained sand.		
						<.50						515
40						<.50						

High-solids Bentonite Grout

NOTES:

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power - FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,612.8
Easting: 2,130.0

Weather:
Sunny, calm, warm (hi-80's)

Boring Information:
Boring No.: B96-1
Well No.: G-121
Surf. Elev.: 553.80

Depth Information:
Total: 56.70
Auger: 56.70
Core: 0.00

Dates:
Start: 05/17/96
Finish: 05/17/96

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 - 4¼" HSA /w 5 foot continuous barrel sampler.

Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Sample Type: - Continuous Barrel - Split Spoon - Shelby Tube - Core - Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
						1.00				Very dark gray, moist, soft, silty CLAY, with very fine-grained sand.		
	9			5.0		1.00						
						1.50						
						1.00				Very dark gray, very moist, soft to firm, sandy/silty CLAY.		510
45						1.00						
						1.00				Very dark gray, very moist, soft, silty CLAY, with very fine-grained sand.		
	10			5.0								
						1.00				Very dark gray, very moist, soft to firm, sandy/silty CLAY.		505
50												
	11			5.0						Very dark gray, wet, soft, clayey, very fine- to fine-grained SAND.		
										Dark gray, very moist, soft, sandy CLAY.		
			11A							Gray, wet, fine- to medium-grained SAND.		500
55					31					Gray, moist, firm, clayey SILT, with sand and rock fragments.		
	12			1.8	34 35 48	4.5+				Gray, dry, hard, SHALE.		
										Gray, dry, hard, fine-grained, SANDSTONE.		
60										*End of Boring = 56.70 feet (497.10' MSL)*		495

Borehole Detail: High-solids Bentonite Grout; Bentonite Chips; Filter Pack

NOTES:

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power – FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,613.2
Easting: 2,305.1

Weather:
Sunny, calm, warm (hi-80's)

Boring Information:
Boring No.: B96-2
Well No.: G-122
Surf. Elev.: 552.70

Depth Information:
Total: 58.40
Auger: 58.40
Core: 0.00

Dates:
Start: 05/20/96
Finish: 05/20/96

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 – 4¼" HSA /w 5 foot continuous barrel sampler.

Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Sample Type: – Continuous Barrel – Split Spoon – Shelby Tube – Core – Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
0						3.50		Stickup = 1.74'		Brown, moist, firm, silty CLAY, trace sand.		
	1			4.7		3.00		Concrete		Very dark brown, moist, firm, silty CLAY, trace sand.		
						3.00						550
						4.5+				Brown, moist, hard to firm, silty CLAY, trace sand.		
5						3.50						
	2			5.0		2.50						
						3.00						
						3.00				Very dark brown with 40% brown mottles, moist, firm, silty CLAY, trace sand.		
						4.5+						545
10						4.00						
						3.25				Brown, moist, firm, silty CLAY, trace sand.		
	3			5.0		2.25						
						2.50				Dark brown with 50% brown mottles, moist, firm, silty CLAY, trace sand.		
						1.25						540
15						2.25				Very dark brown, firm, moist, silty CLAY, trace sand.		
						3.50						
	4			5.0		4.25				Brown, moist, soft, silty CLAY, trace sand.		
						3.25				Dark brown, moist, soft, silty CLAY, trace sand.		
						3.00						535
20	5					4.00		High-solids Bentonite Grout		Very dark brown, dry, friable, clayey SILT, trace sand.		

NOTES:

Andrews Environmental Engineering, Inc.
3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power - FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,613.2
Easting: 2,305.1

Weather:
Sunny, calm, warm (hi-80's)

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 - 4¼" HSA /w 5 foot continuous barrel sampler.

Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Boring Information:
Boring No.: B96-2
Well No.: G-122
Surf. Elev.: 552.70

Depth Information:
Total: 58.40
Auger: 58.40
Core: 0.00

Dates:
Start: 05/20/96
Finish: 05/20/96

Sample Type: ▮ - Continuous Barrel ⊠ - Split Spoon ⧄ - Shelby Tube ▮ - Core ☐ - Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
						2.00				Very dark brown, dry, friable, clayey SILT, trace sand.		
	5			5.0		2.50						
						3.00						530
						3.00						
25						2.75				Black, dry to slightly moist, friable, clayey SILT, trace sand.		
						2.25				Very dark brown, moist, firm to soft, silty CLAY, trace sand.		
	6			5.0		1.00						
						<.50						525
						<.50				Dark brown, very moist, soft, silty CLAY, trace sand.		
30						<.50						
						<.50				Brownish gray, very moist, soft, silty CLAY, trace sand.		
	7			5.0		<.50						
						1.00						520
						1.00						
						1.00				Gray with 25% reddish brown mottles, very moist, soft, silty CLAY, trace sand.		
35						1.00						
						1.50						
	8			5.0		<.50						
						1.25						515
						1.25						
40	9					1.00						

Borehole Detail: High-solids Bentonite Grout

NOTES:

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power – FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,613.2
Easting: 2,305.1

Weather:
Sunny, calm, warm (hi-80's)

Boring Information:
Boring No.: B96-2
Well No.: G-122
Surf. Elev.: 552.70

Depth Information:
Total: 58.40
Auger: 58.40
Core: 0.00

Dates:
Start: 05/20/96
Finish: 05/20/96

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 – 4¼" HSA /w 5 foot continuous barrel sampler.

Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Sample Type: – Continuous Barrel – Split Spoon – Shelby Tube – Core – Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
										Gray with 25% reddish brown mottles, very moist, soft, silty CLAY, trace sand.		
						1.25				Gray, very moist, soft, silty CLAY, with very fine-grained sand.		
	9			5.0		1.00						
						1.00				Gray, very moist, soft, sandy CLAY.		
										Dark gray, moist, soft to firm, silty CLAY.		510
						<.50				Gray, wet, soft, silty, very fine- to fine-grained SAND.		
45										Dark gray, moinst, soft, silty CLAY, trace sand.		
						1.50		High-solids Bentonite Grout				
	10			5.0		2.00		Bentonite Chips		Gray, moist, soft, clayey SILT, trace sand.		
			10A							Gray, wet, soft, fossiliferous, fine- to medium-grained SAND. *Small (3-7 mm.)* Bivalvia *and* Gastropoda.		505
50						1.00				Gray, very moist, soft, clayey SILT, trace sand.		
										Gray, wet, soft, fine- to very coarse-grained, SAND, with shell fragments.		
	11			3.0				Filter Pack and/or Formation Sand		Gray, very moist, soft, clayey SILT, with sand.		
			11A							Bluish gray, moist, soft, silty CLAY.		
										Gray, wet, soft, fine- to very coarse-grained, SAND, with shell fragments.		500
					3					Gray, wet, soft, fine- to medium-grained, SAND, with shell fragments.		
55	12		12A	2.0	10							
					12							
					10							
	13			1.7	0					Dark gray, moist, soft, silty CLAY, trace sand.		495
					3							
					4							
					23					Gray, dry, hard, SHALE.		
60										*End of Boring = 58.70 feet (494.00' MSL)*		

NOTES:

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power – FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,615.9
Easting: 2,481.5

Weather:
Sunny, calm, warm (hi-80's)

Boring Information:
Boring No.: B96-3
Well No.: G-123
Surf. Elev.: 552.20

Depth Information:
Total: 57.80
Auger: 57.80
Core: 0.00

Dates:
Start: 05/16/96
Finish: 05/16/96

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 – 4¼" HSA /w 5 foot continuous barrel sampler.

Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Sample Type: ▮ – Continuous Barrel ⊠ – Split Spoon ⧄ – Shelby Tube ▮▮ – Core ☐ – Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
0								Stickup = 1.70'				
								Concrete		Dark brown, moist, firm, silty CLAY, trace sand.		
										Brown, moist, firm, silty CLAY, trace sand.		
										Dark brown, moist, firm, silty CLAY, trace sand.		
	1			4.9		3.00						550
						4.00				Brown with 10% dark brown mottles, moist, firm, silty CLAY, trace sand.		
5										Dark brown, moist, firm, silty CLAY, trace sand.		
						3.00						
	2			5.0		2.50						
						2.00						545
						1.50				Brown, moist, soft, silty CLAY, trace sand.		
										Dark brown, moist, soft, silty CLAY, trace sand.		
10										Brown, moist, soft, silty CLAY, trace sand.		
						1.75						
	3			5.0		1.75						
						2.50				Yellowish brown, moist, soft, silty CLAY, trace sand, trace fly ash.		540
						2.00				Dark brown with 30% greenish blue mottles, very moist, soft, silty CLAY, trace sand.		
15										Dark brown, very moist, soft, silty CLAY, trace sand.		
						3.25						
						4.00				Yellowish brown, slightly moist, hard, silty CLAY, trace sand.		
	4			5.0								535
						3.75				Dark brown, very moist, soft, silty CLAY, trace sand.		
						4.00				Yellowish brown, slightly moist, friable, silty CLAY, trace sand.		
20										Dark brown, moist, firm, silty CLAY, trace sand.		

High-solids Bentonite Grout

NOTES:

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power - FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,615.9
Easting: 2,481.5

Weather:
Sunny, calm, warm (hi-80's)

Boring Information:
Boring No.: B96-3
Well No.: G-123
Surf. Elev.: 552.20

Depth Information:
Total: 57.80
Auger: 57.80
Core: 0.00

Dates:
Start: 05/16/96
Finish: 05/16/96

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 - 4¼" HSA /w 5 foot continuous barrel sampler.

Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Sample Type: - Continuous Barrel - Split Spoon - Shelby Tube - Core - Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
						3.00				Black, moist, firm, silty CLAY, trace sand, trace fly ash, trace plant fragments.		
						3.50				Black, moist, firm, silty CLAY, trace sand.		
	5			5.0		1.25						530
						1.00				Black, moist, soft, clayey SILT, trace sand.		
						1.00				Black, moist, soft, silty CLAY, trace sand.		
25						<.50						
						<.50				Dark brown, moist, soft, silty CLAY, trace sand.		
	6			5.0		<.50						525
						<.50				Brown, very moist, soft, silty CLAY, trace sand.		
						<.50				Gray, very moist, soft, silty, very fine- to fine-grained SAND.		
30						<.50				Brown, very moist, soft, silty CLAY, trace sand.		
						<.50				Gray, wet, soft, silty, very fine- to fine-grained SAND.		
	7			4.3						Gray, very moist, soft, silty CLAY, with sand.		520
						<.50				Gray, very moist, soft, clayey SILT, with sand and plant fragments.		
35						<.50				*Peat layer at 35.5'-35.6'*		
						<.50				Gray, very moist, soft, sandy SILT, trace organic matter.		515
	8			5.0		<.50				Gray, very moist, soft, silty CLAY, with sand and plant fragments.		
40										Gray, wet, fine-grained SAND.		

Borehole Detail: High-solids Bentonite Grout; Bentonite Chips; Filter Pack

NOTES:

Andrews Environmental Engineering, Inc.

3535 Mayflower Boulevard, Springfield, IL 62707 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light & Power - FGDS Development
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEEI No.: 93-118

Location:
Coord. System: Site Grid
Northing: 5,615.9
Easting: 2,481.5

Weather:
Sunny, calm, warm (hi-80's)

Drilling Contractor:
Name: AE Explortation Corp.
City: Springfield, IL
Equipment: CME 75 - 4¼" HSA /w 5 foot continuous barrel sampler.

Personnel:
Geologist: R. Hasenyager
Driller: A. Wiesenhofer
Helper (s): K. Doetzel

Boring Information:
Boring No.: B96-3
Well No.: G-123
Surf. Elev.: 552.20

Depth Information:
Total: 57.80
Auger: 57.80
Core: 0.00

Dates:
Start: 05/16/96
Finish: 05/16/96

Sample Type: Continuous Barrel | Split Spoon | Shelby Tube | Core | Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
								Filter Pack		Gray, wet, fine-grained SAND.		
										Gray, wet, fine-grained SAND, trace plant fragments.		
	9		9A	2.1						Gray, very moist, soft, silty CLAY, with sand.		510
										Gray, wet, fine-grained SAND, trace *Gastropoda* fossils.		
45										Gray, wet, very fine- to fine-grained SAND, trace coarse sand and shale fragments.		
	10		10A	3.0								505
50												
	11		11A	3.6				Bentonite Chips		Brown, wet, medium- to very coarse-grained SAND, trace shale and sandstone fragments.		500
55					31							
	12			1.5	34 35 48							
	13			0.8						Gray, dry, hard, SHALE		495
										Gray, dry, hard, fine-grained, SANDSTONE.		
60										*End of Boring = 57.80 feet (494.40' MSL)*		

NOTES:

APPENDIX A3:
IMPOUNDMENT WELL BORING LOGS

Professional Service Industries, Inc.
480 North Street
Springfield, Illinois 62704
Telephone: 217/544-6663
Fax: 217/544-6143

LOG OF BORING AP-1

Sheet 1 of 1

PSI Job No.: 0020522
Project: Piezometer Installation
Location: CWLP Ash Pond
East Lake Shore Drive
Springfield, Illinois

Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: CME Automatic; ETR = 86%
Boring Location: See attached boring location plan.

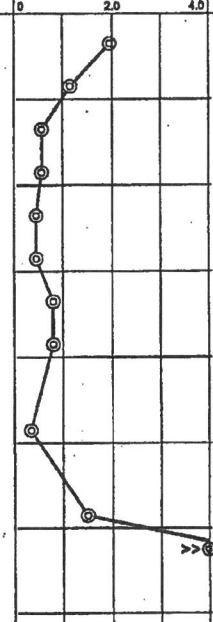
WATER LEVELS

While Drilling	9 feet
Upon Completion	N/A
Delay	N/A

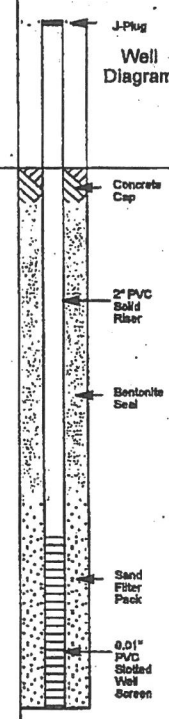
Station: N/A
Offset: N/A

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
	0			1	18	Dark brown silty CLAY, very stiff, slightly moist	CL	7-8-9 N_{60}=24		
	5			2	18	Dark brown clayey SILT, stiff, slightly moist	ML	5-5-5 N_{60}=14		
				3	18	Gray clayey SILT, trace brown, firm, moist		2-2-3 N_{60}=7		
	10			4	18		ML	2-2-3 N_{60}=7		
				5	18			1-2-2 N_{60}=6		
	15			6	18	Gray silty CLAY, few brown sand, firm, saturated	CL	1-2-2 N_{60}=6		
				7	18	Gray sandy CLAY, stiff, saturated	CLS	4-3-4 N_{60}=10		
	20			8	18	Blue-gray clayey SILT, soft to very stiff, moist to saturated		3-3-4 N_{60}=10		
	25			9	18		ML	1-2-1 N_{60}=4		
	30			10	18	Gray SAND with SILT, medium dense/very stiff, saturated	SW-SM	6-7-6 N_{60}=19		
				11	6	Gray SHALE, hard, slightly moist	CL	50/6"		
						Boring terminated ay -31.5'				
	35									

STANDARD PENETRATION TEST DATA
N in blows/ft ◎
× Moisture ◪ PL ✚ LL
0 25 50
STRENGTH, tsf
▲ Qu ✳ Qp
0 2.0 4.0



Well Diagram



Completion Depth: 35.0 ft
Date Boring Started: 4/21/10
Date Boring Completed: 4/21/10
Logged By: Rob Preuss
Drilling Contractor: PSI, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger
Texas Cone

Latitude:
Longitude:
Drill Rig: ATV D50
Remarks: N_{60} denotes the normalization to 60% efficiency as described in ASTM D4633. Moistures determined by visual methods.

The stratification lines represent approximate boundaries. The transition may be gradual.

Professional Service Industries, Inc.
480 North Street
Springfield, Illinois 62704
Telephone: 217/544-6663
Fax: 217/544-6143

LOG OF BORING AP-2

Sheet 1 of 1

PSI Job No.: 0020522
Project: Piezometer Installation
Location: CWLP Ash Pond
East Lake Shore Drive
Springfield, Illinois

Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: CME Automatic; ETR = 86%
Boring Location: See attached boring location plan.

WATER LEVELS

While Drilling	9 feet
Upon Completion	N/A
Delay	N/A

Station: N/A
Offset: N/A

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
	0		SS	1	10	Dark brown silty CLAY, some sand, stiff, slightly moist (FILL)	CL	4-4-6 N_{60}=14		
	5		SS	2	8	Dark brown silty CLAY, soft to firm, moist	CL	2-2-2 N_{60}=6		
			SS	3	6	Gray silty CLAY, soft to firm, moist	CL	1-1-2 N_{60}=4		
	10		SS	4	18	Gray clayey SILT, soft to firm, saturated		2-2-2 N_{60}=6		
			SS	5	18		ML	2-1-1 N_{60}=3		
	15		SS	6	18			2-1-2 N_{60}=4		
			SS	7	18	Light gray SAND, dense, saturated	SP	4-9-16 N_{60}=36		
	20		SS	8	14	Gray SHALE, hard, slightly moist Boring terminate at -20'	CL	19-24-50/2"		

STANDARD PENETRATION TEST DATA
N in blows/ft
Moisture PL LL
0 25 50
STRENGTH, tsf
Qu Qp
0 2.0 4.0

Well Diagram: J-Plug; Concrete Cap; 2" PVC Solid Riser; Bentonite Seal; Sand Filter Pack; 0.01" PVC Slotted Well Screen

Completion Depth: 20.0 ft
Date Boring Started: 4/21/10
Date Boring Completed: 4/21/10
Logged By: Rob Preuss
Drilling Contractor: PSI, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger
Texas Cone

Latitude:
Longitude:
Drill Rig: ATV D50
Remarks: N_{60} denotes the normalization to 60% efficiency as described in ASTM D4633. Moistures determined by visual methods.

The stratification lines represent approximate boundaries. The transition may be gradual.

Professional Service Industries, Inc.
480 North Street
Springfield, Illinois 62704
Telephone: 217/544-6663
Fax: 217/544-6143

LOG OF BORING AP-3

Sheet 1 of 1

PSI Job No.: 0020522
Project: Piezometer Installation
Location: CWLP Ash Pond
East Lake Shore Drive
Springfield, Illinois

Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: CME Automatic; ETR = 86%
Boring Location: See attached boring location plan.

WATER LEVELS
While Drilling: None feet
Upon Completion: N/A
Delay: N/A

Station: N/A
Offset: N/A

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ●	Additional Remarks	Well Diagram
	0		X	1	18	Dark brown silty CLAY, very stiff, slightly moist	CL	6-7-8 N_{60}=21				J-Plug
	5		X	2	18	Gray/brown clayey SILT, soft to stiff, moist to saturated	ML	3-3-4 N_{60}=10				Concrete Cap
			X	3	18			1-1-1 N_{60}=3				2" PVC Solid Riser
	10		X	4	18	Gray clayey SILT, soft to very stiff, saturated		2-1-2 N_{60}=4				Bentonite Seal
			X	5	18			2-2-4 N_{60}=9				Sand Filter Pack
	15		X	6	16		ML	2-2-4 N_{60}=9				0.01" PVC Slotted Well Screen
			X	7	18			4-4-6 N_{60}=14				
	20		X	8	10	Gray SHALE, hard, slightly moist Boring terminated at -19.5	CL	32-50/3"				

STRENGTH, tsf ▲ Qu ✳ Qp (0, 2.0, 4.0)
Moisture ✕ PL ◪ LL (0, 25, 50)

Completion Depth: 20.0 ft
Date Boring Started: 4/21/10
Date Boring Completed: 4/21/10
Logged By: Rob Preuss
Drilling Contractor: PSI, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger
Texas Cone

Latitude:
Longitude:
Drill Rig: ATV D50
Remarks: N_{60} denotes the normalization to 60% efficiency as described in ASTM D4633. Moistures determined by visual methods

The stratification lines represent approximate boundaries. The transition may be gradual.

Professional Service Industries, Inc.
480 North Street
Springfield, Illinois 62704
Telephone: 217/544-6663
Fax: 217/544-6143

LOG OF BORING AP-4

Sheet 1 of 1

PSI Job No.: 0020522
Project: Piezometer Installation
Location: CWLP Ash Pond
East Lake Shore Drive
Springfield, Illinois

Drilling Method: Hollow Stem Auger
Sampling Method: Split Spoon
Hammer Type: CME Automatic; ETR = 86%
Boring Location: See attached boring location plan.

WATER LEVELS
While Drilling 11 feet
Upon Completion N/A
Delay N/A

Station: N/A
Offset: N/A

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
	0		X	1	17	Brown silty CLAY, some brown sand, firm to stiff, slightly moist (FILL)	CL	4-4-3 N_{60}=10		
	5		X	2	18	Brown silty CLAY, trace roots, firm to stiff, moist (FILL)	CL	4-3-2 N_{60}=7		
			X	3	10	Brown SILT, trace gray, firm to stiff, moist (FILL)	ML	6-3-2 N_{60}=7		
	10		X	4	12	5" Brown SAND transitioning to Black FLY ASH at 9.4', stiff to very stiff, slightly moist (FILL)		2-2-4 N_{60}=9		
			X	5	18			2-2-2 N_{60}=6		
	15		X	6	16		SAND/FLY ASH	2-1-1 N_{60}=3		
			X	7	16			6-6-5 N_{60}=16		
	20		X	8	18	Black FLY ASH, some fine sub-round gravel, stiff to very stiff, moist to saturated (FILL) Gray/green (organic?) CLAY, stiff, trace fine sand, moist to saturated	FLY ASH	3-3-3 N_{60}=9		
	25		X	9	1		CL	3-3-4 N_{60}=10		
	30		X	10	18	Brown/gray silty CLAY, fiorm to stiff, saturated	CL	2-2-3 N_{60}=7		
	35		X	11	18	Gray SILT, stiff to very stiff, saturated		3-3-4 N_{60}=10		
	40		X	12	18		ML	4-4-4 N_{60}=11		
	45		X	13	18			4-4-6 N_{60}=14		
	50		X	14	18	Gray fine to coarse SAND, medium dense, saturated		4-5-7 N_{60}=17		
	55		X	15	18		SW	5-5-7 N_{60}=17		
	60		X	16	1	Gray SHALE, hard, moist	CL	50/1"		
						Boring terminated at -60'				

STANDARD PENETRATION TEST DATA
N in blows/ft
Moisture PL LL
0 25 50
STRENGTH, tsf
Qu Qp
0 2.0 4.0

Well Diagram: J-Plug; Concrete Cap; 2" PVC Solid Riser; Bentonite Seal; Sand Filter Pack; 0.01" PVC Slotted Screen

Completion Depth: 60.0 ft
Date Boring Started: 4/20/10
Date Boring Completed: 4/20/10
Logged By: Rob Preuss
Drilling Contractor: PSI, Inc.

Sample Types:
Auger Cutting
Split-Spoon
Rock Core
Shelby Tube
Hand Auger
Texas Cone

Latitude:
Longitude:
Drill Rig: ATV D50
Remarks: N_{60} denotes the normalization to 60% efficiency as described in ASTM D4633. Moistures determined by visual methods.

The stratification lines represent approximate boundaries. The transition may be gradual.

Andrews Engineering, Inc.

3300 Ginger Creek Drive, Springfield, IL 62711 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, & Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 2011-127

Location:
Coord. System: Site Grid
Northing: 5132.40
Easting: 831.70

Weather:
Cloudy; 38° F; West 10-15 MPH

Boring Information:
Boring No.: AP-1R
Well No.: AP-1R
Surf. Elev.: 533.10

Depth Information:
Total: 32.50
Auger: 32.50
Core:

Dates:
Start: 1/30/2012
Finish: 1/30/2012

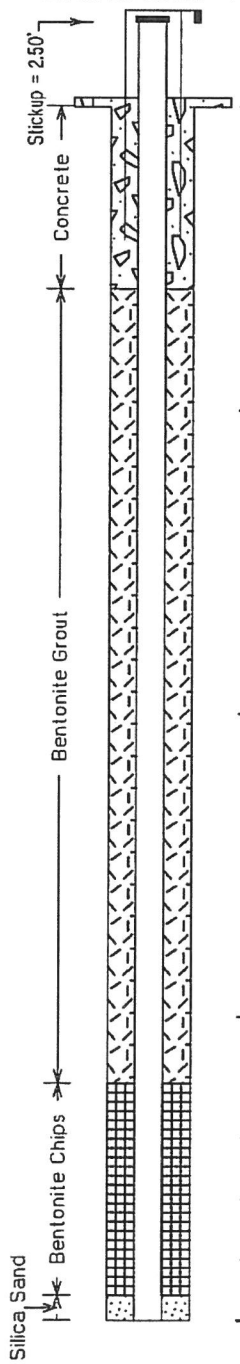
Drilling Contractor:
Name: Terra Drill, Inc.
City: Dupo, IL
Equipment: CME 550 with 4¼" I.D. HSA and 5' CB

Personnel:
Geologist: M. Hewitt
Driller: J. Brown
Helper (s): J. Horn

Sample Type: - Continuous Barrel - Split Spoon - Shelby Tube - Core - Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Description/*Comments*	USC	Elev. (MSL)
	1			NA				Dark brown silty CLAY; very stiff; slightly moist	CL	
								Dark brown clayey SILT; stiff; slightly moist	ML	530
5	2			NA				Gray clayey SILT; trace brown; firm; moist	ML	525
10	3			NA						520
								Gray silty CLAY; few brown sand; firm; saturated	CL	
15	4			NA				Gray sandy CLAY; stiff; saturated	SC	515
20	5							Blue-gray clayey SILT; soft to very stiff; moist to saturated	ML	

Borehole Detail



NOTES: AP-1R blind-drilled to 19.0 ft bgs
Geology from 0-19.0 ft bgs based on AP-1 log

Andrews Engineering, Inc.
3300 Ginger Creek Drive, Springfield, IL 62711 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, & Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 2011-127

Location:
Coord. System: Site Grid
Northing: 5132.40
Easting: 831.70

Weather:
Cloudy; 38° F; West 10-15 MPH

Boring Information:
Boring No.: AP-1R
Well No.: AP-1R
Surf. Elev.: 533.10

Depth Information:
Total: 32.50
Auger: 32.50
Core:

Dates:
Start: 1/30/2012
Finish: 1/30/2012

Drilling Contractor:
Name: Terra Drill, Inc.
City: Dupo, IL
Equipment: CME 550 with 4¼" I.D. HSA and 5' CB

Personnel:
Geologist: M. Hewitt
Driller: J. Brown
Helper (s): J. Horn

Sample Type: Continuous Barrel | Split Spoon | Shelby Tube | Core | Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
	5			100%				Silica Sand		(Cont'd) Blue-gray clayey SILT; soft to very stiff; moist to saturated	ML	510
25	6			100%						Gray SAND with silt; medium dense; saturated	SM	
										Dark gray SAND and GRAVEL; loose; saturated	SW	505
30	7			100%						Dark gray SHALE; weathered; dense; moist	CL	
										End of Boring = 32.5 '		500
35												495
40												

NOTES: AP-1R blind-drilled to 19.0 ft bgs
Geology from 0-19.0 ft bgs based on AP-1 log

Andrews Engineering, Inc.
3300 Ginger Creek Drive, Springfield, IL 62711 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, & Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 2011-127

Location:
Coord. System: Site Grid
Northing: 4184.70
Easting: 725.50

Weather:
Cloudy; 38° F; West 10-15 MPH

Boring Information:
Boring No.: AP-2R
Well No.: AP-2R
Surf. Elev.: 533.10

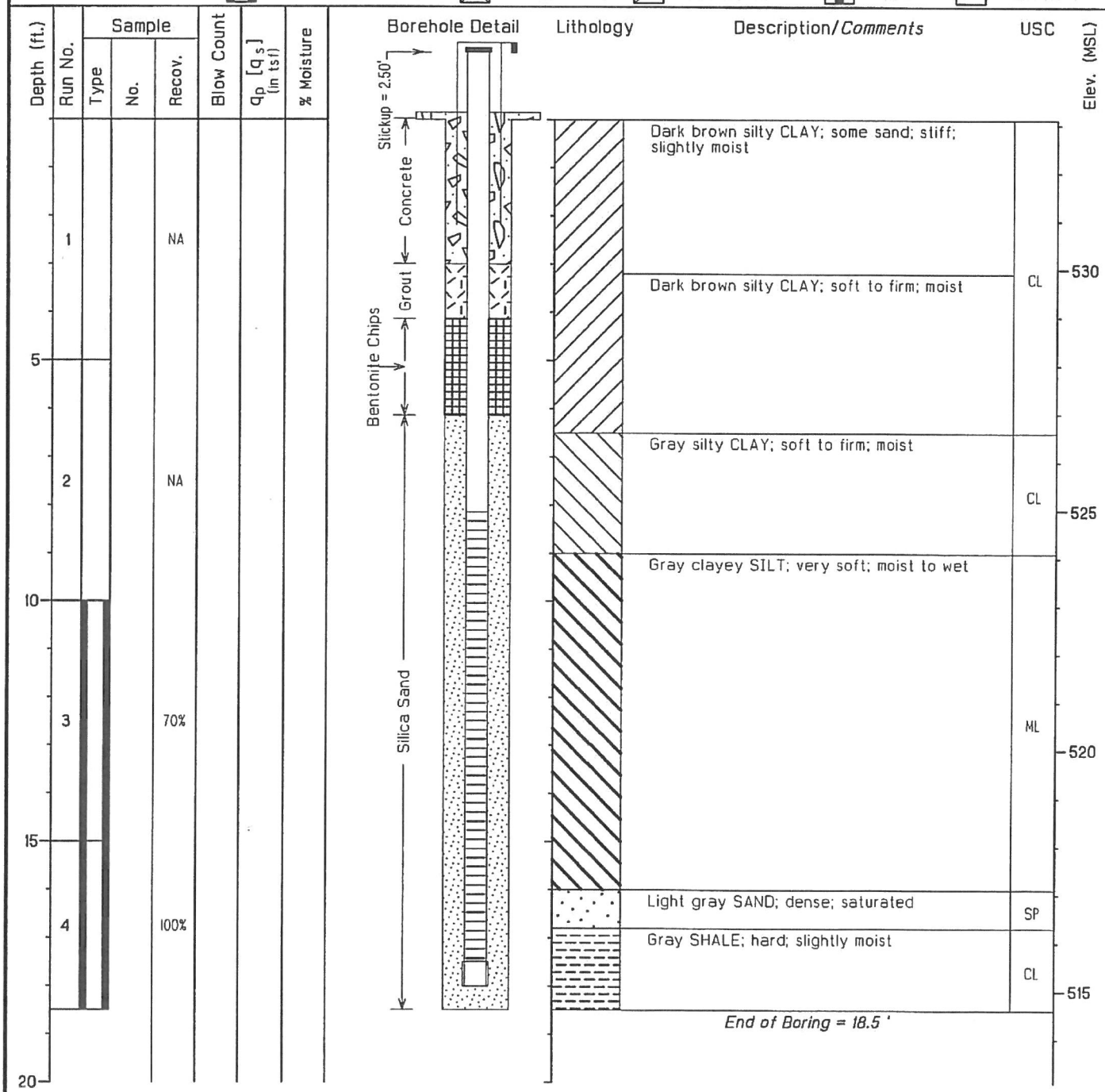
Depth Information:
Total: 18.50
Auger: 18.50
Core:

Dates:
Start: 1/31/2012
Finish: 1/31/2012

Drilling Contractor:
Name: Terra Drill, Inc.
City: Dupo, IL
Equipment: CME 550 with 4¼" I.D. HSA and 5' CB

Personnel:
Geologist: M. Hewitt
Driller: J. Brown
Helper (s): J. Horn

Sample Type: – Continuous Barrel – Split Spoon – Shelby Tube – Core – Blind Drill



NOTES: AP-2R blind-drilled to 10.0 ft bgs
Geology from 0-10.0 ft bgs based on AP-1 log

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 160192

Location:
Coord. System: Site Grid
Northing: 4185.2
Easting: 735.9

Weather: Sunny, 40F

Boring Information:
Boring No: AP-2A
Well No: AP-2A
Surf Elev.: 533.6

Depth Information:
Total: 19.0
Auger: 19.0
Core:

Dates:
Start: 2/16/16
Finish: 2/16/16

Drilling Contractor:
Contractor Name: Bulldog Drilling
City: Dupo, IL
Equipment: AMS Powerprobe w/ 4.25" HSA and 5' MC

Personnel:
Geologist: C. Myrvold
Driller: J. Edwards
Helper(s): Z. Strickland

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
0							Ground Surface	533.6
							Blind drilled to 9.0 feet. For detailed geology refer to the original log for AP-2R	
	1							530.0
5								
								525.0
							Gray CLAYEY SILT; moist to wet; moderately loose	
10	2		3.2/4					
								520.0
15	3		4.0/4					
							Light gray SAND; fine to medium grained; saturated; some gravel	
	4		2.0/2				Gray SHALE; weathered; hard; slightly moist	515.0
20							End of Boring = 19 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive, Springfield, IL 62711 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, & Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 2011-127

Location:
Coord. System: Site Grid
Northing: 3164.10
Easting: 3203.10

Weather:
Cloudy; 38° F; West 10-15 MPH

Boring Information:
Boring No.: AP-5
Well No.: AP-5
Surf. Elev.: 581.6

Depth Information:
Total: 49.0
Auger: 49.0
Core:

Dates:
Start: 2/1/2012
Finish: 2/1/2012

Drilling Contractor:
Name: Terra Drill, Inc.
City: Dupo, IL
Equipment: CME 550 with 4¼" I.D. HSA
5' CB and 2' SS

Personnel:
Geologist: M. Hewitt
Driller: J. Brown
Helper (s): J. Horn

Sample Type: Continuous Barrel | Split Spoon | Shelby Tube | Core | Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
0								Stickup = 2.50'				0
	1			100%				Concrete		Dark yellowish brown silty CLAY; very firm; moist; some dark brown mottling; trace organics	CL	
5												-5
	2			76%				Bentonite Grout		Olive brown clayey SILT; moderately soft; moist; some dark yellowish brown mottling grades dark yellowish brown; clay content increasing	ML	
10												-10
	3			100%						Olive brown silty CLAY; very firm; moist; trace coarse sand; few iron concretions; some dark yellowish brown mottling	CL	
15										some gravel		-15
	4			100%				Bentonite Chips		Dark yellowish brown sandy CLAY; some gravel; very soft; moist to wet	SC	
								Silica Sand				
20	5			100%						Dark yellowish brown clayey SILT with sand and gravel; firm; moist	ML-SM	-20

NOTES:

Andrews Engineering, Inc.
3300 Ginger Creek Drive, Springfield, IL 62711 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, & Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 2011-127

Location:
Coord. System: Site Grid
Northing: 3164.10
Easting: 3203.10

Weather:
Cloudy; 38° F; West 10-15 MPH

Boring Information:
Boring No.: AP-5
Well No.: AP-5
Surf. Elev.: 581.6

Depth Information:
Total: 49.0
Auger: 49.0
Core:

Dates:
Start: 2/1/2012
Finish: 2/1/2012

Drilling Contractor:
Name: Terra Drill, Inc.
City: Dupo, IL
Equipment: CME 550 with 4¼" I.D. HSA
5' CB and 2' SS

Personnel:
Geologist: M. Hewitt
Driller: J. Brown
Helper (s): J. Horn

Sample Type: - Continuous Barrel - Split Spoon - Shelby Tube - Core - Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
	5							Silica Sand		(Cont'd) Dark yellowish brown clayey SILT with sand and gravel; firm; moist	ML-SM	-20
	6			100%						Dark yellowish brown SAND; coarse-grained; loose; wet	SP	
25	7			100%						Yellowish gray clayey SILT with sand; trace gravel; very hard; moist	ML	-25
	8			100%						Gray silty SAND with clay; some gravel; soft; wet	SM	
30	9			90%						Gray clayey SILT; some gravel; very hard; moist		-30
										some shale and coal fragments	ML	
35	10			100%				Bentonite Chips				-35
	11									Light gray silty SAND; some gravel; trace chert; rounded; moderately firm; moist	SM	
40												-40

NOTES:

Andrews Engineering, Inc.
3300 Ginger Creek Drive, Springfield, IL 62711 (217) 787-2334

Field Boring Log

Site Information:
Name: City Water, Light, & Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 2011-127

Location:
Coord. System: Site Grid
Northing: 3164.10
Easting: 3203.10

Weather:
Cloudy; 38° F; West 10-15 MPH

Boring Information:
Boring No.: AP-5
Well No.: AP-5
Surf. Elev.: 581.6

Depth Information:
Total: 49.0
Auger: 49.0
Core:

Dates:
Start: 2/1/2012
Finish: 2/1/2012

Drilling Contractor:
Name: Terra Drill, Inc.
City: Dupo, IL
Equipment: CME 550 with 4¼" I.D. HSA
5' CB and 2' SS

Personnel:
Geologist: M. Hewitt
Driller: J. Brown
Helper (s): J. Horn

Sample Type: Continuous Barrel; Split Spoon; Shelby Tube; Core; Blind Drill

Depth (ft.)	Run No.	Sample Type	Sample No.	Sample Recov.	Blow Count	q_p [q_s] (in tsf)	% Moisture	Borehole Detail	Lithology	Description/*Comments*	USC	Elev. (MSL)
												581.6
	11									Dark gray silty CLAY; some gravel; some shale fragments; trace coal fragments; very firm; moist	SM / CL	
45	12			100%				Bentonite Chips				536.6
										Gray SHALE; hard; moist	CL	
	13			55%								
										End of Boring = 49.0 '		
50												531.6
55												526.6
60												521.6

NOTES:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.:

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: sunny, 73 deg

Boring Information:
Boring No: TW3E
Well No: TW3E
Surf Elev.: 0

Depth Information:
Total: 40.5'
Auger: 40.5'
Core: -

Dates:
Start: 06/27/2017
Finish: 06/27/2017

Drilling Contractor:
Contractor Name: Bulldog Drilling
City: Dupo
Equipment: 4.25" HSA, CME 55, 5' Continuous Macrocore

Personnel:
Geologist: D. Ghosh
Driller: J. Gates
Helper(s): C. Clines

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0	1		4.5/5				**CLAYEY SILT** dark brown, iron oxidation staining, moist, firm to hard, moderate cementation, with root structure	
5	2		5.0/5				**SILT** brown to gray, iron oxidation, moist, 2" wet seam at 12', firm, moderate cementation, blocky, some clay	-5.0
10	3		5.0/5				**SILT** gray, firm to hard, trace fine grained sand sandy 14.5-15'	-10.0
15	4		4.5/5				**SILTY CLAY** dark gray, moist to wet, soft to firm, strong cementation, laminated, some wood fragments	-15.0
20								-20.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: TW3E Boring No: TW3E Well No: TW3E

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	5		5.0/5				cont: dark gray, moist to wet, soft to firm, strong cementation, laminated, some wood fragments	
							SILTY CLAY dark gray, till, moist to wet, soft to firm, moderate cementation, trace fine grained sand and gravel	-25
26	6		3.0/5					
								-30
31	7		4.5/5					
							SANDY SILT fine grained sand	-35
36								
	8		4.0/5.5				**SILTY SAND** gray, fine to medeium grained, wet	
							medium to coarse grained, trace fine grained, angular	
							SHALE	-40
41							End of Boring = 40.5 Feet	

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.:

Location:
Coord. System: Site Coordinates
Northing: 5613.3
Easting: 1737.4

Weather: rain, 55 deg; sunny, 73 deg

Boring Information:
Boring No: TW3N
Well No: RW-3
Surf Elev.: 536.8

Depth Information:
Total: 41.6'
Auger: 41.6'
Core: -

Dates:
Start: 06/26/2017
Finish: 06/27/2017

Drilling Contractor:
Contractor Name: Bulldog Drilling
City: Dupo
Equipment: 4.25" HSA, CME 55, 5' Continuous Macrocore

Personnel:
Geologist: D. Ghosh
Driller: J. Gates
Helper(s): C. Clines

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	536.8
0							**SILTY CLAY** dark brown, pervasive iron oxidation staining, dry (moist below 3'), firm to hard, moderate cementation, with root structure	
	1		3.5/5					535.0
							SILTY CLAY light tan, moist, moderate cementation, blocky	
5							**SILT** brown to gray, mottling, iron oxidation staining, moist, firm, moderate cementation	
	2		5.0/5					530.0
10							**SAND** sand lens, with silt, wet, trace clay	
	3		4.5/5				**SANDY SILT** brown to gray, laminated, some wood fragments, trace coarse sand, coal and roots	525.0
15							**SILTY CLAY** gray, wet to moist, very soft, strong cementation, laminated, some wood fragments, trace fine sand	
	4		5.0/5					520.0
20							**SILTY CLAY** dark gray, wet, very soft, strong cementation, homogeneous	

Notes:

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FIELD BORING LOG

Boring Information: RW-3 Boring No: TW3N Well No: RW-3

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							cont: dark gray, wet, very soft, strong cementation, homogeneous	515
	5		3.0/5					
26								510
	6		4.0/5				**SILTY CLAY** dark gray, till, moist, firm to hard, trace coarse and fine gravel, trace coal	
31								505
	7		4.5/5					
							SANDY SILT	
36							**SILTY SAND** gray, fine to medium graineed, wet, trace angular gravel	500
	8		5.0/5					
							SHALE weathered	
41	9							
							End of Boring = 41.6 Feet	495

Notes:

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FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.:

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: rain, 55 deg

Boring Information:
Boring No: TW3W
Well No: TW3W
Surf Elev.: 536.80

Depth Information:
Total: 23.8'
Auger: 23.8'
Core: -

Dates:
Start: 06/26/2017
Finish: 06/26/2017

Drilling Contractor:
Contractor Name: Bulldog Drilling
City: Dupo
Equipment: 4.25" HSA, CME 55, 5' Continuous Macrocore

Personnel:
Geologist: D. Ghosh
Driller: J. Gates
Helper(s): C. Clines

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0	1		4.5/5				**SILTY CLAY** dark brown, dry, firm to hard, moderate cementation, root structure in upper 2 feet high clay content, moist, soft to firm, blocky iron oxidation spots	
5	2		4.5/5				**SILT** brown to gray, iron oxidation pervasive, moist, soft to firm, moderate cementation, some clay very soft	-5.0
10	3		4.0/5				**SILTY SAND** brown, fine to medium grained sand, wet, poor cementation, moderately sorted, trace clay	-10.0
15	4		4.5/5				**CLAYEY SAND** brown to dark gray, with gravel, coarse grained towards bottom, wet, strong cementation, poorly sorted **SILTY CLAY** dark gray, with coal fragments, moist, very soft, strong cementation, homogeneous appearance, coal content high at 19-19.5'	-15.0
20	5		2.8/3.8				**SILTY CLAY** blue gray, till, wet, soft, moderate cementation, homogeneous appearance, trace coarse sand and gravel light tan, silty from 22-22.5' **SANDY SHALE**	-20.0
							End of Boring = 23.8 Feet	

Notes: Borehole refusal at 23.8'.

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FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: 65, overcast

Boring Information:
Boring No: GP1
Well No: GP1
Surf Elev.: 537.06

Depth Information:
Total: 40.0'
Auger: 40.0'
Core: N/A

Drilling Contractor:
Contractor Name: Bulldog Drilling
City: Dupo, IL
Equipment: CME 55cc 4.25" HSA w/ 5' MC and 2' SS

Personnel:
Geologist: B. Kenning
Driller: C. Clines
Helper(s): D. Smith

Dates:
Start: 6/14/2019
Finish: 6/14/2019

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Sample Run No.	Sample Type	Sample Recov.	Blow Count	Lithology	Description/Comments	Elev. (MSL)
0						Ground Surface	0.0
						Brown clayey TOPSOIL.	
						Light brown to gray silty CLAY, moist, stiff.	
	1		4.2				
5							-5.0
	2		2.2				
10							-10.0
	3		4.6				
15							-15.0
						Gray clayey SILT, moist to wet, moderately stiff.	
	4		4.3				
20							-20.0
	5		4.2				
						Brown/gray silty CLAY, moist, moderately stiff, contains coal fragments.	
						Gray clayey SILT, moist to wet, moderately stiff.	
25							-25.0

Notes:

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FIELD BORING LOG

Boring Information: GP1 Boring No: GP1 Well No: GP1

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Sample Run No.	Sample Type	Sample Recov.	Blow Count	Lithology	Description/Comments	Elev. (MSL)
	6		3.7				
30							-30
	7		3.7			Gray SAND, fine-grained, wet, loose.	
35							-35
	8		4.1			Gray SAND, fine to medium-grained, wet, loose, trace gravel.	
						Gray SAND, medium to coarse-grained, wet, loose, trace gravel.	
40						Gray SHALE, weathered, moist, soft.	-40
						End of Boring = 40 Feet	
45							-45
50							-50

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: 60, partly cloudy, light breeze

Boring Information:
Boring No: GP2
Well No: GP2 /AP-7
Surf Elev.: 425-25

Depth Information:
Total: 40.0'
Auger: 40.0'
Core: N/A

Dates:
Start: 6/14/2019
Finish: 6/14/2019

Drilling Contractor:
Contractor Name: Bulldog Drilling
City: Dupo, IL
Equipment: CME 55cc 4.25" HSA w/ 5' MC and 2' SS

Personnel:
Geologist: B. Kenning
Driller: C. Clines
Helper(s): D. Smith

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Sample Run No.	Sample Type	Sample Recov.	Blow Count	Lithology	Description/Comments	Elev. (MSL)
0						Ground Surface	0.0
						Brown clayey TOPSOIL.	
						Brown silty CLAY, moist, stiff.	
	1		3.0				
5							-5.0
	2		3.5				
10							-10.0
						Brown/gray clayey SILT, moist, stiff.	
	3		3.0				
15							-15.0
	4		3.8				
20							-20.0
	5		2.7				
25							-25.0

Notes: No signs of freewater

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FIELD BORING LOG

Boring Information: GP2 Boring No: GP2 Well No: AP-7

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Sample Run No.	Sample Type	Sample Recov.	Blow Count	Lithology	Description/Comments	Elev. (MSL)
	6		4.1			Gray clayey SAND, fine-grained, moist, moderately stiff.	
30							-30
	7		4.1				
						Gray clayey SILT, moist, stiff, coal fragments at 30.4'.	
35							-35
	8		3.4			Gray SHALE, weathered, slightly moist, soft.	
40							-40
						End of Boring = 40 Feet	
45							-45
50							-50

Notes: No signs of freewater

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FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield
County: Sangamon
Site No.:
AEEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: 65, partly cloudy

Boring Information:
Boring No: GP3
Well No: GP3
Surf Elev.: 549.12

Depth Information:
Total: 25'
Auger: 25'
Core: N/A

Dates:
Start: 6/13/2019
Finish: 6/13/2019

Drilling Contractor:
Contractor Name: Bulldog Drilling
City: Dupo, IL
Equipment: CME 55cc 4.25 in HSA w/ 5' MC and 2' SS

Personnel:
Geologist: B. Kenning
Driller: C. Clines
Helper(s): D. Smith

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Sample Run No.	Sample Type	Sample Recov.	Blow Count	Lithology	Description/Comments	Elev. (MSL)
						Ground Surface	0.0
0						Brown silty to clayey TOPSOIL, moist, stiff.	
						Brown silty CLAY to clayey SILT, moist, stiff.	
	1		4.7				
5							-5.0
	2		1.6	2 4 4 6			
	3		1.6	4 9 12 12		Light brown clayey SILT, slightly moist, stiff.	
10	4		1.8	6 11 11 12			-10.0
	5		3.0			Brown clayey SAND, fine-grained, slightly moist, moderately stiff.	
15							-15.0
	6		4.0			Brown silty CLAY, moist, stiff, contains coal fragments.	
						Brown clayey SAND, fine-grained, moist, moderately loose.	
20							-20.0

Notes: Macrocore refusal at 23'; Split spoon refusal at 24'; blind drilled to EOB depth of 25'

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FIELD BORING LOG

Boring Information: GP3 Boring No: GP3 Well No: GP3

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Sample Run No.	Sample Type	Sample Recov.	Blow Count	Lithology	Description/Comments	Elev. (MSL)
	7		2.2			Gray SHALE, weathered, slightly moist, soft.	
	8		0.7	41 50 3"			
	9		0.0				
25						End of Boring = 25 Feet	-25
30							-30
35							-35
40							-40

Notes: Macrocore refusal at 23'; Split spoon refusal at 24'; blind drilled to EOB depth of 25'

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FIELD BORING LOG

Site Information:
Name: Springfield City Water Light and Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: 80's F, Sunny

Boring Information:
Boring No: GP4
Well No: GP4
Surf Elev.: 0

Depth Information:
Total: 38.0
Auger: 38.0
Core: N/A

Dates:
Start: 5/17/19
Finish: 5/17/19

Drilling Contractor:
Contractor Name: Bulldog Drilling, Inc.
City: Dupo, IL
Equipment: AMS PowerProbe 9500 w/ 5' MC

Personnel:
Geologist: C. Myrvold
Driller: J. Edwards
Helper(s): S. Guy

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							Gray clayey SILT, moist, loose.	
							Brown/gray silty CLAY, moist, stiff.	
	1		4.3/5					
5								-5.0
	2		3.7/4					
							Gray clayey SILT, moist, moderately loose.	
							Brown silty SAND, fine to medium-grained, moist, moderately tight.	
10								-10.0
	3		4.0/4				Gray to dark gray silty CLAY, moist, stiff; trace to some sand.	
15	4		1.3/4					-15.0
	5		4.0/4					
20								-20.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: GP4 Boring No: GP4 Well No: GP4

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							(cont.) Gray to dark gray silty CLAY, moist, stiff; trace to some sand.	
	6		3.1/4					
25								-25.0
	7		4.0/4					
30								-30.0
	8		3.4/4					
35	9		4.0/4					-35.0
							End of Boring = 38 Feet	
40								-40.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield, IL
County: Sangamon
Site No.:
AEEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather:

Boring Information:
Boring No: GP5
Well No: GP5
Surf Elev.: 0

Depth Information:
Total: 15.5'
Auger: 15.5'
Core: N/A

Dates:
Start: 6/11/2019
Finish: 6/11/2019

Drilling Contractor:
Contractor Name: Bulldog Drilling
City: Dupo, IL
Equipment: CME 55cc w/ 4.25" HSA and 5' MC

Personnel:
Geologist: C. Myrvold
Driller: C. Clines
Helper(s): D. Smith

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Sample Run No.	Sample Type	Sample Recov.	Blow Count	Lithology	Description/Comments	Elev. (MSL)
						Ground Surface	0.0
0	1		0.5			Brown silty CLAY, moist, stiff.	
5	2		4.5			Brown to gray silty CLAY, moderately stiff, shows of iron oxidation.	-5.0
10	3		2			Black COAL, slightly moist, soft.	-10.0
	4		3			Gray SHALE, weathered, dry, soft.	
15	5		0.5				-15.0
						End of Boring = 15.5 Feet	
20							-20.0

Notes: Refusal at 15.5'; No well installation

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FIELD BORING LOG

Site Information:
Name: Springfield City Water Light and Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: 80's F, Sunny

Boring Information:
Boring No: GP6
Well No: GP6 /AP-6
Surf Elev.: 535.40

Depth Information:
Total: 37.0
Auger: 37.0
Core: N/A

Dates:
Start: 5/17/19
Finish: 5/17/19

Drilling Contractor:
Contractor Name: Bulldog Drilling, Inc.
City: Dupo, IL
Equipment: AMS PowerProbe 9500 w/ 5' MC

Personnel:
Geologist: C. Myrvold
Driller: J. Edwards
Helper(s): S. Guy

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							Dark brown clayey silt TOPSOIL, moist, moderately loose.	
							Brown/gray silty CLAY to clayey SILT, moist, stiff.	
	1		4.1/5					
5								-5.0
	2		4.0/4					
10								-10.0
	3		4.0/4				Brown silty SAND, fine-grained, saturated, loose.	
							Dark gray clayey SAND, fine-grained, wet to saturated, moderately loose, some silt.	
15	4		1.3/4				Dark gray clayey SILT, moist, moderately stiff to stiff, some sand.	-15.0
	5		3.0/4					
20								-20.0

Notes: refusal at 37'

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: GP6 Boring No: GP6 Well No: AP-6

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							(cont.) Dark gray clayey SILT, moist, moderately stiff to stiff, some sand.	
	6		4.0/4				Dark gray silty CLAY, moist, moderately stiff, some sand.	
25								-25.0
	7		4.0/4					
30								-30.0
	8		2.7/4					
35	9		4.0/4				Dark brownish gray clayey SAND, fine-grained, moist to wet, moderately loose.	-35.0
							End of Boring = 37 Feet	
40								-40.0

Notes: refusal at 37'

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water Light and Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: 80's F, Sunny

Boring Information:
Boring No: GP7
Well No: GP7
Surf Elev.: 0

Depth Information:
Total: 36.5
Auger: 36.5
Core: N/A

Drilling Contractor:
Contractor Name: Bulldog Drilling, Inc.
City: Dupo, IL
Equipment: AMS PowerProbe 9500 w/ 5' MC

Personnel:
Geologist: C. Myrvold
Driller: J. Edwards
Helper(s): S. Guy

Dates:
Start: 5/16/19
Finish: 5/16/19

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
0							Ground Surface	0.0
							Dark brown clayey silt TOPSOIL, moist, moderately loose.	
							Brown/gray silty CLAY to clayey SILT, moist, stiff, trace sand.	
	1		4.1/5					
5								-5.0
	2		4.0/4					
10								-10.0
	3		4.0/4					
							Gray silty CLAY, moist, stiff.	
15	4		2.7/4					-15.0
							17.0 - 18.0: Soft, saturated.	
							18.0 - 25.0: moderately loose to moderately stiff.	
	5		4.0/4					
20								-20.0

Notes: Refusal at 36.50'

Andrews Engineering, Inc.
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Springfield, IL 62711

FIELD BORING LOG

Boring Information: GP7 Boring No: GP7 Well No: GP7

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							(cont.) Gray silty CLAY, moist, stiff.	
	6		4.0/4				23.0 - 25.0: gray to brown/gray.	
25							Dark gray silty CLAY, moist, moderately stiff; some sand.	-25.0
	7		3.1/4					
							Dark gray silty SAND, fine-grained, wet, loose, some clay.	
30								-30.0
	8		3.7/4					
	9		3.5/ 3.5					
35								-35.0
							Gray to dark gray SHALE, weathered, soft, dry.	
							End of Boring = 36.5 Feet	
40								-40.0

Notes: Refusal at 36.50'

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water Light and Power
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 180247

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: 80's F, Sunny

Boring Information:
Boring No: GP8
Well No: GP8
Surf Elev.: 530.08

Depth Information:
Total: 42.0
Auger: 42.0
Core: N/A

Dates:
Start: 5/15/19
Finish: 5/16/19

Drilling Contractor:
Contractor Name: Bulldog Drilling, Inc.
City: Dupo, IL
Equipment: AMS PowerProbe 9500 w/ 5' MC

Personnel:
Geologist: C. Myrvold
Driller: J. Edwards
Helper(s): S. Guy

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							Dark brown clayey SILT, moist to wet, loose.	
							Brown silty CLAY, moist, stiff, trace sand, black mottling.	
	1		2.7/4					
5								-5.0
	2		3.3/4					
10	3		4.0/4					-10.0
	4		4.0/4				Gray silty CLAY, moist, moderately stiff.	
15								-15.0
	5		4.0/4					
20								-20.0

Notes: Refusal at 42.00'

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FIELD BORING LOG

Boring Information: GP8 Boring No: GP8 Well No: GP8

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							(cont.) Gray silty CLAY, moist, moderately stiff.	
	6		2.2/4					
25	7		4.0/4					-25.0
30	8		4.0/4					-30.0
	9		4.0/4					
35							Dark gray clayey SAND, fine-grained, moist, moderately stiff.	-35.0
	10		4.0/4					
40								-40.0

Notes: Refusal at 42.00'

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: GP8 Boring No: GP8 Well No: GP8

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	11		2.0/2				Gray to dark gray weathered SHALE, soft, slightly moist.	
							End of Boring = 42 Feet	
45								-45.0
50								-50.0
55								-55.0
60								-60.0

Notes: Refusal at 42.00'

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield, IL.
County: Sangamon
Site No.:
AEI No.: 200387

Location:
Coord. System:
Northing: 3401.7
Easting: 1265.0
Weather: 52F Sunny

Boring Information:
Boring No: W-9
Well No: AP-8
Surf Elev.: 537.2

Depth Information:
Total: 39.6
Auger: 4.25" HSA
Core: 5ft. Continuous Sampler

Dates:
Start: 2/25/2021
Finish: 2/25/2021

Drilling Contractor:
Contractor Name: Total Drilling Services/Skinner ltd.
City: Hindsboro, IL.
Equipment: CME 850

Personnel:
Geologist: C.M. Latham
Driller: Todd Skinner
Helper(s): A. Bruce

- Continuous Barrel (CB)
- Split Spoon (SS)
- Shelby Tube
- Core
- Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							**SILTY TOPSOIL** Dark brown, organic roots, moist, low-moderate firm.	
	1		4/5				**SILTY CLAY** Dark brown, firm, moist. Mottling with light brown and grey silty clay. Oxidation. 3'-5'.	
5								-5.0
	2		5/5				**CLAYEY SILT** Grey, oxidation mottling, moist, soft. Increased oxidation at 8'	
							SAND SEAM Fine-grained, well sorted, subrounded, saturated, soft.	
10							**CLAYEY SILT** Grey, oxidation, moist, soft.	-10.0
	3		5/5				**SILTY CLAY** Light grey, moist, soft	
15								-15.0
	4		5/5					
20								-20.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: W-9 Boring No: W-9 Well No: AP-8

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							CLAYEY SILT Brown, moist, soft-firm. Organic roots at 20'	
	5		5/5				Mottling with grey clay at 23.5'	
							SILTY CLAY Grey, moist, soft.	
25							**SILTY CLAY** Dark grey, firm, moist.	-25.0
							Mottled dark grey clay with blue clay at 26.5'	
	6		5/5				**CLAY** Dark grey, firm, moist.	
							Mottled dark grey clay with blue clay at 26.5'	
30								-30.0
							SILTY CLAY Blue, with trace organic coal fragments, moist, soft, moderate plasticity.	
	7		5/5					
							CLAYEY SILT WITH SAND Moist, poorly sorted, trace coal.	
35								-35.0
	8		3.5/5					
							SAND Loose sands, saturated, poorly sorted.	
				60			**SHALE**	
	9			40			Blue, moist, weathered, with lamination.	
40							End of Boring = 39.6 Feet	-40.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield, IL.
County: Sangamon
Site No.:
AEI No.: 200387

Location:
Coord. System:
Northing: 5216.8
Easting: 703.0

Weather: 43F Sunny

Boring Information:
Boring No: W-8
Well No: AP-9
Surf Elev.: 534.3

Depth Information:
Total: 32.5ft.
Auger: 4.25". HSA
Core: 5ft. Continuous Sampler

Dates:
Start: 2/26/2021
Finish: 2/26/2021

Drilling Contractor:
Contractor Name: Total Drilling Services/Skinner ltd.
City: Hindsboro, IL.
Equipment: CME 850

Personnel:
Geologist: C.M. Latham
Driller: Todd Skinner
Helper(s): A. Bruce

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0	1		5/5				**CLAYEY SILT** Dark brown, organic roots and leaves, moist, soft.	
							CLAYEY SILT Dark brown, moist, firm, slight mottling with dark grey clay.	
5								-5.0
	2		4.5				**SILTY CLAY** Medium brown, silty clay, soft, high plasticity, moist.	
10								-10.0
	3		4.5/5				Oxidation at 11' Moderate mottling with dark grey clay at 12 ft.	
15							**SILTY CLAY** Dark grey, moist, soft, high plasticity.	-15.0
	4		5/5				**CLAY** Light grey clay, moist, soft, mottled with brown clay and oxidation.	
20								-20.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: W-8 Boring No: W-8 Well No: AP-9

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							SILTY CLAY Brown, moist, firm, mottled with oxidation.	
							Mottled with blue clay and oxidation.	
	5		5/5				**CLAY** Blue clay, moist, firm, high plasticity.	
							Increasing silt content.	
25								-25.0
							CLAYEY SILT WITH SAND Poorly sorted, moist.	
	6		4.5/5				Gradation to heavier sand content; poorly sorted, moist.	
							SAND AND GRAVEL Sand and gravel with organic coal fragments; moist, poorly sorted.	
30							**SHALE** Grey, laminated, weathered, shale. Firm, Moist.	-30.0
	7			30 88 4				
							End of Boring = 32.5 Feet	
35								-35.0
40								-40.0

Notes:

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FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield
County: Sangamon
Site No.:
AEI No.: 200387

Location:
Coord. System:
Northing: 4684.0
Easting: 695.6

Weather: 40F Partly cloudy

Boring Information:
Boring No: W-5
Well No: AP-10
Surf Elev.: 534.4

Depth Information:
Total: 34.97
Auger: 4.25" HSA
Core: 5ft. Continous Sampler

Dates:
Start: 2/24/2021
Finish: 2/24/2021

Drilling Contractor:
Contractor Name: Total Drilling Services/Skinner ltd.
City: Hindsboro, Il.
Equipment: CME 850

Personnel:
Geologist: C.M. Latham
Driller: Todd Skinner
Helper(s): A. Bruce

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							**SILTY TOPSOIL** Dark brown, moist, very firm, hard silt in shoe.	
	1		2.5/5				**SILT** Medium brown, moist, very firm, hard silt in shoe.	
5							**CLAYEY SILT** Brown, moist, soft, homogenous.	-5.0
	2		4/4				**SILTY CLAY** Brown, high plasticity, moist, very soft, homogenous. Trace sand seen in top of barrel.	
10							Wet from 10'-15'	-10.0
	3		5				Free water at 12'5"	
15							**SILTY CLAY** Grey, soft, moist. Fine sands, trace gravels at 17'	-15.0
	4		5				**CLAYEY SILT WITH SAND** Blueish grey with trace gravel, soft, moderate sorting.	
20								-20.0

Notes:

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FIELD BORING LOG

Boring Information: W-5 Boring No: W-5 Well No: AP-10

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							SANDY GRAVEL Poorly sorted, sub rounded, saturated, unconsolidated sands. Poorly sorted angular gravel.	
							SILTY CLAY Blue, high plasticity, firm, moist, tight clay. Very thin sand seam, fine grained, saturated at 23' Very thin sand seam, fine grained, saturated at 29.5'	
	5		5/5					
25								-25.0
	6		5/5					
30								-30.0
	7		4/5				**DIAMICTON** Blue, subrounded, poorly sorted sandy clay, with angular coal up to 0.3ft. Angular gravels; poorly sorted. Trace silts, saturated. Gradation into larger gravel and sand clasts towards bottom with trace silts and no clay.	
				33			**SHALE** Grey, moist, with lamination.	
	8			60				
35							End of Boring = 34.97 Feet	-35.0
40								-40.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 200387-0025

Location:
Coord. System:
Northing: 4150.6
Easting: 524.5

Weather: Clear 40s

Boring Information:
Boring No: W-4
Well No: AP-11
Surf Elev.: 535.30

Depth Information:
Total: 20.1
Auger: 4.25" HSA
Core: 5ft continous sampler

Dates:
Start: 2/23/2021
Finish: 2/23/2021

Drilling Contractor:
Contractor Name: Total Drilling Services/Skinner LTD
City: Hindsboro
Equipment: CME 850

Personnel:
Geologist: Scott Kangas
Driller: Todd Skinner
Helper(s): Adam Bruce

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							**CLAYEY SILT TOPSILT** Black to dark brown, moist, soft to moderately stiff.	
	1		3.5/5				**CLAYEY SILT** Dark brown, moist, stiff to hard, homogenous.	
5								-5.0
	2		3.75/5				Very hard, trace fine sand, and oxidation with depth	
10								-10.0
	3		5/5				**SILTY CLAY** Olive gray, moist, soft, heavily oxidated, trace fine sand that increases with depth	
15							**CLAYEY SAND** Dark Gray to reddish brown with depth, wet, soft, fine well sorted sand	-15.0
	4		2.5/5				**GRAVEL AND SAND** Gray, poorly sorted up to 1" angular pieces, wet	
20								-20.0

Notes:

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FIELD BORING LOG

Boring Information: W-4 Boring No: W-4 Well No: AP-11

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							SHALE Weathered, gray	
							End of Boring = 20.1 Feet	
25								-25.0
30								-30.0
35								-35.0
40								-40.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 200387-0025

Location:
Coord. System:
Northing: 3797.7
Easting: 667.6
Weather: Clear 40s

Boring Information:
Boring No: W-3
Well No: AP-12
Surf Elev.: 537.80

Depth Information:
Total: 27.3
Auger: 4.25" HSA
Core: 5ft continous sampler

Dates:
Start: 2/23/2021
Finish: 2/23/2021

Drilling Contractor:
Contractor Name: Total Drilling Services/Skinner LTD
City: Hindsboro, IL
Equipment: CME 850

Personnel:
Geologist: Scott Kangas
Driller: Todd Skinner
Helper(s): Adam Bruce

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							**CLAYEY SILT TOPSOIL** Dark brown, moist, soft to slightly stiff, root structures	
							CLAYEY SILT Brown, moist, stiff to hard, heavily oxidated, homogenous	
	1		4/5					
5								-5.0
							SILT Light gray, moist, firm to hard, heavily oxidated, mottling, homogenous.	
	2		4/5					
10								-10.0
							CLAYEY SILT Brown, moist, stiff to hard, moderate oxidation	
	3		5/5				Lighter in color, trace fine sand, and increase clay content with depth	
15								-15.0
	4		4/5					
							SANDY CLAY Gray, wet, soft, fine sand, well sorted and homgenous	
20								-20.0

Notes:

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FIELD BORING LOG

Boring Information: W-3 Boring No: W-3 Well No: AP-12

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	5		2.5/ 2.5					
	6		2/2.5				**CLAYEY SAND** Dark gray, wet, stiff, well sorted fine sand	
							GRAVEL AND SAND Gray, poorly sorted, angular to subangular, 1.5" or less in size	
25	7		2.3/ 2.3				**SHALE** Gray, weathered	-25.0
							End of Boring = 27.3 Feet	
30								-30.0
35								-35.0
40								-40.0

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield, IL.
County: Sangamon
Site No.:
AEI No.: 200387

Location:
Coord. System:
Northing: 3451.2
Easting: 852.1

Weather: 50F Sunny

Boring Information:
Boring No: W-2
Well No: AP-13
Surf Elev.: 538.6

Depth Information:
Total: 27.6
Auger: 4.25" HSA
Core: 5ft. Continuous Sampler

Dates:
Start: 2/23/2021
Finish: 2/24/2021

Drilling Contractor:
Contractor Name: Total Drilling Services/Skinner ltd.
City: Hindsboro, IL.
Equipment: CME 850

Personnel:
Geologist: C.M. Latham
Driller: Todd Skinner
Helper(s): A. Bruce

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							**SILTY TOPSOIL** Dark Brown-black, moist, soft.	
	1		3.5				**CLAYEY SILT** Light brown, firm, moist.	
5							**SILT** Grey, moist, firm, homogenous.	-5.0
	2		4/5				**SILT** Reddish brown, moist, firm, homogenous.	
10								-10.0
	3		5/5				**CLAYEY SILT** Reddish brown, mottled with grey clay, moist, soft-firm, homogenous.	
15								-15.0
	4		5/5					
20								-20.0

Notes:

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FIELD BORING LOG

Boring Information: W-2 Boring No: W-2 Well No: AP-13

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	5		1.25/ 2.5				**SAND AND GRAVEL** Dirty olive, saturated, poorly sorted, angular.	
25							**SHALE** Grey, weathered, with lamination.	-25.0
				29 60 4				
							End of Boring = 27.6 Feet	
30								-30.0
35								-35.0
40								-40.0

Notes:

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FIELD BORING LOG

Site Information:
Name: CWLP
Location: Springfield, IL
County: Sangamon
Site No.:
AEI No.: 200387

Location:
Coord. System:
Northing: 3171.5
Easting: 1275.2

Weather: 44F Partly Sunny

Boring Information:
Boring No: W-1
Well No: AP-14
Surf Elev.: 536.80

Depth Information:
Total: 27.5
Auger: 4.25" HSA
Core: 5ft Continuous Sampler

Dates:
Start: 2/25/2021
Finish: 2/26/2021

Drilling Contractor:
Contractor Name: Total Drilling Services/Skinner ltd.
City: Hindsboro, IL
Equipment: CME 850 4.25" HSA w/ 5' cont. sampler and 2'SS

Personnel:
Geologist: C.M. Latham
Driller: Todd Skinner
Helper(s): A. Bruce

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0							**SILTY TOPSOIL** Dark brown, moist, soft, organic leaves	
							SILTY CLAY Some gravel	
	1		3.5/5					
5							**CLAYEY SILT** Dark brown, moist, soft, organic leaves and roots, oxidation	-5.0
							SILTY CLAY Medium brown, mottled with grey clay and oxidation, high plasticity, moist, firm.	
	2		5/5					
10								-10.0
	3		4/5				Groundwater encountered at 14'	
15							**SILTY CLAY** Grey, moist, firm, high plasticity, oxidation	-15.0
	4		5/5					
20							21-21.5' coal fragments with undifferentiated organic materials	-20.0

Notes:

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FIELD BORING LOG

Boring Information: W-1 Boring No: W-1 Well No: AP-14

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	5		3/5				**SILTY CLAY** Some gravel	
							SAND Coarse grained, poorly sorted, unconsolidated, saturated.	
25								-25.0
	6		3/5	30 60 4			**SHALE** Grey, weatherd with lamination	
							End of Boring = 27.5 Feet	
30								-30.0
35								-35.0
40								-40.0

Notes:

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3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1128150.33
Easting: 2455538.81

Weather: Sunny 66 F

Boring Information:
Boring No: B1
Well No: T1
Surf Elev.: 535.33

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 05/01/2024
Finish: 05/01/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	535.3
0							Dark brown silty CLAY (topsoil); Sample CS1A	
	1		4.0/5		0.25		Dark brown silty CLAY; moist	
5								530.0
	2		5.0/5		0.25		Sample CS2 7.0-7.5'; saturated 7.5'	
10							Free water 9.5'	
					2.0		Light brown silty CLAY; gray mottling; Sample CS3A 11.0-11.3'	525.0
	3		5.0/5				Sample CS3B 13.0-13.5'	
					2.75			
15					1.75			520.0
					0.5		Sample CS4A 15.5-16.0'	
	4		3.0/4.5				Brown SAND and GRAVEL; fine to coarse grained; silty clay matrix	
							Gray SANDSTONE; weathered	
							Greenish gray SANDSTONE; fine grained	
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1128803.76
Easting: 2455006.85

Weather: Sunny 66 F

Boring Information:
Boring No: B2
Well No: T2
Surf Elev.: 547.22

Depth Information:
Total: 35.0'
Auger: 35.0'
Core: -

Dates:
Start: 05/01/2024
Finish: 05/01/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	547.2
0							Dark brown silty CLAY (topsoil); Sample CS1A 0-0.5	
							Brown silty CLAY; moist; Sample CS1B 2.5-3.0	
	1		4.3/5		3.0 3.0			545.0
5							Brown clayey SILT; greenish gray mottling; moist	
	2		4.0/5					540.0
					2.25		Sample CS2A 8.0-8.5'	
10							Sample CS3A 11.0-11.5	
							Dark brown CONCRETIONS; Sample CS3B 12.1-12.3'	535.0
	3		5.0/5				Brown silty CLAY; Sample CS3C	
					1.5			
15								

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: B2 Boring No: B2 Well No: T2

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Sample CS4	
	4		5.0/5		4.75			530.0
20	5		2.0/2					
							Gray clayey SILT; brown mottling; moist; trace black organics	525.0
	6		3.0/3		3.25		Sample CS6A 23-23.5'	
25					1.25		Increasing black organics; Sample CS7A 25.5-26	
							Gray silty CLAY; brown mottling; moist; trace organics	
	7		5.0/5		1.75		Sample CS7B 27.0-28.0'	520.0
30								

Notes:

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FIELD BORING LOG

Boring Information: B2 Boring No: B2 Well No: T2

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Sample CS8A	
							Gray to brownish gray SHALE; weathered; wet; Sample CS8B	515.0
	8		5.0/5				Gray SHALE; Sample CS8C 32.25-33.0'	
35							End of Boring = 35 Feet	510.0
40								505.0
45								

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1130726.70
Easting: 2455622.14

Weather: Cloudy 50 F

Boring Information:
Boring No: B4
Well No: T4
Surf Elev.: 546.56

Depth Information:
Total: 35.0'
Auger: 35.0'
Core: -

Dates:
Start: 04/26/2024
Finish: 04/26/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	546.6
0							Brown silty CLAY; moist; organics	
	1		4.7/5		0.5			545.0
5							Brown clayey SILT; moist; trace organics; becoming more dense with depth	
	2		5.0/5		3.5 >5			540.0
10								
	3		5.0/5		0.5		Black organics; Sample CS3A	535.0
					0.25		Brown silty CLAY; Sample CS3B	
15								

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: B4 Boring No: B4 Well No: T4

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
					0.25		Brown clayey SILT; moist	530.0
	4		3.6/5		0.5		Brown silty CLAY; moist; medium to fine coarse gravel	
							Gray SHALE; weathered	
20							Gray SHALE; weathered; moist	525.0
	5		3.6/5					
25							End of Boring = 25 Feet	520.0
30								

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1130996.32
Easting: 2455852.04

Weather: Sunny 43 F

Boring Information:
Boring No: B5
Well No: T5
Surf Elev.: 538.15

Depth Information:
Total: 20.0'
Auger: 20.0'
Core: -

Dates:
Start: 04/25/2024
Finish: 04/25/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	538.2
0					0.25		Brown SILT; moist	
	1		4.6/5		2.0		Dark brown silty CLAY; moist	535.0
					2.25		Dark brown silty CLAY; brown/tan mottling; moist	
5							Olive green to brown silty CLAY; mottling; moist	
	2		4.8/5		2.25		8.0' Free water	530.0
10							Brown SAND; fine grained; with silt; saturated	
					>5.0		Olive green clayey SILT; brown mottling	
	3		3.8/5				Gray SHALE; weathered	525.0
15								

Notes:

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FIELD BORING LOG

Boring Information: B5 Boring No: B5 Well No: T5

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	4		1.6/5				Black SHALE; saturated	520.0
20							End of Boring = 20 Feet	515.0
25								510.0
30								

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1131175.15
Easting: 2456259.47

Weather: Sunny 43 F

Boring Information:
Boring No: B6
Well No: T6
Surf Elev.: 535.96

Depth Information:
Total: 42.2'
Auger: 42.2'
Core: -

Dates:
Start: 04/25/2024
Finish: 04/25/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	536.0
0							Dark brown silty CLAY (topsoil)	535.0
					1.5		Greenish brown silty CLAY; moist; trace organics	
	1		4.1/5					
5							Greenish brown silty CLAY; gray mottling; trace organics	530.0
	2		4.2/5		2.0			
10							Gray/brown clayey SILT; greenish mottling; moist	525.0
	3		5.0/5		4.5			
							14.0' Wet	
15								

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Boring Information: B6 Boring No: B6 Well No: T6

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Gray silty CLAY; trace brown mottling; organics	520.0
	4		5.0/5		1.75		18.0' Saturated	
20							Gray CLAY; saturated; soft	
	5		5.0/5		0.25		Dark gray SILT; saturated	515.0
25							Dark gray silty CLAY; saturated; small gravel	510.0
	6		4.7/5		0.5			
30								

Notes:

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FIELD BORING LOG

Boring Information: B6 Boring No: B6 Well No: T6

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Dark gray SILT; saturated; trace white clasts	505.0
	7		5.0/5		0.5			
35					0.5			500.0
	8		3.5/5				Gray SILT to silty SAND; fine to coarse grained	
40							Gray SHALE (bedrock)	
	9		1.5/5					495.0
							End of Boring = 42.2 Feet	
45								

Notes:

APPENDIX A4:
IMPOUNDMENT GEOTECHNICAL INVESTIGATION LOGS

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127408.40
Easting: 2456167.19

Weather: Rainy 62 F

Boring Information:
Boring No: B-1U
Well No: B-1U
Surf Elev.: 564.17

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/13/2023
Finish: 10/13/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kergel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	564.2
0	1						Black CINDERS; moist; loose	
	2		1.0/1.5	4 5 6	2.0		Dark brown silty CLAY; moist; stiff; some black cinders; trace organics; trace gravel	
	3							560.0
5	4		0.9/1.5	2 3 5	1.5			
	5						Black fly ASH with CINDERS; moist to wet; moderately stiff	
	6		1.0/1.5	2 6 6	1.0			
	7							555.0
10	8		0.8/1.5	2 5 6				
	9							
	10		0.8/1.5	1 2 1				
	11							550.0
15	12		1.4/1.5	0 1 1			Black fly ASH; wet; soft	
	13						CINDERS	
	14		1.1/1.5	1 2 3	0.25		Black fly ASH; wet; soft; laminated	
	15							545.0
20							End of Boring = 19.5 Feet	

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127370.68
Easting: 2456072.07

Weather: Sunny 72 F

Boring Information:
Boring No: B-1L
Well No: B-1L
Surf Elev.: 552.56

Depth Information:
Total: 24.5'
Auger: 24.5'
Core: -

Dates:
Start: 10/11/2023
Finish: 10/11/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kergel
Helper(s): M. Sick

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
0							Ground Surface	552.6
	1						Brown silty CLAY; moist; stiff; some dark brown mottling; few organics; trace ash fragments; trace gravel	
	2		1.1/1.5	2 6 7	3.75			550.0
	3							
5	4		1.0/1.5	3 5 4	3.5			
	5							
	6		0.6/1.5	2 3 3	2.5			545.0
	7							
							16 mm VST@ 9.5' = 7.7, 2.4, 2.8	
10	8		0.6/1.5	1 4 3	2.25		Brown SAND; medium to coarse grained; moist; loose	
	9							
	10		0.3/1.5	1 3 3			Black coal ASH fragments; wet; loose	540.0
	11							
15	12		0.6/1.5	0 2 2				
	13							
	14		0.5/1.5	4 10 3				535.0
	15						Dark gray sandy SILT; wet; soft; trace gravel	
							More clayey	
20	16		1.1/1.5	0 0 2	0.25		Dark gray CLAY; moist; soft; some organic fragments; trace gravel	
	17				0.5			
	18		1.4/2.0				20 mm VST@ 22.0' = 13.0+, 3.9, 3.9	530.0
	19							
25					2.0		End of Boring = 24.5 Feet	

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128045.00
Easting: 2456005.51
Weather: Sunny 78 F

Boring Information:
Boring No: B-2U
Well No: B-2U
Surf Elev.: 562.33

Depth Information:
Total: 26.0'
Auger: 26.0'
Core: -

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

Dates:
Start: 10/12/2023
Finish: 10/12/2023

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	562.3
0	1						Black coal ASH (cinders); moist; loose	
	2		0.4/1.5	2 5 1				560.0
	3							
5	4		0.2/1.5	1 1 2				
	5							
	6		0.8/1.5	2 4 8	2.0		Gray silty CLAY; some yellow brown mottling; some iron concretions; moist; stiff; trace gravel	555.0
	7							
10	8		0.4/1.5	2 5 4			Black coal ASH (cinders); wet; loose	
	9							
	10		1.5/1.5	1 2 11	<0.25		Black fly ASH; wet; soft; some cinders	550.0
	11							
15	12		1.0/1.5	1 0 2	<0.25		With cinders	
	13							
	14		0.4/1.5	3 3 4			Black coal ASH (cinders); wet; loose	545.0
	15							
20	16		0.5/2.0				Black fly ASH; wet; soft; 20 mm VST@ 19.5' = 3.0, 3.2, 3.8	
	17				<0.25			
	18		0.5/1.5	1 2 5			Black CINDERS; wet; loose	540.0
	19							
25	20		0.5/1.5	0 1 2	1.25		Olive brown CLAY; moist; stiff; some organics	
							End of Boring = 26 Feet	

Notes:

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3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128015.70
Easting: 2455909.16

Weather: Sunny 65 F

Boring Information:
Boring No: B-2L
Well No: B-2L
Surf Elev.: 536.92

Depth Information:
Total: 24.5'
Auger: 24.5'
Core: -

Dates:
Start: 10/10/2023
Finish: 10/10/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	536.9
0	1						Gray/brown silty CLAY; some iron concretions; moist; stiff; some organics; some ash fragments; some gravel	
	2		0.5/1.5	1 4 4	1.25			535.0
	3							
5	4		1.3/1.5	2 2 3	1.0			
	5							
	6		1.8/2.0				Light gray clayey SILT; few dark yellow brown mottling; moist; firm; trace iron concretions	530.0
	7				2.25			
10	8		1.5/1.5	1 2 2	0.75		20 mm VST@9.5' = 13.0, 3.2, 2.8	
	9				<0.25		Gray clayey SAND; wet; soft	
	10		1.5/1.5	0 1 1	<0.25			525.0
	11							
15	12		1.0/1.5	0 0 1	<0.25			
	13							
	14		1.0/1.5	0 1 1	0.25		Gray clayey SILT; laminated; moist to wet; soft	520.0
	15							
20	16		1.3/1.5	0 1 2			Brown SAND; medium to coarse grained; wet; loose	
	17							
	18		1.5/1.5	1 3 3	0.25		Dark gray clayey SILT; laminated; moist; soft; organic fragments	515.0
	19							
25							End of Boring = 24.5 Feet	

Notes:

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3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128026.78
Easting: 2455971.03

Weather: Cloudy 62 F

Boring Information:
Boring No: B-2
Well No: B-2
Surf Elev.: 554.71

Depth Information:
Total: 30.0'
Auger: 30.0'
Core: -

Dates:
Start: 10/06/2023
Finish: 10/06/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: S. Van Hook
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	554.7
0	1						Gray brown SILT; dry	
	2		0.4/1.5	3 5 5	4.75			
	3							
5	4		0.8/1.5	3 4 6	2.5		Becoming moist	550.0
	5							
	6		0.7/1.5	3 4 4	2.0		Brown silty CLAY; moist	
	7				2.5			
10	8		0.9/1.5	2 4 4				545.0
	9						Greenish brown silty CLAY; moist	
	10		1.0./1.5	2 3 4	1.5			
	11							
15	12		1.0/1.5	1 3 5	2.0		Brown silty CLAY; moist; trace black organics; 16 mm VST@ 14.5' = 7.0, 4.3, 4.2	540.0
	13							
	14		1.0/1.5	1 2 4	2.0			
	15							
20	16		1.4/1.5	1 3 4	2.5		Brownish gray silty CLAY; black/orange inclusions; organics; moist	535.0
	17							
	18		1.9/2.0					
	19							530.0
25	20		1.5/1.5	1 3 4	1.0		Brownish/greenish gray silty CLAY; moist; trace brown organics; 16 mm VST@ 25.0' = 5.4, 3.2, 3.5	
	21							
	22		1.5/1.5	0 2 2	<0.25 <0.25		Becoming trace fine grained sand	
	23						Orangish brown SILT; moist	
30								525.0
							End of Boring = 30 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127389.92
Easting: 2456246.00

Weather: Sunny 64 F

Boring Information:
Boring No: B-1CCR
Well No: B-1CCR
Surf Elev.: 568.03

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/17/2023
Finish: 10/17/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	568.0
0	1						Black bottom ash and CINDERS; moist; loose	
	2		0.5/1.5	5 5 2				565.0
	3							
5	4		0.3/1.5	1 2 3				
	5						Black fly ASH; moist to wet	
	6		0.8/1.5	1 3 3	1.0			560.0
	7						Black bottom ASH; moist to wet; moderately loose	
10	8		1.0/1.5	1 1 1				
	9							
	10		1.2/1.5	1 0 1				555.0
	11							
15	12		1.5/1.5	0 0 1	<0.25		Black fly ASH; moist to wet; moderately firm	
	13						Black bottom ASH; wet; loose	
	14		0.9/1.5	2 6 7				550.0
	15							
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127355.19
Easting: 2456023.58

Weather: Sunny 65 F

Boring Information:
Boring No: B-1LL
Well No: B-1LL
Surf Elev.: 542.84

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/10/2023
Finish: 10/10/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	542.8
0	1						Brown clayey SILT; with sand; moist; loose	
	2		0.2/1.5	6 8 8				540.0
	3							
5	4		0.2/1.5	6 5 5				
	5							
	6		0.6/1.5	4 4 5			Gray silty CLAY; with cinders; dark yellowish brown mottling; moist; stiff	535.0
	7				2.25			
10	8		0.6/1.5	7 9 10			Gray SAND; medium to coarse grained; wet; loose	
	9							
	10		0.7/1.5	3 5 5			Gray silty CLAY; with black organic varved material; few ash fragments	530.0
	11				2.75			
15	12		2.0/2				16 mm VST@ 14.5' = 8.5, 3.6, 4.2	
	13				0.5		Very soft	
	14		1.4/1.5	1 2 2	0.75			525.0
	15							
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127375.6
Easting: 2456111.7

Weather: Sunny 62 F

Boring Information:
Boring No: B-1
Well No: B-1
Surf Elev.: 557.77

Depth Information:
Total: 29.5'
Auger: 29.5'
Core: -

Dates:
Start: 10/09/2023
Finish: 10/09/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: R. Carson
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	557.8
0	1						CINDER and GRAVEL (fill)	
	2		0.3/1.5	3 4 2				555.0
	3							
5	4		0.2/1.5	1 2 1			CINDER (fill); dry; loose	
	5						Gray silty CLAY; with cinders; dry; medium stiff	
	6		0.5/1.5	1 3 2				550.0
	7							
10	8		0.9/1.5	1 2 8	1.0		Gray silty CLAY; with gravel and sand; moist; stiff; 20 mm VST@ 9.5' = 6.0, 3.2, 4.3	
	9							
	10		0.8/1.5	0 1 3	1.0		Gray sandy CLAY; moist; medium stiff	545.0
	11						Gray SANDY LOAM	
15	12		0.9/1.5	4 18 9			Black CINDER (fill); with gravel and silty clay; wet; loose	
	13							
	14		0.2/1.5	1 1 1				540.0
	15							
20	16		1.1/1.5	1 1 3	0.3		Gray SANDY LOAM; wet; slightly stiff	
	17							
	18		1.1/1.5	0 0 3			Gray SILTY LOAM; wet; soft; 20 mm VST@ 51.5' = 6.7, 2.3, 2.5	535.0
	19							
25	20		1.8/2.0				Gray SANDY LOAM; moist	
	21				0.7			
	22		1.2/1.5	2 3 5	1.5		Gray silty CLAY; moist; stiff	530.0
	23							
30							End of Boring = 29.5 Feet	

Notes:

Andrews Engineering, Inc.
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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128059.37
Easting: 2456087.51

Weather: Sunny 64 F

Boring Information:
Boring No: B-2CCR
Well No: B-2CCR
Surf Elev.: 566.77

Depth Information:
Total: 26.0'
Auger: 26.0'
Core: -

Dates:
Start: 10/17/2023
Finish: 10/17/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	566.8
0	1						Mix of lime sludge, and fly and bottom ASH; some dark yellow brown mottling; moist; soft	
	2		1.3/1.5	1 1 1	0.25			565.0
	3							
5	4		1.6/1.5	1 0 1			More bottom ash	
	5							
	6		0.9/1.5	1 5 3	<0.25		Lime SLUDGE; wet; soft	560.0
	7							
10	8		1.5/1.5	0 0 0	<0.25		Black fly ASH; moist; soft; some organic fragments	
	9							555.0
	10		1.5/1.5	0 0 0			Some bottom ash	
	11							
15	12		1.5/1.5	0 0 0	<0.25			
	13							
	14		0.4/1.5	1 0 1			Black bottom ASH; wet; loose	550.0
	15							
20							End of Boring = 19.5 Feet	

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128663.99
Easting: 2456486.97

Weather: Sunny 69 F

Boring Information:
Boring No: B-3
Well No: B-3
Surf Elev.: 554.19

Depth Information:
Total: 29.5'
Auger: 29.5'
Core: -

Dates:
Start: 10/18/2023
Finish: 10/18/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	554.2
0	1						Dark yellowish brown silty CLAY; organic staining; moist; stiff	
	2		0.5/1.5	1 1 2	1.0			
	3							
5	4		0.9/1.5	2 2 2			Brown/gray SAND; coarse grained; moist to wet; loose	550.0
	5							
	6		0.8/1.5	1 2 3	2.57		Dark yellowish brown silty CLAY; organic staining; moist; stiff	
	7							545.0
10	8		1.5/2.0				16 mm VST@ 9.5' = 9.3, 5.3, 5.4	
	9				1.5			
	10		1.0/1.5	1 3 3	1.5		Black/gray	
	11							540.0
15	12		1.3/1.5	2 3 4	1.5			
	13							
	14		1.2/1.5	1 2 5	1.25		With dark yellow brown mottling	
	15							535.0
20	16		1.6/2.0				16 mm VST@ 19.5' = 11.8, 5.0, 5.1	
	17				1.75			
	18		1.5/1.5	1 2 4			Manganese oxide concretions Dark yellowish brown silty CLAY; more silty; organic staining; moist; stiff	
	19							530.0
25	20		1.1/1.5	0 2 2	1.25		Yellow brownclayey SILT; some dark yellow brown mottling; laminated; some magnesium oxide concretions; moist; soft; 16 mm VST@ 24.5' = 9.1, 6.0, 5.9	
	21							
	22		1.2/1.5	0 2 4	0.5			
	23				2.75		Yellow brown silty CLAY; some dark yellow brown mottling; few manganese oxide concretions; moist; stiff	525.0
30							End of Boring = 29.5 Feet	

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128634.05
Easting: 2456502.96

Weather: Sunny 64 F

Boring Information:
Boring No: B-3U
Well No: B-3U
Surf Elev.: 562.94

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/17/2023
Finish: 10/17/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	562.9
0	1						Dark yellowish brown silty CLAY; some iron concretions; moist; stiff; trace gravel	
	2		0.8/1.5	2 4 7	3.25		GYPSUM; moist; loose	560.0
	3							
5	4		0.5/1.5	2 2 2				
	5						Olive gray silty CLAY; few dark yellow brown mottling; laminated; some bottom ash; moist; stiff; trace gravel	
	6		0.7/1.5	2 4 6	1.5			555.0
	7							
10	8		1.3/2.0				16 mm VST@ 9.5' = 0.8, 3.9, 4.2	
	9						Bottom ASH; moist to wet; loose	
	10		0.5/1.5	1 0 1			Fly ASH; wet; soft	550.0
	11							
15	12		1.5/1.5	0 1 0			Little bottom ASH	
	13				0.5			
	14		1.5/1.5	0 0 1	0.5			545.0
	15				<0.25			
20							End of Boring = 19.5 Feet	

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128336.73
Easting: 2456638.09

Weather: Sunny 65 F

Boring Information:
Boring No: B-3CCR
Well No: B-3CCR
Surf Elev.: 564.05

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/20/2023
Finish: 10/20/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	564.0
0	1						Fly ash with bottom ASH; moist; moderately firm	
	2		0.7/1.5	1 3 4	1.0			
	3							560.0
5	4		1.5/1.5	1 0 0	<0.25		Light gray lime SLUDGE; with rootlets; some organics; moist; soft	
	5							
	6		0.9/1.5	0 1 1	<0.25			
	7							555.0
10	8		1.1/1.5	0 0 0	<0.25		Fly ASH; moist to wet; soft; strong petroleum odor	
	9						Some organic matter; strong petroleum odor	
	10		1.5/1.5	0 0 0	<0.25			
	11							550.0
15	12		1.4/1.5	0 0 0			Faint odor	
	13							
	14		1.5/1.5	0 0 0				
	15							545.0
20							End of Boring = 19.5 Feet	

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127789.13
Easting: 2456023.78
Weather: Sunny 62 F

Boring Information:
Boring No: B-4
Well No: B-4
Surf Elev.: 555.18

Depth Information:
Total: 34.5'
Auger: 34.5'
Core: -

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: R. Carson
Driller: M. Sick
Helper(s): B. Hummel

Dates:
Start: 10/09/2023
Finish: 10/09/2023

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	555.2
0	1						Gray silty CLAY; with cinders; dry; stiff	
	2		0.8/1.5	3 6 6	3.3		Brown silty CLAY; dry; stiff	
	3							
5	4		0.2/1.5	4 6 5	4.0		Gray silty CLAY; with cinders	550.0
	5							
	6		0.7/1.5	2 3 4	1.0		Brown/gray silty CLAY; moist; moderately stiff; trace cinders	
	7							
10	8		0.6/1.5	1 3 4			Gray silty CLAY; moist; moderately stiff; 16 mm VST@ 9.5' = 4.4, 2.5, 2.7	545.0
	9				1.0			
	10		0.8/1.5	0 1 2	0.5		Gray silty CLAY; moist; soft	
	11							
15	12		0.9/1.5	1 2 3	1.0		Brown/gray silty CLAY; mottling; moist; soft	540.0
	13							
	14		0.6/1.5	0 2 2	1.1			
	15							
20	16		1.3/2.0				Brown silty CLAY; oxidation staining; moist; moderately stiff; 16 mm VST@ 19.5' = 2.6, 1.7, 1.7	535.0
	17				2.1			
	18		0.8/1.5	0 0 1				
	19				0.5			
25	20		0.9/1.5	0 0 1	0.2-0.5		Soft	530.0
	21							
	22		1.5/1.5	0 1 2	0.1		Brown/gray silty LOAM; wet; soft; trace sand	
	23							
30	24		1.5/1.5	0 0 0	0.1		Brown sandy LOAM; wet; very soft	525.0
	25							
	26		1.5/1.5	0 0 0	0.5		Brown/gray silty CLAY; wet; soft	
	27							
35							End of Boring = 34.5 Feet	520.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127802.23
Easting: 2456057.41

Weather: Sunny 78 F

Boring Information:
Boring No: B-4U
Well No: B-4U
Surf Elev.: 563.01

Depth Information:
Total: 29.0'
Auger: 29.0'
Core: -

Dates:
Start: 10/12/2023
Finish: 10/12/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	563.0
0	1						Black CINDERS; moist; loose	
	2		0.4/1.5	3 6 1				560.0
	3						Black silty CLAY; with fly ash; moist; stiff; some organic fragments	
5	4		0.7/1.5	1 0 1	2.75			
	5						Olive gray silty CLAY; some dark yellow brown mottling; moist; stiff	
	6		0.7/1.5	1 2 2	1.75		Black CINDERS; wet; loose	555.0
	7							
10	8		0.8/1.5	1 0 0	<0.25		Black fly ASH; wet; soft	
	9							
	10		1.0/1.5	2 4 3				550.0
	11							
15	12		0.9/1.5	0 2 2				
	13							
	14		1.1/1.5	1 3 6				545.0
	15							
20	16		0.7/1.5	2 3 4			Black CINDERS; wet; loose	
	17							
	18		1.2/1.5	0 0			Light gray/black fly ASH	540.0
	19							
25	20		0.4/1.5	0 0 1	1.25		Olive gray silty CLAY; some dark yellow brown mottling; moist; moderately stiff; trace organics	
	21							
	22		1.9/2.0					535.0
					1.25		End of Boring = 29 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127732.94
Easting: 2455960.98

Weather: Sunny 65 F

Boring Information:
Boring No: B-4L
Well No: B-4L
Surf Elev.: 533.51

Depth Information:
Total: 21.5'
Auger: 21.5'
Core: -

Dates:
Start: 10/10/2023
Finish: 10/10/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	533.5
0	1						Dark gray silty CLAY; some dark yellow brown mottling; some organic fragments; moist; soft; some gravel; trace coal fragments	
	2		0.4/1.5	3 2 1	0.25			
	3							530.0
5	4		0.7/1.5	1 1 1	<0.25			
	5						Grading to light gray	
	6		1.4/1.5	1 2 2	0.25		Light gray silty CLAY; some dark yellow brown mottling; few iron concretions; moist; soft	
	7							525.0
10	8		1.5/1.5	1 1 2	0.75			
	9							
	10		1.2/2.0				16 mm VST@ 12.0' = 5.6, 2.6, 2.4	
	11				1.75			520.0
15	12		1.4/1.5	0 1 2	0.5		Gray clayey SILT; some dark yellow brown mottling; trace iron concretions; laminated; moist to wet; soft	
	13							
	14		1.5/1.5	0 0 0	<0.25		Light gray silty CLAY; some dark yellow brown mottling; moist; soft	
	15							515.0
20	16		0.0/2.0				Shelby tube attempted but no recovery; 20 mm VST@ 19.5' = 4.2, 1.4, 1.6	
							End of Boring = 21.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1127834.10
Easting: 2456152.87

Weather: Sunny 64 F

Boring Information:
Boring No: B-4CCR
Well No: B-4CCR
Surf Elev.: 567.59

Depth Information:
Total: 21.0'
Auger: 21.0'
Core: -

Dates:
Start: 10/17/2023
Finish: 10/17/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	567.6
0	1						Dark yellow brown silty CLAY; moist; stiff; some bottom ash	
	2		0.8/1.5	1 3 3	1.75			565.0
	3						Dark gray fly ash with bottom ASH; moist; moderately loose	
5	4		0.4/1.5	2 2 2				
	5						Gray lime SLUDGE; with layers of fly ash; wet; soft; few organic fragments	
	6		1.2/1.5	2 3 3	<0.25			560.0
	7							
10	8		1.4/1.5	0 0 0	<0.25		Black fly ASH; moist; soft; trace to some organic fragments	
	9							
	10		1.5/1.5	1 0 0	<0.25			555.0
	11							
15	12		1.5/1.5	0 0 1	<0.25		Black bottom ash with fly ASH; wet; moderately loose; some organic fragments	
	13				<0.25		Black fly ash with bottom ASH; wet; moderately soft; some organic fragments	
	14		0.2/1.5	0 1 1				550.0
	15							
20	16		0.9/1.5	0 1 3			Black bottom ASH; wet; loose	
							End of Boring = 21 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1129302.48
Easting: 2455281.11

Weather: Cloudy, 62 F

Boring Information:
Boring No: B-5
Well No: B-5
Surf Elev.: 553.62

Depth Information:
Total: 39.5'
Auger: 39.5'
Core: -

Dates:
Start: 10/06/2023
Finish: 10/06/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: S. Van Hook
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
0							Ground Surface	553.6
	1						Greenish brown SILT; dry	
	2		0.9/1.5	3 7 7	4.5			
	3							550.0
5	4		0.7/1.5	3 4 8	3.5		Greenish brown silty CLAY	
	5							
	6		0.5/1.5	2 2 4	2.5		Brown mottling	
	7							545.0
10	8		0.9/1.5	2 4 5	1.5			
	9							
	10		0.9/1.5	2 5 6	3.5			
	11							540.0
15	12		0.8/1.5	3 4 7			16 mm VST@15.0' = 1.3, 3.3, 3.2	
	13				3.0			
	14		0.7/1.5	2 5 6	3.5			
	15							535.0
20	16		0.9/1.5	1 5 8	4.5		Dark gray clayey SILT; moist; wood chucks	
	17							
	18		0.9/1.5	2 5 5	2.0			
	19							530.0
25	20		1.9/2.0				16 mm VST@ 24.0' = 3.7-3.8	
	21							
	22		1.3/1.5	0 1 2	0.5		Brown silty CLAY; moist	
	23							525.0
30	24		1.2/1.5	0 0 1	<0.25		Saturated	
	25							
	26		1.2/1.5	0 1 2	0.5		Brown silty CLAY; trace greenish gray and dark brown mottling	
	27							520.0
35	28		1.5/1.5	0 2 2	0.25		BroVery little silt	
	29							
	30		1.5/1.5	0 0 2				
	31							515.0
40							End of Boring = 39.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1129295.29
Easting: 2455215.62

Weather: Sunny, 87 F

Boring Information:
Boring No: B-5L
Well No: B-5L
Surf Elev.: 534.00

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/03/2023
Finish: 10/03/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: R. Carson
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	534.0
0	1						Dark brown silty CLAY; dry; stiff	
	2		0.5/1.5	4 6 5	>4.5			
	3							530.0
5	4		1.0/1.5	5 5 7				
	5				2.7			
	6		0.2/1.5	2 2 2			Soft	
	7							525.0
10	8		1.6/2.0				Gray silty CLAY; soft; 20 mm VST@ 9.5' = 5.8, 2.5, 2.9	
	9				0.5			
	10		1.5/1.5	0 2 1	0.2-0.7		Gray CLAY; very soft	
	11							520.0
15	12		1.5/1.5	0 1 2				
	13				0.2-0.5			
	14		1.5/1.5	0 0 0			Gray sandy CLAY; very soft	
	15				0.1			
							Gray SAND; 20 mm VST@19.0' = 7.2, 3.2, 3.2	515.0
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1129333.75
Easting: 2455341.56

Weather: Sunny, 87 F

Boring Information:
Boring No: B-5CCR
Well No: B-5CCR
Surf Elev.: 552.59

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/03/2023
Finish: 10/03/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: R. Carson
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	552.6
0	1						Bottom ASH	
	2		0.9/1.5	14 12				550.0
	3				4.5		Dark gray sandy LOAM; stiff	
5	4		1.4/1.5	3 2 3			Dark gray SAND; bottom ash; wet	
	5				1.0			
	6		1.5/1.5	1 1 1			Dark gray sandy LOAM; bottom ash	545.0
	7				1.0			
10	8		0.6/1.5	1 4 6			Black SAND; bottom ash; wet	
	9							
	10		0.4/1.5	5 9 4				540.0
	11							
15	12		0.2/1.5	0 1 1			Black SAND; coarse grained; bottom ash; wet	
	13							
	14		0.2/1.5	3 2 3				535.0
	15							
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1130094.72
Easting: 2455316.59

Weather: Mostly Cloudy, 71 F

Boring Information:
Boring No: B-6
Well No: B-6
Surf Elev.: 553.93

Depth Information:
Total: 40.0'
Auger: 40.0'
Core: -

Dates:
Start: 10/05/2023
Finish: 10/05/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: S. Van Hook
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	553.9
0	1		1.3/2.0	5 15 37 33			Dark brown SILTY (fill)	
	2		0.8/2.0	5 5 6 7	+4.5		Dark brown silty CLAY; moist	
	3							550.0
5	4		0.7/1.5	2 3 5	2.25			
	5							
	6		0.8/1.5	1 3 7	2			545.0
	7							
10	8		0.8/1.5	5 8 7			8.2 mm VST@ 9.5' = 1.3-1.4	
	9				4.0			
	10		0.9/1.5	3 4 6	4.0			540.0
	11							
15	12		1.2/1.5	2 4 6	3.0		13 mm VST@ 15.0' = 4.7-4.6	
	13							
	14		2.0/2.0					
	15		1.4/2.0	2 5 6 10	2.7			535.0
20	16		1.5/2.0	5 10 11 12	4.2		Dark greenish gray silty CLAY; moist	
	17		1.3/2.0	2 4 6 8	3.0		Gray CLAY and SAND; with coal; brown mottling	530.0
25	18		1.6/2.0	1 5 6 6	2.0		Gray silty CLAY; 6.1 mm VST@ 25.5' = 4.0-3.9	
	19		2.0/2.0	1 1 2 2	1.0		Gray clayey SILT	
	20		1.9/2.0	0 0 0 2	0.25			525.0
30	21							
	22		2.0/2.0	0 0 0 2	<0.25		Gray silty CLAY; yellow brown mottling	520.0
	23		2.0/2.0	0 0 0 0	<0.25		Brown CLAY; mottling light brown; trace sand	
35	24		1.8/2.0	0 2 2 3	1.0		Light gray clayey sandy SILT; mottling yellow brown	
	25							515.0
40							End of Boring = 40 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1130067.17
Easting: 2455388.17

Weather: Sunny, 65 F

Boring Information:
Boring No: B-6CCR
Well No: B-6CCR
Surf Elev.: 553.32

Depth Information:
Total: 24.5'
Auger: 24.5'
Core: -

Dates:
Start: 10/20/2023
Finish: 10/20/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	553.3
0	1						Gray fly ASH; moist; friable; some gypsum; trace bottom ash	
	2		1.0/1.5	13 12				
	3							550.0
							Bottom ASH; moist; loose	
5	4		0.9/1.5	5 3 2				
	5							
	6		1.1/1.5	2 2 2	<0.25		Fly ASH; moist to wet; soft	
	7							545.0
10	8		1.5/1.5	1 0 0	<0.25			
	9						Fly ASH; wet; soft	
	10		0.6/1.5	0 0 0	<0.25			
	11							540.0
15	12		1.5/1.5	0 0 0	<0.25			
	13							
	14		1.5/1.5	0 0 0	<0.25			
	15							535.0
20	16		1.5/1.5	0 0 0	<0.25			
	17							
	18		1.5/1.5	0 0 0	<0.25			
	19							530.0
25							End of Boring = 24.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1130413.91
Easting: 2455917.71

Weather: Haze, 79 F

Boring Information:
Boring No: B-7
Well No: B-7
Surf Elev.: 552.56

Depth Information:
Total: 39.5'
Auger: 39.5'
Core: -

Dates:
Start: 10/04/2023
Finish: 10/04/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: R. Carson
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	552.6
0	1						Brown/gray sandy CLAY; mottling; dry; very stiff	
	2		0.6/1.5	3 5 6	>4.5			550.0
	3						Brown silty CLAY; slightly moist; very stiff	
5	4		0.5/1.5	3 4 7	2.5			
	5						BrowGray silty LOAM; slightly moist; stiff	545.0
	6		0.7/1.5	3 4 5	2.5			
	7						Gray silty CLAY; 16 mm VST@ 9.5' = 13+, 5.2, 5.2	
10	8		0.7/1.5	2 3 6	2.4		Gray silty LOAM	
	9							540.0
	10		0.8/1.5	2 4 7	2.2		Gray silty LOAMSlightly moist; fractured	
	11							
15	12		0.9/1.5	2 4 7	2.3			
	13						Brown sandy LOAM; moist; stiff	535.0
	14		0.5/1.5	2 4 5	2.5			
	15						Brown/gray silty LOAM; mottling; moist; stiff; 16 mm VST@ 19.5' = 11.4, 6.1, 6.2	
20	16		2.0/2.0					
	17				2.1		Brown/gray silty CLAY; mottling; moist; stiff	530.0
	18		1.2/1.5	2 3 5	1.6			
	19						Red brown SAND; moist; loose	
25	20		1.4/1.5	2 3 5	1.7		Brown sandy LOAM; wet; soft	525.0
	21							
	22		1.5/1.5	0 1 2	0.2		Brown/gray silty LOAM; with sand; moist; soft	
	23							
30	24		1.5/1.5	0 2 2	0.5 1.2			520.0
	25							
	26		1.5/1.5	0 1 1	0.2			
	27							
35	28		1.5/1.5	0 0 2	0.5			
	29							
	30		1.5/1.5	1 1 1	0.8		Gray SILT; very moist; soft	515.0
	31							
40							End of Boring = 39.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1130310.33
Easting: 2455947.06

Weather: Cloudy, 58 F

Boring Information:
Boring No: B-7CCR
Well No: B-7CCR
Surf Elev.: 552.18

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/19/2023
Finish: 10/19/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	552.2
0	1						Fly ash, bottom ASH and cinder (fill); moist to wet; soft	
	2		1.0/1.5	3 2 2	0.25			550.0
	3							
5	4		1.0/1.5	0 1 1	<0.25		Bottom ASH; moist; loose	
	5						Fly ASH; wet; soft	
	6		0.6/1.5	0 0 0	<0.25			545.0
	7							
10	8		1.1/1.5	0 0 0	<0.25			
	9							
	10		1.5/1.5	0 0 0	<0.25			540.0
	11							
15	12		1.3/1.5	0 0 0	<0.25			
	13							
	14		1.5/1.5	0 0 0	<0.25			535.0
	15							
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1130083.21
Easting: 2456391.16

Weather: Cloudy, 58 F

Boring Information:
Boring No: B-8U
Well No: B-8U
Surf Elev.: 551.74

Depth Information:
Total: 33.5'
Auger: 33.5'
Core: -

Dates:
Start: 10/19/2023
Finish: 10/19/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	551.7
0	1						Dark gray to brown silty CLAY; moist; moderatyely firm; some organic fragments; some bottom ash	
	2		0.8/1.5	1 2 2	1.0			550.0
	3							
5	4		0.9/1.5	3 5 5	4.0			
	5							545.0
	6		1.0/1.5	3 5 6	4.5			
	7							
10	8		1.8/2.0				16 mm VST@ 9.5' = 10.0, 3.8, 3.9	
	9				0.75			
	10		1.1/1.5	2 2 5	1.5		Color grades to light brown; more clayey; some dark yellow brown mottling; some iron oxide modules	540.0
	11							
15	12		0.8/1.5	2 3 5	1.5		Black/dark brown silty CLAY; moist; stiff; trace coal fragments	
	13							535.0
	14		0.9/1.5	2 4 7	3.0			
	15							
20	16		1.7/2.0				16 mm VST@ 19.5' = 11.2, 4.0, 3.8	
	17				2.25			530.0
	18		1.0/1.5	3 6 7	2.5		Trace organic fragments	
	19							
25	20		1.3/1.5	1 1 3	0.5		16 mm VST@ 24.5' = 5.8, 3.2, 3.0 More silty; some organics	
	21							
	22		1.5/1.5	1 1 2	0.5		Dark gray clayey SILT; moist to wet; moderately soft; some organics	525.0
	23							
30	24		1.3/1.5	1 1 2	0.75			
	25							520.0
	26		1.5/1.5	0 1 1	0.5			
							End of Boring = 33.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1130467.06
Easting: 2455885.37

Weather: Sunny, 85 F

Boring Information:
Boring No: B-7L
Well No: B-7L
Surf Elev.: 533.19

Depth Information:
Total: 20.0'
Auger: 20.0'
Core: -

Dates:
Start: 10/02/2023
Finish: 10/02/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: K. Finke
Driller: M. Sick
Helper(s): A. Kargel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	533.2
0	1				3.5		Gray silty CLAY; dry; very firm; trace sand	
	2		0.5/1.5	3 5 7				530.0
	3							
5	4		0.5/1.5	3 4 7	1.5		Reddish brown clayey SILT; moist; trace sand	
	5							
	6			3 3 3	1.0		Brownish red SAND; wet	525.0
	7							
	8		0.6/1.5	W 3 2			20 mm VST@ 10.0' = 3.8, 1.2	
10							Brownish red SAND with dark black SILT; ash	
	9				0.25			
	10		1.5/1.5	2 1 2			ASH	
	11				0.25		Gray silty CLAY; wet; soft	520.0
15	12		0.9/1.5	W W W	0.25		Gray clayey SILT; moist; soft	
	13							
	14		1.1/1.5	W W W	0			515.0
	15							
20							20 mm VST@ 20.0' = 6.7, 3.0, 3.1	
							End of Boring = 20 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1130109.51
Easting: 2456566.64

Weather: Haze, 79 F

Boring Information:
Boring No: B-8L
Well No: B-8L
Surf Elev.: 530.62

Depth Information:
Total: 24.5'
Auger: 24.5'
Core: -

Dates:
Start: 10/04/2023
Finish: 10/04/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: R. Carson
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	530.6
0	1						Brown silty LOAM; dry; hard	
	2		0.8/1.5	4 6 7	>4.5			
	3							
5	4		0.2/1.5	4 3 4			Brown silty CLAY; moist; stiff	525.0
	5							
	6		1.1/1.5	1 1 1	0.1		Wet; soft	
	7							
10	8		1.5/1.5	1 1 1			20 mm VST@9.5' = 5.4, 3.4, 3.8	
	9				0.0-0.1		Wet; very soft	520.0
	10		1.6/2.0				Some mottling; wet; soft	
	11				0.5			
15	12		1.4/1.5	1 1 1	0.5		Brown sandy LOAM; wet; soft	515.0
	13						Gray sandy LOAM; wet; soft	
	14		1.1/1.5	0 1 3			Gray SAND; loose; trace clay	
	15							
20	16		1.4/1.5	0 0 1				
	17				0.2		Gray SILT; wet; soft	510.0
	18		1.5/1.5	0 0 0			20 mm VST@ 22.0' = 6.8, 3.4, 3.8	
	19				0.1		Gray sandy LOAM; wet; soft	
25							End of Boring = 24.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1129690.26
Easting: 2456402.29

Weather: Cloudy, 58 F

Boring Information:
Boring No: B-9U
Well No: B-9U
Surf Elev.: 552.15

Depth Information:
Total: 40.0'
Auger: 40.0'
Core: -

Dates:
Start: 10/19/2023
Finish: 10/19/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	552.2
0	1						Dark brown/gray silty CLAY; moist; stiff	
	2		0.7/1.5	3 7 7	4.0			550.0
	3							
5	4		1.0/1.5	3 4 6	3.75			
	5							
	6		0.5/1.5	3 3 6	2.25		More clayey; trace bottom ash fragments	545.0
	7							
10	8		1.7/2.0				Yellow brown silty CLAY; moist; stiff; laminated; trace iron nodules; 16 mm VST@ 9.5' = 7.5, 4.1, 3.5	
	9				1.0			540.0
	10		0.8/1.5	2 4 5	2.75		Black silty CLAY; few cinders (bottom ash); moist; stiff	
	11							
15	12		0.8/1.5	3 5 8	3.0			
	13							
	14		0.7/1.5	2 4 6	2.5			535.0
	15							
20	16		1.9/2.0				16 mm VST@ 19.5' = 11.3, 6.0, 5.6	
	17				3.25			
	18		0.8/1.5	2 5 7	2.25		Trace organic fragments; trace coal fragments	530.0
	19							
25	20		0.9/1.5	1 4 5	2.25		16 mm VST@ 24.5' = 7.0, 3.8, 3.5	
	21		1.1/2.0	2 5 6 7	2.5 0.75		Light brown silty clay to CLAY; moist; stiff; some iron oxidized nodules; trace organic fragments; rootlets; more clayey at 26.5'	525.0
	22		1.2/2.0	3 4 5 6	0.75		Gray CLAY	
30	23		1.5/2.0	1 2 4 5	1.0		Some dark yellow brown mottling; some iron oxidized nodules	
	24		1.6/2.0	0 1 2 3	0.5		Black to dark gray clayey SILT; moist; soft; trace organic fragments	520.0
35	25		1.7/2.0	0 2 3 4	0.5			
	26		2.0/2.0	0 1 3 3	1.0		Dark gray clayey SILT; moist; moderately stiff; with organic fragments; some coal; glauconite the last 0.3'	515.0
	27		2.0/2.0	0 1 2 4	0.75		Dark gray clayey SAND; moist; moderately stiff; trace coal fragments	
40							Dark gray sandy CLAY; moist; moderately stiff; trace coal fragments	
							End of Boring = 40 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1129680.19
Easting: 2456242.16

Weather: Sunny, 69 F

Boring Information:
Boring No: B-9CCR
Well No: B-9CCR
Surf Elev.: 553.97

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/18/2023
Finish: 10/18/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	554.0
0	1						Bottom ASH; moist	
	2		0.3/1.5	1 6 4				
	3							550.0
5	4		1.5/1.5	0 1 0	<0.25		Fly ASH; wet; soft	
	5							
	6		1.5/1.5	0 0 0	<0.25			
	7							545.0
10	8		1.5/1.5	0 0 0	<0.25			
	9							
	10		1.5/1.5	0 0 1	<0.25			
	11							540.0
15	12		1.5/1.5	0 0 0	<0.25			
	13							
	14		1.5/1.5	0 0 0	<0.25			
	15							535.0
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1129778.29
Easting: 2456635.89

Weather: Haze, 79 F

Boring Information:
Boring No: B-9L
Well No: B-9L
Surf Elev.: 524.07

Depth Information:
Total: 19.5'
Auger: 19.5'
Core: -

Dates:
Start: 10/04/2023
Finish: 10/04/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: R. Carson
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	524.1
0	1						Brown silty LOAM; moist; soft	
	2		1.4/1.5	1 2 2	1.0 0.5			
	3							520.0
5	4		1.5/1.5	1 1 1	1.0			
	5				0.1			
	6		2.0/2.0				Brown SAND; medium grained; moist; soft	
	7							515.0
10	8		1.0/1.5	0 0 1	0.1		Brown sandy CLAY; wet; soft; gray at 10.5'	
	9							
	10		0.9/1.5	0 1 2	0.5		Gray silty CLAY; wet; soft	
	11							510.0
15	12		1.5/1.5	0 0 1	0.5 0.2			
	13							
	14		1.5/1.5	0 0 0	0.3			
	15						16 mm VST@19.5' = 5.4, 2.9, 3.1	505.0
20							End of Boring = 19.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1129518.55
Easting: 2455869.56

Weather: Sunny, 65 F

Boring Information:
Boring No: B-10CCR
Well No: B-10CCR
Surf Elev.: 555.35

Depth Information:
Total: 24.5'
Auger: 24.5'
Core: -

Dates:
Start: 10/20/2023
Finish: 10/20/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	555.4
0	1						Bottom ASH; moist to wet; loose	
	2		0.8/1.5	4 5 3				
	3							
5	4		0.8/1.5	2 7 12			Moist; loose	550.0
	5							
	6		1.3/1.5	1 2 1	<0.25		Fly ASH; moist to wet; soft; some bottom ash	
	7							
10	8		1.4/1.5	1 0 1	<0.25		Trace bottom ash	545.0
	9							
	10		1.3/1.5	0 0 0	<0.25		Wet; soft	
	11							
15	12		1.1/1.5	4 1 2			Bottom ASH; wet; loose	540.0
	13							
	14		0.9/1.5	0 0 0	<0.25		Fly ASH; wet; soft	
	15							
20	16		1.5/1.5	0 0 0	<0.25			535.0
	17							
	18		1.5/1.5	0 0 0	<0.25			
	19							
25							End of Boring = 24.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128891.26
Easting: 2456234.99

Weather: Sunny, 69 F

Boring Information:
Boring No: B-11U
Well No: B-11U
Surf Elev.: 552.27

Depth Information:
Total: 29.5'
Auger: 29.5'
Core: -

Dates:
Start: 10/18/2023
Finish: 10/18/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	552.3
0	1						Black silty CLAY; with sand and gravel; moist; moderately stiff	
	2		0.3/1.5	1 3 10/3"				550.0
	3							
5	4		0.4/1.5	1 1 2	1.25		Yellow brown silty CLAY; some dark yellow mottling; some iron oxide nodules; moist; moderately stiff	
	5							
	6		0.8/1.5	1 2 3	2.5			545.0
	7							
10	8		2.0/2.0				16 mm VST@ 9.5' = 9.2, 2.8, 2.8	
	9				2.0			
	10		1.2/1.5	2 4 5				540.0
	11				3.5		Gray	
15	12		0.9/1.5	4 7 7	2.25		Organic fragments	
	13						Dark gray clayey SILT; moist; moderately firm; some organic fragments	
	14		1.3/1.5	1 4 6	2.0			535.0
	15							
20	16		1.8/2.0				Dark gray brown silty CLAY; moist; stiff; 16 mm VST@19.5' = 13+, 7.4, 7.6	
	17				2.5			
	18		1.5/1.5	0 3 4	1.25		Yellow brown silty CLAY; some dark yellow brown mottling; iron oxide and manganese oxide concretions; moist; moderately stiff	530.0
	19						16 mm VST@ 24.5' = 4.9, 3.1, 3.1	
25	20		1.5/1.5	0 0 0	<0.25		Yellow brown clayey silt to SILT; wet; soft	
	21							
	22		1.5/1.5	0 0 0				525.0
	23							
30							End of Boring = 29.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128504.92
Easting: 2455639.11

Weather: Sunny, 74 F

Boring Information:
Boring No: B-12U
Well No: B-12U
Surf Elev.: 553.41

Depth Information:
Total: 8.5'
Auger: 8.5'
Core: -

Dates:
Start: 10/23/2023
Finish: 10/23/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	553.4
0	1						Dark yellow brown silty CLAY; some bottom ash; moist; stiff; trace iron oxide nodules	
	2		1.1/1.5	5 6 7	3.75			550.0
	3							
5	4		1.0/1.5	5 5 6	3.25			
	5							
	6		1.5/1.5	3 5 5	2.75			545.0
							End of Boring = 8.5 Feet	
10								540.0
15								535.0
20								

Notes:

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Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: Cloudy, 72 F

Boring Information:
Boring No: B-13BN
Well No: B-13BN
Surf Elev.: 0

Depth Information:
Total: 10.5'
Auger: 10.5'
Core: -

Dates:
Start: 10/24/2023
Finish: 10/24/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0	1						Light brown clayey silt to silty CLAY; moist; firm; few dark yellow brown mottling; trace iron oxide nodules	
	2		1.0/1.5	3 5 6	4.25			
	3							
5	4		0.7/1.5	4 4 7	3.75			-5.0
	5							
	6		1.0/1.5	5 8 11	4.75+		Brown silty CLAY; moist; very firm; trace iron oxide nodules 16 mm VST@ 8.0' = 13+, 6.7, 6.5	
	7		1.7/2.0					
10					3.5		End of Boring = 10.5 Feet	-10.0
15								-15.0
20								-20.0

Notes:

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3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: Cloudy, 72 F

Boring Information:
Boring No: B-13BS
Well No: B-13BS
Surf Elev.: 0

Depth Information:
Total: 10.5'
Auger: 10.5'
Core: -

Dates:
Start: 10/24/2023
Finish: 10/24/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0	1						Dark brown clayey silt to silty CLAY; moist; very firm; trace iron oxide nodules; trace rootlets	
	2		1.0/1.5	4 4 5	4.5+			
	3							
5	4		0.5/1.5	4 5 6	4.5			-5.0
	5							
	6		1.1/1.5	3 7 9	4.5+		Grades to dark gray; trace organics; trace rootlets; 16 mm VST@8.5' = 13+, 6.5, 5.8	
	7		1.5/2.0					
10					3.5			-10.0
							End of Boring = 10.5 Feet	
15								-15.0
20								-20.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: Cloudy, 72 F

Boring Information:
Boring No: B-13L
Well No: B-13L
Surf Elev.: 0

Depth Information:
Total: 16.0'
Auger: 16.0'
Core: -

Dates:
Start: 10/24/2023
Finish: 10/24/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0	1						Dark brown clayey silt to silty CLAY; moist; very firm	
	2		1.0/1.5	4 5 6	4.5+			
	3							
5	4		1.0/1.5	4 5 7	4.5			-5.0
	5							
	6		1.4/1.5	3 7 10	3.75		Some rootlets; some manganese oxide nodules	
	7							
10	8		1.5/1.5	4 6 10	3.5		Trace rootlets; some manganese oxide nodules	-10.0
	9							
	10		1.5/1.5	3 6 8	2.5		Trace rootlets; some iron oxide nodules	
	11							
15	12		1.3/1.5	4 4 7	2.25		Light gray silty CLAY; moist; firm; some organics; some iron staining; few iron oxide nodules	-15.0
							End of Boring = 16 Feet	
20								-20.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 0
Easting: 0

Weather: Sunny, 74 F

Boring Information:
Boring No: B-13LF
Well No: B-13LF
Surf Elev.: 0

Depth Information:
Total: 26.0'
Auger: 26.0'
Core: -

Dates:
Start: 10/23/2023
Finish: 10/23/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	0.0
0	1						Yellow brown clayey SILT; dry; stiff	
	2		0.2/1.5	5 7 5				
	3							
5	4		0.8/1.5	4 5 6	3.75		Light gray silty CLAY; moist; stiff	-5.0
	5							
	6		0.5/1.5	5 50/4"			GYPSUM; dry; loose	
	7							
10	8		0.3/1.5	27 0/3.5				-10.0
	9							
	10		0.8/1.5	35 50/5"				
	11							
15	12		0.7/1.5	37 50/4"				-15.0
	13							
	14		0.4/1.5	0/4.5				
	15							
20	16		1.2/1.5	13 34 50/3"	3.75		Dark yellow brown silty CLAY; moist; firm	-20.0
	17						GYPSUM	
	18		0.6/1.5	50/5"				
	19							
25	20		0.4/1.5	50/5"				-25.0
							End of Boring = 26 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128504.92
Easting: 2455639.11

Weather: Sunny, 74 F

Boring Information:
Boring No: B-12U-
Well No: B-12U-
Surf Elev.: 553.41

Depth Information:
Total: 8.5'
Auger: 8.5'
Core: -

Dates:
Start: 10/23/2023
Finish: 10/23/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: M. Hewitt
Driller: M. Sick
Helper(s): B. Hummel

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	553.4
0	1						Dark yellow brown silty CLAY; some bottom ash; moist; stiff; some organic fragments; trace iron oxide nodules	
	2		0.3/1.5	5 5 6	3.25			550.0
	3							
5	4		1.0/1.5	3 4 5	4.0			
	5							
	6		0.7/1.5	3 3 3	1.5			545.0
	7							
10	8		1.5/2.0		1.5		16 mm VST@ 9.5' = 10.8, 5.0, 4.3	
	9							
	10		0.8/1.5	2 5 9	3.5			540.0
	11							
15	12		0.9/1.5	2 5 7	3.25		Light gray silty cLAY; with bottom ash; moist; stiff	
	13							
	14		1.0/1.5	1 4 8	4.0			535.0
	15							
20	16		1.7/2.0				Yellow brown silty CLAY; moist; moderately stiff; few manganese oxide nodules; 16 mm VST@ 19.5' = 13+, 6.0, 6.0	
	17				2.5			
	18		1.4/1.5	1 2 3	1.5			530.0
	19							
25	20		1.5/1.5	1 2 4	0.75		16 mm VST@ 24.5' = 9.5, 4.0, 3.7	
	21							
	22		1.5/1.5	2 2 3	0.75			525.0
	23							
30							End of Boring = 29.5 Feet	

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1128541.37
Easting: 2455514.61

Weather: Sunny, 87 F

Boring Information:
Boring No: B-12L
Well No: B-12L
Surf Elev.: 533.69

Depth Information:
Total: 23.0'
Auger: 23.0'
Core: -

Dates:
Start: 10/03/2023
Finish: 10/03/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: R. Carson
Driller: A. Kargel
Helper(s): M. Sick

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	533.7
0	1						Brown silty CLAY; dry; very stiff	
	2		0.4/1.5	4 8 7	4			
	3							530.0
5	4		0.6/1.5	2 5 5	4.0			
	5							
	6		1.2/1.5	2 2 3	0.7		Brown silty CLAY; moist; soft	
	7							525.0
10	8		1.2/1.5	1 2 3			20 mm VST@ 10.0' = 3.8, 3.9	
	9				1.0			
	10		1.4/1.5	1 2 3	1.2		Moist; stiff	
	11							520.0
15	12		2.0/2.0					
	13				4.5		Gray/brown silty CLAY; mottling; stiff	
	14		1.5/1.5	1 2 4	0.5			
	15						Gray SILT; soft	515.0
20	16		1.0/1.5	0 6 7			Brown SAND; saturated; 20 mm VST@ 19.5' = 3.8, 1.5, 1.4	
	17						Gray sandy CLAY; moist	
	18		1.4/1.5	5 25 50/4.5	>4.5		Gray SHALE; dry; hard	
25							End of Boring = 23.5 Feet	510.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 220408

Location:
Coord. System:
Northing: 1130126.84
Easting: 2455243.51

Weather: Sunny, 85 F

Boring Information:
Boring No: B-6L
Well No: B-6L
Surf Elev.: 531.19

Depth Information:
Total: 23.5'
Auger: 23.5'
Core: -

Dates:
Start: 10/02/2023
Finish: 10/02/2023

Drilling Contractor:
Contractor Name: Geotechnics Soil & Material Testing
City: Hannibal, Missouri
Equipment: CME 55 w/ 3 1/4" HSA and 1.5" split spoon

Personnel:
Geologist: K. Finke
Driller: M. Sick
Helper(s): A. Kargel

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	531.2
0	1						Grayish brown silty CLAY; moist; firm; trace sand	
	2		0.5/1.5	4 7 7	1.5			530.0
	3							
5	4		0.5/1.5	3 2 3	1.5		Reddish brown silty CLAY; moist; firm; trace sand	
	5							525.0
	6		0.1/2.0					
	7							
10	8		0.6/1.5	W 1 1			20 mm VST@ 10.0' = 5.2, 2.8, 3.0	
	9				0		Gray clayey SILT; soft; moist	520.0
	10		1.5/1.5	W 1 1	0.5			
	11						Gray/reddish brown clayey SILT; soft; moist	
15	12		0.9/1.5	1 2 2				
	13				0-0.5		Gray SILT to reddish brown SAND; fine to coarse grained; moist	515.0
	14		1.1/1.5	W W W	0.25			
	15						Gray silty clay to clayey SILT; moist; soft; some organics, wood, bark, and ash	
20	16		0.9/1.5	W 1 2	3.9		20 mm VST@ 20.0' = 7.2, 3.9	
	17				0.5		Gray clayey SILT; moist	510.0
	18		0.9/1.5	W W W	0.5			
							End of Boring = 23.5 Feet	

Notes:

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 5/19/2025
Finish: 5/19/2025
WEATHER: 75°F, overcast

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: BH01
Well ID: n/a
Surface Elev: 553.0 ft. MSL
Completion: 10.5 ft. BGS
Station: 1,128,975.90N
2,455,612.61E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = Dry - During drilling
▽ = Dry - At completion
▽ =

SAMPLE			TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
	12/18 *67%*	SS	*6-7 9* N=16				2	Very dark gray (10YR3/1), moist, stiff, GRAVEL with few ash, little clay, and trace sand. [FILL]		552	
	17/18 *94%*	SS	*4-7 9* N=16				4			550	
	18/24 *75%*	SH					6	Yellowish brown (10YR5/6), moist, stiff, CLAY with some silt, trace sand, and trace ash. [FILL]		548	
	14/18 *78%*	SS	*3-3 4* N=7				8			546	k = 6.9 x 10^{-7} cm/sec
							10	Yellowish brown (10YR5/6) with 10% gray (10YR5/1) mottles, moist, stiff, CLAY with some silt, trace sand and trace ash. [FILL]		544	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 5/19/2025
Finish: 5/19/2025
WEATHER: 75°F, overcast

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: BH02
Well ID: n/a
Surface Elev: 552.5 ft. MSL
Completion: 20.0 ft. BGS
Station: 1,128,919.96N
2,456,031.83E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = Dry - During drilling
▽ = Dry - At completion
▽ =

SAMPLE			TESTING							
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
	15/18 *83%*	SS	*3-7 10* N=17				2	Very dark gray (10YR3/1), moist, stiff, GRAVEL with few ash, little clay, and trace sand. [FILL]		552	
	15/18 *83%*	SS	*3-7 9* N=16				4	Dark brown (10YR3/3), moiste, stiff, CLAY with some silt little sand, trace gravel, and trace ash. [FILL]		550	
	9/18 *50%*	SS	*3-4 4* N=8				6			548	
	18/18 *100%*	SS	*3-4 5* N=9				8	Yellowish brown (10YR5/4) with 10% gray (10YR5/1) mottles, moist, stiff, CLAY with some silt and trace sand. [FILL]		546	
	15/18 *83%*	SS	*3-4 5* N=9				10			544	
	16/18 *89%*	SS	*3-4 7* N=11				12	Gray (10YR5/1), moist, medium, CLAY with some silt and trace sand. [FILL]		542	
	20/24 *83%*	SH					14	Gray (10YR5/1) with 10% yellowish brown (10YR5/6) mottles, moist, medium, CLAY with some silt and trace sand. [FILL]		540	
	18/18 *100%*	SS	*6-7 9* N=16				16	Gray (10YR5/1), moist, medium, CLAY with some silt and trace sand. [FILL]		538	
								Yellowish brown (10YR5/6), moist, medium, CLAY with some silt and trace sand. [FILL]		536	k = 6.9 x 10^{-7} cm/sec
							18	Black (10YR2/1), moist, medium, CLAY with some silt and trace sand. [FILL]		534	
							20				

NOTE(S):

APPENDIX A5:
IMPOUNDMENT CCR WELL LOGS

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1129934.00
Easting: 2455460.00

Weather: Cloudy 59F

Boring Information:
Boring No: D1
Well No: D1
Surf Elev.: 564.0

Depth Information:
Total: 40.5'
Auger: 40.5'
Core: -

Dates:
Start: 04/29/2024
Finish: 04/29/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	564.0
0	1						Dark gray ASH (fill)	
								560.0
5	2		2.0/2	WH				
	3							555.0
10	4		1.5/2	3 21 23 24				
	5							550.0
15				W				

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: D1 Boring No: D1 Well No: D1

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	6		1.3/2	W 1 3 W			Dark gray ASH (fill) Saturated	
	7							545.0
20	8		2.0/2	WOH				
	9							540.0
25	10		2.0/2	2 3 1 1			Groundwater sample at 25.0'	
	11							535.0
30				W				

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: D1 Boring No: D1 Well No: D1

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	12		2.0/2	W W 1 1				
	13							530.0
35	14		2.0/2	W W 1 1				
	15		2.0/2	W W 3 4				
	16		1.9/2		1.0		Dark gray clayey SILT	525.0
40							End of Boring = 40.5 Feet	
								520.0
45								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1130169.00
Easting: 2456076.00

Weather: Cloudy 59F

Boring Information:
Boring No: D2
Well No: D2
Surf Elev.: 558.0

Depth Information:
Total: 37.5'
Auger: 37.5'
Core: -

Dates:
Start: 04/29/2024
Finish: 04/29/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) | - Split Spoon (SS) | - Shelby Tube | - Core | - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	558.0
0							Dark gray ASH (fill)	
	1							555.0
5	2		0.0/2	WOH				
	3							550.0
10	4		2.0/2	WOH				
	5							545.0
15								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: D2 Boring No: D2 Well No: D2

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	6		2.0/2	WOH			Dark gray ASH (fill)	
	7							540.0
20	8		2.0/2	W W 1 1			Groundwater sample at 20.0'	
	9							535.0
25	10		2.0/2	WOH				
	11							530.0
30								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: D2 Boring No: D2 Well No: D2

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	12		0.0/2	WOH				
	13		0.0/2	WOH				525.0
	14		2.0/2	W W W 6				
35							Gray clayey SILT; brown mottling; saturated	
	15		1.5/2					
							End of Boring = 37.5 Feet	520.0
40								
								515.0
45								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1129640.00
Easting: 2455918.00

Weather: Sunny 66F

Boring Information:
Boring No: D3
Well No: D3
Surf Elev.: 554.9

Depth Information:
Total: 31.5'
Auger: 31.5'
Core: -

Dates:
Start: 04/30/2024
Finish: 04/30/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	554.9
0	1						Dark gray ASH (fill); wet	
5	2		2.0/2	2 2 2 3				550.0
	3							
10	4		2.0/2	WH				545.0
	5						Free water at 12.0'	
15								540.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: D3 Boring No: D3 Well No: D3

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	6		0.2/2	WH 1				
	7							
20	8		0.1/2	WH			Groundwater sample at 20.0'	535.0
	9							
25	10		0.3/2	WH				530.0
	11		2.0/2					
30					0.75		Brown silty CLAY; greenish gray mottling; Jar Sample SS6A	525.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: D3 Boring No: D3 Well No: D3

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	12		2.0/2					
							End of Boring = 31.5 Feet	
35								520.0
40								515.0
45								510.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1129248.00
Easting: 2455777.00

Weather: Sunny 66F

Boring Information:
Boring No: D4
Well No: D4
Surf Elev.: 561.00

Depth Information:
Total: 36.5'
Auger: 36.5'
Core: -

Dates:
Start: 04/30/2024
Finish: 04/30/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	561.0
0							Dark gray ASH (fill); dry	
	1							560.0
5	2		1.2/2	W 1 2 3				555.0
	3							
10	4		0.5/2	WOH			Moist	550.0
	5							
15								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: D4 Boring No: D4 Well No: D4

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	6		2.0/2	WOH			Wet	
								545.0
	7							
							Free water at 19.5'; Groundwater sample at 20.0'	
20	8		2.0/2	WOH				
								540.0
	9							
							Saturated	
25	10		2.0/2	WOH				
								535.0
	11							
30								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: D4 Boring No: D4 Well No: D4

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	12		2.0/2					530.0
	13		3.0/3	WH 2 3 2 1 1	0.75		Brown silty CLAY; greenish gray mottling	
35	14		2.0/2					525.0
							End of Boring = 36.5 Feet	
40								520.0
45								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1127471.67
Easting: 2456542.99

Weather: Sunny 72 F

Boring Information:
Boring No: L1
Well No: L1
Surf Elev.: 568.96

Depth Information:
Total: 38.0'
Auger: 38.0'
Core: -

Dates:
Start: 05/02/2024
Finish: 05/02/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	569.0
0							Light gray SLUDGE (fill)	
	1							
	2		0.8/2	3 3 3 4				565.0
5	3							
	4		1.4/2	WOH				560.0
10	5							
								555.0
15				1				

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: L1 Boring No: L1 Well No: L1

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	6		1.4/2	1 2 1 3			Light gray SLUDGE (fill)	
	7							550.0
20	8		1.5/2	4 4 3 5			20.0' Water sample collected	
	9							545.0
25	10		1.6/2	2 3 4 5				
	11							540.0
30				WH				

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: L1 Boring No: L1 Well No: L1

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	12		1.1/2	WH 1 1 2				
	13							535.0
35	14		1.5/1.5	5 6 8	0.75		Olive green silty CLAY; dark brown mottling; saturated	
	15		2.0/2				End of Boring = 38 Feet	530.0
40								525.0
45								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1128216.45
Easting: 2456765.72

Weather: Sunny 72 F

Boring Information:
Boring No: L3
Well No: L3
Surf Elev.: 563.02

Depth Information:
Total: 36.5'
Auger: 36.5'
Core: -

Dates:
Start: 05/02/2024
Finish: 05/02/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	563.0
0							Dark gray ASH (fill)	
	1							
								560.0
5	2		0.22	WH WH 1 1				
	3							555.0
							9.5' Free water	
10	4		2.0/2	WH				
	5							550.0
15								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: L3 Boring No: L3 Well No: L3

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	6		2.0/2	WH				
	7							545.0
20	8		1.6/2	1 1 1 1			20.0' Water sample collected; saturated	
	9							540.0
25	10		1.6/2	1 1 1 1				
	11							535.0
30	12		0.8/1	WH				

Notes:

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3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: L3 Boring No: L3 Well No: L3

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	12			WH				
	13							
	14		1.5/1.5	WH 3 4 6			Brown silty CLAY; greenish gray mottling	530.0
35	15		1.8/2		0.75			
							End of Boring = 36.5 Feet	525.0
40								520.0
45								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1127968.18
Easting: 2457141.08

Weather: Sunny 72 F

Boring Information:
Boring No: L4
Well No: L4
Surf Elev.: 568.58

Depth Information:
Total: 21.0'
Auger: 21.0'
Core: -

Dates:
Start: 05/02/2024
Finish: 05/02/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	568.6
0							Gray ASH (fill)	
	1							565.0
5	2							
	3							560.0
10	4							
	5							555.0
15								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: L4 Boring No: L4 Well No: L4

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	6		1.4/2	1 1 4 6	1.0		Gray ASH (fill) Brown silty CLAY; gray mottling; moist	
	7		1.5/2					550.0
20	8		1.5/2	6 8 10 12	4.75			
							End of Boring = 21 Feet	545.0
25								
								540.0
30								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: CWLP Ash Pond
Location: Springfield, Illinois
County: Sangamon
Site No.:
AEI No.: 240227

Location:
Coord. System:
Northing: 1128308.56
Easting: 2456118.23

Weather: Cloudy 61 F

Boring Information:
Boring No: L5
Well No: L5
Surf Elev.: 565.19

Depth Information:
Total: 39.5'
Auger: 39.5'
Core: -

Dates:
Start: 05/03/2024
Finish: 05/03/2024

Drilling Contractor:
Contractor Name: Skinner Limited
City: Hindsboro, Illinois
Equipment: 4 1/4" HSA 5' CSD 3"

Personnel:
Geologist: S. Van Hook
Driller: T. Skinner
Helper(s): NA

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	565.2
0	1						Gray silty CLAY (fill)	
5	2		1.5/2				Light gray LIME SLUDGE (fill)	560.0
	3							
10	4		2.0/2				Dark gray to black COAL ASH (fill)	555.0
	5							
15								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: L5 Boring No: L5 Well No: L5

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	6		2.0/2				16.0' Free water	
	7							
20	8		2.0/2					545.0
	9							
25	10		2.0/2					540.0
	11		3.0/3					
30								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: L5 Boring No: L5 Well No: L5

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	12		3.0/3					
	13		2.0/2				Light gray LIME SLUDGE (fill); Sample CA 32.5-35.2'	
35	14		3.0/3		1.0		Brown silty CLAY; greenish gray mottling	530.0
	15		2.0/2					
40							End of Boring = 39.5 Feet	525.0
45								

Notes:

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/13/2024
Finish: 8/13/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-01
Well ID: n/a
Surface Elev: 563.8 ft. MSL
Completion: 39.0 ft. BGS
Station: 1,129,829.03N
2,455,470.48E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 18.00 - During Drilling
▼ =
▼ =

SAMPLE Number	Recov / Total (in) / % Recovery	Type	TESTING Blows / 6 in N - Value RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	12/18 67%	SPT	1-1 1 N=2	32.0			2			562	
2	14/18 78%	SPT	1-WH WH	37.0			4	Ash, (Silt like), Very Soft, Dark Gray (10Y 3/1), Moist		560	
3	18/18 100%	SPT	2-4 4 N=8	36.0			6			558	
4	12/18 67%	SPT	8-11 10 N=21	25.0			8			556	
5	12/18 67%	SPT	3-6 6 N=12	27.0			10			554	
6	12/18 67%	SPT	4-4 4 N=8	37.0			12	Ash, (Silt like), Medium Stiff, Dark Gray (10Y 3/1), Moist, 1 inch wet seam at 12.4		552	
7	18/18 100%	SPT	WR-WR WR	45.0			14			550	
				52.0			16	Ash, Med Grained, Loose, Black (10G 2.5/1), Moist		548	
							18 ▼	Ash, (Silt like), Very Soft, Dark Gray (10Y 3/1), Wet		546	
							20			544	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/13/2024
Finish: 8/13/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-01
Well ID: n/a
Surface Elev: 563.8 ft. MSL
Completion: 39.0 ft. BGS
Station: 1,129,829.03N
2,455,470.48E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 18.00 - During Drilling
▼ =
▼ =

SAMPLE			TESTING							
Number	Recov / Total (in) / % Recovery	Type	Blows / 6 in / N - Value / RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
8	18/18 *100%*	SPT	*WR-WR 1*				22			542	
9	14/18 *78%*	SPT	*WR-WR WH*	49.0			24			540	
10	16/18 *89%*	SPT	*WH-WH WH*	85.0			26			538	
11	18/18 *100%*	SPT	*WH-WH WH*	56.0			28	Ash, (Silt like), Very Soft, Dark Gray (10Y 3/1), Wet *[Continued from previous page]*		536	
12	18/18 *100%*	SPT	*WH-WH WH*	39.0			30			534	
13	18/18 *100%*	SPT	*WR-WR WR*	40.0			32			532	
14	18/18 *100%*	SPT	*WH-WH 1*	35.0			34			530	
15	16/18 *89%*	SPT	*WR-WR WR*	41.0			36			528	
16	14/18 *78%*	SPT	*7-8 11* N=19	22.0			38	Clay, Silty, Med Stiff, Moist, Dark Greenish Gray (5G 4/1)		526	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/13/2024
Finish: 8/13/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-02
Well ID: n/a
Surface Elev: 556.9 ft. MSL
Completion: 35.5 ft. BGS
Station: 1,130,338.40N
2,456,218.17E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 10.00 - During Drilling
▼ =
▼ =

SAMPLE Number	Recov / Total (in) *% Recovery*	Type	TESTING *Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	4/18 *22%*	SPT	*2-3* *2* N=5	33.0			2	Ash, (Silt like), Soft-Very Soft, Greenish Black (5G 2.5/1), Moist		556	
2	6/18 *33%*	SPT	*1-1* *1* N=2	20.0			4			554	
3	14/18 *78%*	SPT	*WH-WH* *WH*	53.0			6			552	
4	18/18 *100%*	SPT	*WH-WH* *WH*	53.0			8	Ash, (Silt like), Very Soft, Dark Gray (10Y 3/1), Moist		550	
5	18/18 *100%*	SPT	*WH-WH* *WH*	37.0			▼ 10			548	
6	18/18 *100%*	SPT	*WR-WR* *WR*	31.0			12			546	
7	18/18 *100%*	SPT	*WR-WR* *WR*	52.0			14	Ash, (Silt like), Very Soft, Dark Gray (10Y 3/1), Wet		544	
				48.0			16			542	
							18			540	
							20	Ash, (Silt like), Very Soft, Bluish Black (5B 2.5/1), Wet		538	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/13/2024
Finish: 8/13/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-02
Well ID: n/a
Surface Elev: 556.9 ft. MSL
Completion: 35.5 ft. BGS
Station: 1,130,338.40N
2,456,218.17E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 10.00 - During Drilling
▼ =
▼ =

SAMPLE			TESTING							
Number	Recov / Total (in) / % Recovery	Type	Blows / 6 in / N - Value / RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Failure Type	Qp (tsf)	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
8	18/18 100%	SPT	WR-WR WR									
				49.0				22			536	
9	18/18 100%	SPT	WH-WH WH									
								24			534	
10	18/18 100%	SPT	WH-WH WH	50.0								
								26	Ash, (Silt like), Very Soft, Bluish Black (5B 2.5/1), Wet *[Continued from previous page]*		532	
11	18/18 100%	SPT	WR-WR WR	53.0								
								28			530	
12	18/18 100%	SPT	WR-WR WR	60.0								
								30			528	
13	14/18 78%	SPT	WR-WR WR	46.0								
								32			526	
14	18/18 100%	SPT	WR-WR 2	35.0								
								34			524	
15	18/18 100%	SPT	3-4 5 N=9	27.0					Clay, Silty, Soft, Light Greenish Gray (5G 7/1) w/ brown mottling, High Plasticity, Moist		522	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/14/2024
Finish: 8/14/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-03
Well ID: n/a
Surface Elev: 554.7 ft. MSL
Completion: 31.0 ft. BGS
Station: 1,129,517.42N
2,455,963.38E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

SAMPLE Number	Recov / Total (in) *% Recovery*	Type	TESTING *Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	4/18 *22%*	SPT	*1-WH WH*	13.0			0			554	
							2	Ash (Sand Like), Med Grained, Poorly Graded, Light Greenish Gray (5G 7/1), Moist		552	
2	18/18 *100%*	SPT	*1-1 1* N=2	26.0			4			550	
							6			548	
3	14/18 *78%*	SPT	*WH-WH 1*	34.0			8			546	
4	16/18 *89%*	SPT	*WH-1 2* N=3	48.0			10			544	
5	18/18 *100%*	SPT	*WH-WH WH*	52.0			12	Ash (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), Wet, Trace Coarse Grains		542	
6	18/18 *100%*	SPT	*WH-WH WH*	51.0			14			540	
							16			538	
7	18/18 *100%*	SPT	*WH-WH WH*	50.0			18			536	
				47.0			20	Ash (Sand Like), Fine Grained w/ trace coarse, Very Loose, Light Greenish Gray (5G 7/1), Wet			

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/14/2024
Finish: 8/14/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-03
Well ID: n/a
Surface Elev: 554.7 ft. MSL
Completion: 31.0 ft. BGS
Station: 1,129,517.42N
2,455,963.38E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

SAMPLE Number	Recov / Total (in) / % Recovery	Type	TESTING Blows / 6 in N - Value RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
8	18/18 100%	SPT	WH-WH WH					Ash (Sand Like), Fine Grained w/ trace coarse, Very Loose, Light Greenish Gray (5G 7/1), Wet *[Continued from previous page]*		534	
9	18/18 100%	SPT	WR-WR WR	56.0			22			532	
10	18/18 100%	SPT	WR-WR WR	49.0			24	Ash (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), No Plasticity, Wet		530	
11	18/18 100%	SPT	WR-WR WR	41.0			26			528	
12	18/18 100%	SPT	WH-2 2 N=4	24.0			28			526	
							30	Clay, Silty, Soft, High Plasticity, Moist, Light Reddish Brown (2.5YR 6/4) w/ Gray Mottling		524	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/19/2024
Finish: 8/19/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-04
Well ID: DB04D
Surface Elev: 553.71 ft. MSL
Completion: 31.00 ft. BGS
Station: 1,129,163.19N
2,455,379.61E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

SAMPLE Number	Recov / Total (in) *% Recovery*	Type	TESTING *Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	12/18 *67%*	SPT	*14-24* *36* N=60	14.0			2	Ash (Sand Like), Medium Grained, Poorly Graded, Greenish Black (10GY 2.5/1), Medium Dense, Moist		552	
2	12/18 *67%*	SPT	*10-15* *14* N=29	12.0			4			550	
3	14/18 *78%*	SPT	*4-7* *4* N=11	30.0			6			548	
4	18/18 *100%*	SPT	*1-1* *1* N=2	59.0			8	Ash (Sand Like), Medium Grained, Poorly Graded, Greenish Black (10GY 2.5/1), Loose, Wet		546	
5	4/18 *22%*	SPT	*1-1* *2* N=3	36.0			10	Ash (Silt Like) w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet		544	
6	10/18 *56%*	SPT	*4-5* *6* N=11	50.0			12	Ash (Sand Like), Medium Grained, Poorly Graded, Greenish Black (10GY 2.5/1), Loose, Wet		542	
7	18/18 *100%*	SPT	*3-4* *5* N=9	49.0			14			540	
				48.0			16	Ash (Silt Like) w/ trace sand, Very Soft, Light Greenish Gray (5G 7/1), Wet		538	
							18			536	
							20	Ash (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), Wet		534	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/19/2024
Finish: 8/19/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-04
Well ID: DB04D
Surface Elev: 553.71 ft. MSL
Completion: 31.00 ft. BGS
Station: 1,129,163.19N
2,455,379.61E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

SAMPLE Number	Recov / Total (in) / % Recovery	Type	TESTING Blows / 6 in N - Value RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
8	14/18 *78%*	SPT	*WH-WH WH*					Sandy @ 27			
9	18/18 *100%*	SPT	*WH-WH WH*	41.0			22			532	
10	18/18 *100%*	SPT	*WH-WH WH*	37.0			24	Ash (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), Wet Sandy @ 27 *[Continued from previous page]*		530	
11	18/18 *100%*	SPT	*1-1 1* N=2	44.0			26			528	
12	18/18 *100%*	SPT	*2-4 5* N=9	26.0			28			526	
							30	Clay, Silty, Medium Stiff, Moist, Light Reddish Brown (2.5YR 6/4) w/ Gray Mottling		524	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/15/2024
Finish: 8/15/2024
WEATHER: 85F and Rainy

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-05
Well ID: DB05D
Surface Elev: 553.24 ft. MSL
Completion: 28.50 ft. BGS
Station: 1,129,181.97N
2,456,241.37E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

SAMPLE				TESTING						
Number	Recov / Total (in) / % Recovery	Type	Blows / 6 in / N - Value / RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	18/18 100%	SPT	WH-WH WH	34.0			0			552	
2	18/18 100%	SPT	WH-WH WH	41.0			2	ASH (Silt Like) w/ trace fine sand, Very Soft, Greenish Black (10GY 2.5/1), Moist			
3	18/18 100%	SPT	WH-WH WH	44.0			4			550	
4	18/18 100%	SPT	WH-WH WH	47.0			6			548	
5	18/18 100%	SPT	WH-WH WH	53.0			8	ASH (Silt Like) w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet		546	
6	18/18 100%	SPT	WH-WH WH	52.0			10			544	
7	18/18 100%	SPT	WH-WH WH	47.0			12			542	
				41.0			14			540	
							16	ASH (Silt Like), Very Soft, Dark Greenish Gray (5GY 4/1), Wet		538	
							18			536	
							20	ASH (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), Wet		534	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/15/2024
Finish: 8/15/2024
WEATHER: 85F and Rainy

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: DB-05
Well ID: DB05D
Surface Elev: 553.24 ft. MSL
Completion: 28.50 ft. BGS
Station: 1,129,181.97N
2,456,241.37E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

SAMPLE			TESTING						
Number	Recov / Total (in) / *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Elevation ft. MSL
8	18/18 *100%*	SPT	*WH-WH WH*						
				43.0			22		532
9	18/18 *100%*	SPT	*WH-WH WH*					ASH (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), Wet *[Continued from previous page]*	
				55.0			24		530
10	18/18 *100%*	SPT	*WH-WH WH*						
				24.0			26		528
11	18/18 *100%*	SPT	*WH-2 4* N=6						
							28	Clay, Silty, Medium Stiff, Moist, Light Reddish Brown (2.5YR 6/4) w/ Gray Mottling, High Plasticity	526

Borehole Detail

Remarks

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/20/2024
Finish: 8/20/2024
WEATHER: 75F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-01
Well ID: n/a
Surface Elev: 568.9 ft. MSL
Completion: 35.5 ft. BGS
Station: 1,127,471.50N
2,456,543.15E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 19.50 - During Drilling
▼ =
▼ =

SAMPLE				TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	10/18 *56%*	SPT	*5-15* *20* N=35	24.0			2	Ash (Sand Like), Medium Coarse, Poorly Graded, Medium Dense, Greenish Black (10GY 2.5/1), Moist		568	
2	9/18 *50%*	SPT	*4-4* *4* N=8	30.0			4			566	
3	18/18 *100%*	SPT	*WH-WH* *WH*	70.0			6			564	
4	18/18 *100%*	SPT	*WH-WH* *1*	57.0			8	Lime Sludge (Silt Like), Soft, Light Greenish Gray (5G 7/1), No Plasticity, Moist		562	
5	18/18 *100%*	SPT	*WH-WH* *WH*	63.0			10			560	
6	18/18 *100%*	SPT	*2-4* *2* N=6	41.0			12	Ash (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), Moist 13 - 2 inch sandy wet seam		558	
7	18/18 *100%*	SPT	*3-10* *15* N=25	38.0			14			556	
				36.0			16			554	
							18	Ash (Sand Like), Medium Coarse, Poorly Graded, Loose-Medium Dense, Greenish Black (10GY 2.5/1), Moist Wet @ 19.5		552	
							▼ 20			550	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/20/2024
Finish: 8/20/2024
WEATHER: 75F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-01
Well ID: n/a
Surface Elev: 568.9 ft. MSL
Completion: 35.5 ft. BGS
Station: 1,127,471.50N
2,456,543.15E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 19.50 - During Drilling
▼ =
▼ =

SAMPLE			TESTING						
Number	Recov / Total (in) / % Recovery	Type	Blows / 6 in / N - Value / RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
8	18/18 100%	SPT	5-5 4 N=9				20	Ash (Sand Like), Medium Coarse, Poorly Graded, Loose-Medium Dense, Greenish Black (10GY 2.5/1), Moist Wet @ 19.5 *[Continued from previous page]*		548	
9	14/18 78%	SPT	2-3 2 N=5	105.6			22			546	
10	18/18 100%	SPT	2-3 4 N=7	96.0			24			544	
11	18/18 100%	SPT	WR-1 1 N=2	75.0			26			542	
12	18/18 100%	SPT	WH-1 1 N=2	86.0			28	Ash (Silt Like) w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet		540	
13	18/18 100%	SPT	WR-WH 1	77.0			30			538	
14	18/18 100%	SPT	WR-WH 4	24.0			32			536	
15	12/18 67%	SPT	WH-3 4 N=7	26.0			34	Clay, Silty, Medium Stiff, Moist, Light Reddish Brown (2.5YR 6/4) w/ Gray Mottling		534	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/20/2024
Finish: 8/20/2024
WEATHER: 75F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-02
Well ID: LB02D
Surface Elev: 568.06 ft. MSL
Completion: 35.00 ft. BGS
Station: 1,127,826.17N
2,456,727.26E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 15.00 - During Drilling
▼ =
▼ =

SAMPLE Number	SAMPLE Recov / Total (in) *% Recovery*	SAMPLE Type	TESTING *Blows / 6 in* N - Value **RQD**	TESTING Water Content (%)	TESTING Dry Density (lb/ft³)	TESTING Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	13/18 *72%*	SPT	*9-16 16* N=32	16.0			2	Ash (Sand Like), Fine Grained w/ fines, Med Dense, Greenish Black (10GY 2.5/1), Moist		566	
2	9/18 *50%*	SPT	*6-3 4* N=7	14.0			4			564	
							6	Ash (Silt Like) w/ trace sand, Soft, Light Greenish Gray (5G 7/1), Moist, High Plasticity		562	
3	8/18 *44%*	SPT	*2-4 6* N=10	15.0			8			560	
4	9/18 *50%*	SPT	*2-3 4* N=7	18.0			10	Lime Sludge (Silt Like), Med Stiff, Light Greenish Gray (5G 7/1) w/ Brown Mottling, Moist, No Plasticity		558	
5	2/18 *11%*	SPT	*1-1 1* N=2	15.0			12			556	
6	14/18 *78%*	SPT	*3-4 5* N=9	21.0			14	Ash (Sand Like), Fine Grained w/ fines,Loose, Greenish Black (10GY 2.5/1), Moist		554	
							▼	Wet at 15			
							16			552	
7	9/18 *50%*	SPT	*WH-WH 1*	82.0			18	Ash (Silt Like), w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet		550	
				99.0			20				

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/20/2024
Finish: 8/20/2024
WEATHER: 75F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-02
Well ID: LB02D
Surface Elev: 568.06 ft. MSL
Completion: 35.00 ft. BGS
Station: 1,127,826.17N
2,456,727.26E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 15.00 - During Drilling
▽ =
▽ =

SAMPLE			TESTING							
Number	Recov / Total (in) / % Recovery	Type	Blows / 6 in / N - Value / RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Failure Type	Qp (tsf)	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
8	11/18 61%	SPT	WH-WH WH									
9	18/18 100%	SPT	WH-WH WH	101.4				22			546	
10	18/18 100%	SPT	WH-WH 1	91.0				24			544	
11	18/18 100%	SPT	1-1 1 N=2	139.8				26	Ash (Silt Like), w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet *[Continued from previous page]*		542	
12	6/18 33%	SPT	WR-WR WR	111.1				28			540	
13	18/18 100%	SPT	WR-WR 2	142.9				30			538	
14	9/18 50%	SPT	2-3 6 N=9	30.0				32			536	
								34	Clay, Silty, Medium Stiff, Moist, Light Reddish Brown (2.5YR 6/4) w/ Gray Mottling		534	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/19/2024
Finish: 8/19/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-03
Well ID: n/a
Surface Elev: 562.9 ft. MSL
Completion: 33.5 ft. BGS
Station: 1,128,249.84N
2,456,722.48E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 14.00 - During Drilling
▼ =
▼ =

SAMPLE			TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	12/18 *67%*	SPT	*1-1* *1* N=2	28.0			2	Ash (Sand Like), Medium Coarse, Poorly Graded, Very Loose, Greenish Black (10GY 2.5/1), Moist		562	
2	16/18 *89%*	SPT	*WH-WH* *WH*	79.0			4			560	
3	16/18 *89%*	SPT	*1-1* *1* N=2	50.0			6			558	
4	13/18 *72%*	SPT	*4-1* *1* N=2	76.0			8			556	
5	18/18 *100%*	SPT	*1-1* *1* N=2	74.0			10	Ash (Silt Like) w/ Sand, Very Soft, Greenish Black (10GY 2.5/1), Moist 12.5-13 Med Coarse Sand - Wet		554	
6	18/18 *100%*	SPT	*WH-WH* *WH*	80.0			12			552	
7	18/18 *100%*	SPT	*1-1* *1* N=2	73.0			14 ▼			550	
				74.0			16	Ash (Silt Like), Layered Fine and Coarse Materials, Very Soft, Greenish Black (10GY 2.5/1), Wet		548	
							18	Lime Sludge, Very Soft, Light Greenish Gray (5G 7/1), Wet		546	
							20	Ash (Sand Like), Very Loose, Fine-Medium Grained, Greenish Black (10GY 2.5/1), Wet		544	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/19/2024
Finish: 8/19/2024
WEATHER: 80F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-03
Well ID: n/a
Surface Elev: 562.9 ft. MSL
Completion: 33.5 ft. BGS
Station: 1,128,249.84N
2,456,722.48E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 14.00 - During Drilling
▽ =
▽ =

SAMPLE Number	Recov / Total (in) / % Recovery	Type	TESTING Blows / 6 in / N - Value / RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) / Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
8	17/18 *94%*	SPT	*1-1* *1* N=2								
				84.0			22	Ash (Sand Like), Very Loose, Fine-Medium Grained, Greenish Black (10GY 2.5/1), Wet *[Continued from previous page]*		542	
9	16/18 *89%*	SPT	*WH-WH* *1*							540	
				86.0			24				
10	18/18 *100%*	SPT	*WH-WH* *WH*							538	
				74.0			26				
11	18/18 *100%*	SPT	*WH-WH* *WH*							536	
							28	Ash (Silt Like) w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet			
				100.0						534	
12	18/18 *100%*	SPT	*WR-WR* *WR*				30				
										532	
				26.0			32				
13	16/18 *89%*	SPT	*3-3* *5* N=8					Clay, Silty, Medium Stiff, Moist, Light Reddish Brown (2.5YR 6/4) w/ Gray Mottling		530	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/21/2024
Finish: 8/21/2024
WEATHER: 75F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-04
Well ID: n/a
Surface Elev: 566.3 ft. MSL
Completion: 22.0 ft. BGS
Station: 1,127,977.32N
2,457,073.44E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 9.50 - During Drilling
▼ =
▼ =

SAMPLE Number	Recov / Total (in) *% Recovery*	Type	TESTING *Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	3/18 *17%*	SPT	*WH-1* *2* N=3	19.0			2	Clay, Silty, Soft, High Plasticity, Light Reddish Brown (2.5YR 6/4), Moist		566	
2	6/18 *33%*	SPT	*1-1* *1* N=2	18.0			4			564	
3	14/18 *78%*	SPT	*WH-WH* *WH*	177.9			6			562	
4	18/18 *100%*	SPT	*WR-WR* *WR*	72.0			8	Ash, (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), Moist		560	
5	18/18 *100%*	SPT	*WR-WR* *WH*	43.0			10 ▼			558	
6	18/18 *100%*	SPT	*WH-WH* *WH*	61.0			12			556	
7	6/18 *33%*	SPT	*WR-WR* *WR*	68.0			14	Ash, (Silt Like), Very Soft, Greenish Black (10GY 2.5/1), Wet		554	
8	14/18 *78%*	SPT	*WR-WR* *WR*	87.0			16			552	
9	18/18	SPT	*WR-WR* *WR*	60.0			18	Lime Sludge, Very Soft, Light Greenish Gray (5G 7/1), Wet		550	
							20			548	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/21/2024
Finish: 8/21/2024
WEATHER: 75F and Sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-04
Well ID: n/a
Surface Elev: 566.3 ft. MSL
Completion: 22.0 ft. BGS
Station: 1,127,977.32N
2,457,073.44E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 9.50 - During Drilling
▽ =
▽ =

SAMPLE				TESTING						
Number	Recov / Total (in) *% Recovery*	Type	Depth ft. BGS	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
	100%				30.0			Lime Sludge, Very Soft, Light Greenish Gray (5G 7/1), Wet *[Continued from previous page]*		546	
10	18/18 *100%*	SPT		*WR-1* *2* N=3				Clay, Silty, Medium Stiff, Moist, Light Reddish Brown (2.5YR 6/4) w/ Gray Mottling			
			22								

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/16/2024
Finish: 8/16/2024
WEATHER: 85F and Overcast

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-05
Well ID: n/a
Surface Elev: 565.4 ft. MSL
Completion: 37.5 ft. BGS
Station: 1,128,266.90N
2,456,131.15E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 12.00 - During Drilling
▼ =
▼ =

SAMPLE				TESTING						
Number	Recov / Total (in) / % Recovery	Type	Blows / 6 in N - Value RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1	10/18 56%	SPT	1-WH WH				2	Ash (Sand Like), Medium Grained, Poorly Graded, Very Loose, Greenish Black (10GY 2.5/1), Moist		564	
2	18/18 100%	SPT	WH-WH WH				4			562	
3	14/18 78%	SPT	WH-WH WH	47.0			6			560	
4	11/18 61%	SPT	WH-WH WH	92.0			8	Lime Sludge (Silt Like), Very Soft, Light Greenish Gray (5G 7/1) w/ Brown Mottling, Moist, Medium Plasticity		558	
5	14/18 78%	SPT	WH-WH WH	74.0			10			556	
6	18/18 100%	SPT	WH-WH WH	62.0			▼ 12			554	
7	18/18 100%	SPT	WH-WH WH	74.0			14			552	
				74.0			16	Ash (Silt Like) w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet, High Plasticity		550	
							18			548	
							20	Ash (Sand Like), Medium Grained, Poorly Graded, Very Loose, Greenish Black (10GY 2.5/1), Wet		546	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 8/16/2024
Finish: 8/16/2024
WEATHER: 85F and Overcast

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-550 ATV Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: G. Tabacchi

BOREHOLE ID: LB-05
Well ID: n/a
Surface Elev: 565.4 ft. MSL
Completion: 37.5 ft. BGS
Station: 1,128,266.90N
2,456,131.15E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 12.00 - During Drilling
▼ =
▼ =

SAMPLE Number	Recov / Total (in) % Recovery	Type	TESTING Blows / 6 in N - Value RQD	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
8	18/18 100%	SPT	WH-WH WH								
9	18/18 100%	SPT	WH-WH WH	70.0			22			544	
10	18/18 100%	SPT	WH-WH WH	73.0			24	Ash (Sand Like), Medium Grained, Poorly Graded, Very Loose, Greenish Black (10GY 2.5/1), Wet *[Continued from previous page]*		542	
11	18/18 100%	SPT	WH-WH WH	71.0			26			540	
12	18/18 100%	SPT	WR-WR WR	82.0			28			538	
13	18/18 100%	SPT	WR-WR WR	86.0			30	Ash (Silt Like) w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet, High Plasticity		536	
14	18/18 100%	SPT	WH-WH WH	89.0			32			534	
15	16/18 89%	SPT	2-4 4 N=8	28.0			34	Ash (Sand Like), Medium Grained, Poorly Graded, Very Loose, Greenish Black (10GY 2.5/1), Wet		532	
							36	Ash (Silt Like) w/ trace sand, Very Soft, Greenish Black (10GY 2.5/1), Wet, High Plasticity		530	
								Clay, Silty, Medium Stiff, Moist, Light Reddish Brown (2.5YR 6/4) w/ Gray Mottling		528	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 6/19/2025
Finish: 6/20/2025
WEATHER: 85°F, sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: Bucket Auger Rig
Drilling Method: Bucket Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: DO06
Well ID: DO06
Surface Elev: 552.77 ft. MSL
Completion: 30.30 ft. BGS
Station: 1,129,174.10N
2,456,191.27E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 2.00 - During Drilling
▽ = 4.76 - 6/23/25
▽ =

SAMPLE			TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
							0			552	
							2 ▽				
							4 ▽			550	
							6			548	
							8			546	
							10	Very dark grayish brown (10YR3/2), wet, soft, SILT with trace very fine-grained sand. (Fly Ash)		544	
							12			542	
							14			540	
							16			538	
							18			536	
							20			534	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 6/19/2025
Finish: 6/20/2025
WEATHER: 85°F, sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: Bucket Auger Rig
Drilling Method: Bucket Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: DO06
Well ID: DO06
Surface Elev: 552.77 ft. MSL
Completion: 30.30 ft. BGS
Station: 1,129,174.10N
2,456,191.27E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 2.00 - During Drilling
▽ = 4.76 - 6/23/25
▽ =

SAMPLE			TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
							22	Very dark grayish brown (10YR3/2), wet, soft, SILT with trace very fine-grained sand. (Fly Ash) *[Continued from previous page]*		532	
							24			530	
							26			528	
							28			526	
							30	Dark gray (10YR4/1), moist, medium, SILT with some clay and trace sand.		524	

End of Boring = 30.3 feet

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 6/19/2025
Finish: 6/19/2025
WEATHER: 85°F, sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-850 Track Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: DO07
Well ID: DO07
Surface Elev: 552.75 ft. MSL
Completion: 27.00 ft. BGS
Station: 1,129,197.21N
2,456,094.95E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▼ = 4.00 - During Drilling
▼ = 3.72 - 6/23/25
▼ =

SAMPLE Number	SAMPLE Recov / Total (in) *% Recovery*	SAMPLE Type	TESTING *Blows / 6 in* N - Value **RQD**	TESTING Water Content (%)	TESTING Dry Density (lb/ft³)	TESTING Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
	18/18 *100%*	SS	*woh-1* *1* N=2				0			552	
							2				
							4			550	
							6			548	
							8			546	
							10	Very dark grayish brown (10YR3/2), wet, soft, SILT with trace very fine-grained sand. (Fly Ash)		544	
	24/24 *100%*	SS	*woh-woh* *woh-woh*				12			542	
							14			540	
							16			538	
	20/24 *83%*	SS	*woh-woh* *woh-woh*				18			536	
							20			534	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 6/19/2025
Finish: 6/19/2025
WEATHER: 85°F, sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-850 Track Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: DO07
Well ID: DO07
Surface Elev: 552.75 ft. MSL
Completion: 27.00 ft. BGS
Station: 1,129,197.21N
2,456,094.95E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 4.00 - During Drilling
▽ = 3.72 - 6/23/25
▽ =

SAMPLE			TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
	24/24 *100%*	SS	*woh-woh woh-woh*								
							22	Black (10YR2/1), wet, soft, SILT with trace very fine-grained sand. (Fly Ash)		532	
										530	
							24				
										528	
	24/24 *100%*	SS	*woh-woh 3-4*					Black (10YR2/1), wet, loose, very coarse- to medium-grained SAND with little silt. (Bottom Ash)			
							26	Yellowish brown (10YR5/6), moist, medium, SILT with some clay and trace sand.		526	
								End of Boring = 27.0 feet			

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 6/19/2025
Finish: 6/19/2025
WEATHER: 85°F, sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-850 Track Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: DO08
Well ID: DO08
Surface Elev: 551.80 ft. MSL
Completion: 28.27 ft. BGS
Station: 1,129,401.38N
2,456,257.44E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 1.75 - During Drilling
▽ = 3.20 - 6/23/25
▽ =

SAMPLE			TESTING						
Number	Recov / Total (in) / % Recovery	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
	17/24 *71%*	SS	*woh-woh woh-woh*				0			552	
							2			550	
							4			548	
							6			546	
							8	Very dark grayish brown (10YR3/2), wet, soft, SILT with trace very fine-grained sand. (Fly Ash)		544	
	24/24 *100%*	SS	*woh-woh woh-1*				10			542	
							12			540	
							14			538	
	24/24 *100%*	SS	*woh-woh woh-woh*				16			536	
							18	Black (10YR2/1), wet, soft, SILT with trace very fine-grained sand. (Fly Ash)		534	
							20			532	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 6/19/2025
Finish: 6/19/2025
WEATHER: 85°F, sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: CME-850 Track Drill
Drilling Method: Hollow Stem Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: DO08
Well ID: DO08
Surface Elev: 551.80 ft. MSL
Completion: 28.27 ft. BGS
Station: 1,129,401.38N
2,456,257.44E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 1.75 - During Drilling
▽ = 3.20 - 6/23/25
▽ =

SAMPLE			TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
	24/24 *100%*	SS	*woh-woh* *woh-woh*								
							22			530	
								Black (10YR2/1), wet, soft, SILT with trace very fine-grained sand. (Fly Ash) *[Continued from previous page]*			
							24			528	
	24/24 *100%*	SS	*woh-woh* *woh-woh*								
							26			526	
	22/24 *92%*	SS	*woh-1* *2-3* N=3					Dark gray (10YR4/1), moist, medium, SILT with some clay and trace sand.		524	
							28				
								End of Boring = 28.27 feet			

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 6/19/2025
Finish: 6/20/2025
WEATHER: 85°F, sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: Bucket Auger Rig
Drilling Method: Bucket Auger

FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: DW01
Well ID: DW01
Surface Elev: 553.01 ft. MSL
Completion: 30.30 ft. BGS
Station: 1,129,174.10N
2,456,191.27E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 2.00 - During Drilling
▽ = 4.95 - 6/23/25
▽ =

SAMPLE			TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
							0			553	
							2			552	
							4			550	
							6			548	
							8			546	
							10	Very dark grayish brown (10YR3/2), wet, soft, SILT with trace very fine-grained sand. (Fly Ash)		544	
							12			542	
							14			540	
							16			538	
							18			536	
							20			534	

NOTE(S):

FIELD BORING LOG

HANSON™

CLIENT: City Water, Light and Power
Site: CWLP Ash Pond Dewatering
Location: Springfield, IL
Project: 25E0006.00
DATES: **Start:** 6/19/2025
Finish: 6/20/2025
WEATHER: 85°F, sunny

CONTRACTOR: Skinner Limited
Rig mfg/model: Bucket Auger Rig
Drilling Method: Bucket Auger
FIELD STAFF: **Driller:** T. Skinner
Helper: C. Vanburen
Eng/Geo: R. Hasenyager

BOREHOLE ID: DW01
Well ID: DW01
Surface Elev: 553.01 ft. MSL
Completion: 30.30 ft. BGS
Station: 1,129,174.10N
2,456,191.27E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Springfield East
Township: Woodside
Section 12, **Tier** 15; **Range** 5

WATER LEVEL INFORMATION:
▽ = 2.00 - During Drilling
▽ = 4.95 - 6/23/25
▽ =

SAMPLE			TESTING						
Number	Recov / Total (in) *% Recovery*	Type	*Blows / 6 in* N - Value **RQD**	Water Content (%)	Dry Density (lb/ft³)	Qu (tsf) *Qp* (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
							22	Very dark grayish brown (10YR3/2), wet, soft, SILT with trace very fine-grained sand. (Fly Ash) *[Continued from previous page]*		532	
							24			530	
							26			528	
							28	Dark gray (10YR4/1), moist, medium, SILT with some clay and trace sand.		526	
							30			524	

End of Boring = 30.3 feet

NOTE(S):

APPENDIX A6:
FLOW PATH INVESTIGATION WELL LOGS

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Site Grid
Northing: 39.7704029
Easting: -89.59912433

Weather: Sunny, 80F

Boring Information:
Boring No: AP-6SA
Well No: AP-6S
Surf Elev.: 534

Depth Information:
Total: 14.0
Auger: 14.0
Core: 0.0

Dates:
Start: 5/13/2025
Finish: 5/13/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
0							Ground Surface	534.0
	1		4.1				Grey (5/1 10YR) silty CLAY, grading to olive (6/2 5GY) with yellow (7/8 10YR) mottles	530.0
5	2		4.2					
							Grey (5/1 10YR) clayey SAND, with olive (6/2 5GY) and some yellow (7/8 2.5Y) mottles	525.0
10	3		3.8				Dark grey (4/1 10YR) SAND, with clay, with black (2/1 10YR) mottles, organics	
							End of Boring = 14 Feet	520.0
15								
								515.0
20								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Latitude & Longitude
Northing: 39.76959656
Easting: -89.60064954

Weather: Sunny, 80F

Boring Information:
Boring No: AP-8SA
Well No: AP-8S
Surf Elev.: 535.9

Depth Information:
Total: 15.0
Auger: 15.0
Core: 0.0

Dates:
Start: 5/14/2025
Finish: 5/14/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB

Personnel:
Geologist: B. Hunsberger
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	535.9
0							Dark grey (4/1 10YR) silty CLAY, with some fine sand and organics	
								535.0
							Dark grey (4/1 10YR) silty CLAY, trace fine sand, moist	
	1		5'				Brown (4/3 10YR) silty CLAY, little fine sand, moist	
5							Grey (5/1 10YR) clayey SILT to silty CLAY, little fine sand, very moist	530.0
	2		5'				with brown (5/3 10YR) laminatations, increased stiffness	
							Grey (5/1 10YR) clayey SILT to silty CLAY, little fine sand, very moist	
							Grey (5/1 10YR) sandy CLAY, soft	
10							Grey (5/1 10YR) clayey SILT to silty CLAY, little fine sand, very moist	
								525.0
	3		5'				Grey (5/1 01YR) silty CLAY, little fine sand, moist, some brown bands, trace rootlets	
							Grey (5/1 10YR) soft CLAY, with silt	
							Grey (5/1 01YR) silty CLAY, little fine sand, moist, some brown bands, trace rootlets	
15							Grey (5/1 10YR) soft CLAY, some silt	
							Grey (5/1 01YR) silty CLAY, little fine sand, moist, some brown bands, trace rootlets	520.0
							End of Boring = 15 Feet	
20								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Latitude & Longitude
Northing: 39.762762
Easting: -89.59991904

Weather: Sunny, 67F

Boring Information:
Boring No: AP-15D
Well No: AP-15D
Surf Elev.: 536.3

Depth Information:
Total: 30.5
Auger: 30.5
Core: 0.0

Dates:
Start: 5/12/2025
Finish: 5/12/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA, 5' CB, 3' & 2' split spoon

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	536.3
0							Brown (5/3 10YR) clayey SILT, with organics, spongy texture, very moist	
	1		3.92				Grey (5/1 10YR) silty CLAY, moist	535.0
5	2		4				Yellow (7/8 2.5Y) silty CLAY, with black (2/1 10YR) and olive (6/2 10Y) mottles, wet	530.0
10							Yellow (7/8 10YR) SAND, with trace clay, olive (6/2 10Y) and dark grey (4/1 10YR) mottles, wet	
	3		3.85				Yellow (7/8 2.5Y) clayey SAND, very fine to fine grain size	525.0
15	4		4				Yellow (7/8 2.5Y) SAND, coarse grain size, with some medium grains, saturated	520.0
20				1				

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: AP-15D Boring No: AP-15D Well No: AP-15D

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	5		2.3	1 3 4 4 4 4			color grades to grey (5/1 10YR)	515.0
	6		3	wg wg wg 1 1 2			Grey (5/1 10YR) clayey SAND, fine grain size, saturated	
25	7		4				Light grey (7/1 10YR) CLAY, wet, high plasticity, highly adhesive	510.0
							Grey (5/1 10YR) clayey SAND, medium grain size	
30	8		0.6	wg 60\2			Grey (6/1 10YR) clayey SAND, very fine grain size	
							Dark grey (4/1 10YR) SHALE, wet	
							End of Boring = 30.5 Feet	505.0
35								500.0
40								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Latitude & Longitude
Northing: 39.76277306
Easting: -89.59992106

Weather: Sunny, 67F

Boring Information:
Boring No: AP-15S
Well No: AP-15S
Surf Elev.: 533.6

Depth Information:
Total: 24.5
Auger: 24.5
Core: 0.0

Dates:
Start: 5/12/2025
Finish: 5/12/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA, 5' CB, 3' & 2' Split spoon

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	533.6
0	1		3.9				Dark (3/1 10YR) silty CLAY, with coal fragments and organics, moist	
							Dark grey (3/1 10YR) CLAY, moist	530.0
5	2		4.8				Yellow (7/8 2.5Y) sandy CLAY, with olive (6/2 10Y) and grey (5/1 10YR) mottles	
							Yellow (7/8 2.5 Y) clayey SAND, very moist, with olive (6/2 5GY) and grey (5/1 10YR) mottles	525.0
10	3		4.9				Yellow (7/8 2.5Y) CLAY, fine to medium grain size, wet	
							Yellow (7/8 2.5Y) clayey SAND, very moist, with olive (6/2 10Y)	520.0
15	4		2.9	wg wg 2 4 5 8			Yellowish brown (5/6 10YR) SAND, fine to medium grain size, trace clay, wet	
	5		1.5	wg 2 3 5				515.0
20				5				

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: AP-15S Boring No: AP-15S Well No: AP-15S

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
				5			Yellowish brown (5/6 10YR) clayey SAND, very fine grain size	
	6		2.3	6 8 8 7 5			Grey (6/1 10YR) SAND, medium to coarse grain size, wet	
							Grey (5/1 10YR) silty CLAY, moist, with sand	
	7		1.8	2 2 2 2			Light grey (7/1 10YR) CLAY, firm, wet	510.0
25							End of Boring = 24.5 Feet	
								505.0
30								
								500.0
35								
								495.0
40								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Latitude & Longitude
Northing: 39.77159212
Easting: -89.60008687

Weather: Sunny, 70F

Boring Information:
Boring No: AP-16
Well No: AP-16
Surf Elev.: 533.6

Depth Information:
Total: 23.0
Auger: 23.0
Core: 0.0

Dates:
Start: 5/20/2025
Finish: 5/20/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	533.6
0							Light brown (6/3 7.5YR) SILT, organics	
	1		4.8				Grey (4/1 10YR) silty CLAY, moist, trace yellow (7/8 2.5Y) mottles	
							Olive (6/4 10Y) CLAY, with some brownish yellow (6/8 10YR) mottles	530.0
5							color grades to (8/1 10YR) with olive (6/4 10Y) and brownish yellow (6/8 10YR) mottles, moist	
	2		4.4				color grades to white (8/1 10YR) clayey SILT, moist, yellowish brown (4/6 10YR) mottles	525.0
10							white (8/1 N) with brown (7/6 10YR) mottles, wet	
	3		5				White (8/1 10YR) silty CLAY, moist, with brown (6/8 10YR) mottles	
							Light olive (6/3 5Y) clayey SAND, wet	520.0
							Light bluish grey (7/1 10B) silty CLAY with yellow (7/6 10YR) mottles, moist	
15	4		1.8				Grey (5/1 10YR) SAND, well sorted, medium to coarse grain size, coarsening downward, trace gravel, with clay	515.0
20								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: AP-16 Boring No: AP-16 Well No: AP-16

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Grey (5/1 10YR) clayey SAND, well sorted, coarse to medium grain size, trace gravel	
	5		3.3				Black (2/1 10YR), grading to olive (6/2 5GY) clayey SHALE	
							End of Boring = 23 Feet	510.0
25								505.0
30								500.0
35								495.0
40								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Latitude & Longitude
Northing: 39.77042692
Easting: -89.59572184

Weather: Sunny, 73F

Boring Information:
Boring No: P03D
Well No: P03D
Surf Elev.: 530

Depth Information:
Total: 35.0
Auger: 35.0
Core: 0.0

Dates:
Start: 5/14/2025
Finish: 5/14/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	530.0
0	1		4.8				Black (2/1 10YR) SILT, with organics	
							Light grey (7/1 10YR) clayey SILT, with shale and coal fragments	
5	2		4.7				Grey (4/1 10YR) clayey SILT with shale and coal fragments	525.0
							Olive (6/2 5GY) clayey SILT trace coal fragments	
10	3		4.3				Dark grey (3/1 10YR) silty SAND, with trace organics, wet, medium to coarse grain size	520.0
15	4		5				Light grey (7/1 10YR) silty CLAY, with (6/8 10YR) brown mottles	515.0
							Olive (6/2 5GY) silty CLAY, with thin interbedded very fine grained sand, moist	
20								510.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: P03D Boring No: P03D Well No: P03D

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	5		4.4				Grey (5/1 10YR) CLAY, with olive (6/2 5GY) mottles, moist, with thin sand interbedded	
25								505.0
	6		4.6				Grey (6/1 10YR) CLAY, wet, highly plastic, very sticky	
							Grey (5/1 10YR) clayey SAND, medium grain size, moist	
30								500.0
	7		2.75				Grey (4/1 10YR) SAND, medium to coarse grain size, wet	
							Dark grey (3/1 10YR) SHALE	
35							End of Boring = 35 Feet	495.0
40								490.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Site Grid
Northing: 39.77042711
Easting: -89.59573599

Weather: Sunny, 67F

Boring Information:
Boring No: P03S
Well No: P03S
Surf Elev.: 529.9

Depth Information:
Total: 14.0
Auger: 14.0
Core: 0.0

Dates:
Start: 5/14/2025
Finish: 5/14/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	529.9
0	1		4.75				Dark brown (3/2 10YR) SILT, with organics, trace coal and shale	
							Light grey (7/1 10YR) clayey SILT, with brown mottles, trace gravel	
5	2		4.6				Dark grey (3/1 10YR) clayey SILT, with coal and shale fragments	525.0
							Olive (5/3 5Y) silty CLAY, with grey (5/1 10YR) mottles, trace coal	
10							Dark grey (3/1 10YR) silty SAND, wet, trace organics	520.0
	3		3.8				Dark grey (3/1 10YR) SAND, medium to coarse grain size, with silt, trace gravel	
							Olive (6/2 5GY) silty CLAY, moist, trace grey mottles	
							End of Boring = 14 Feet	
15								515.0
20								510.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Site Grid
Northing: 39.77040608
Easting: -89.59696106

Weather: Sunny, 80F

Boring Information:
Boring No: P104S
Well No: P104S
Surf Elev.: 529.7

Depth Information:
Total: 36.5
Auger: 36.5
Core: 0.0

Dates:
Start: 5/15/2025
Finish: 5/15/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB and 2' Split Spoon

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	529.7
0	1		4.4'				Brown (4/6 10YR) clayey SILT, with coal fragments, black and yellow mottles	
							grades to black	
							Grey (5/1 10YR) clayey SILT, with coal fragments, black and yellow mottles	525.0
5							Dark grey (3/1 10YR) SILT	
	2		4.8'				Grey (5/1 10YR) silty CLAY, trace sand	
10							Dark grey (4/1 10YR) CLAY, moist, trace coal fragments	520.0
	3		5'				Dark grey (4/1 10YR) silty CLAY, moist, trace organics and sand	515.0
15								
	4		4.9'					
20								510.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: G104S Boring No: G104S Well No: G104S

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	5		2.9'					
							Grey (5/1 10YR) SAND, with clay, wet, with little gravel	
	6		1.6'	wg wg 1				
							Grey (6/1 10YR) CLAY, moist	505.0
25							End of Boring = 25 Feet	
								500.0
30								
								495.0
35								
								490.0
40								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Latitude & Longitude
Northing: 39.77031764
Easting: -89.59489383

Weather: Sunny, 78F

Boring Information:
Boring No: R103S
Well No: R103S
Surf Elev.: 535.1

Depth Information:
Total: 30.0
Auger: 30.0
Core: 0.0

Dates:
Start: 5/19/2025
Finish: 5/19/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	535.1
0	1		4.5				White (8/1 10YR) SILT, with many brown (6/4 10YR) mottles, organics, with trace sand	
5							Olive (6/2 5GY) silty CLAY, with brown (6/4 10YR) mottles, and trace black (2/1 10YR) mottles	530.0
	2		Full				Light grey (7/1 10YR) grading to brown (5/4 10YR) CLAY, with silt, with (6/8 10YR) mottles, soft	
10								525.0
	3		Full				Light grey (7/1 10YR) clayey SILT, moist	
15							soft, wet	520.0
	4		4.4				Dark grey (4/1 10YR) sandy CLAY, wet, soft, trace, with brown (5/6 10YR)	
							Dark grey (4/1 10YR) SAND, wet, brown (5/7 10YR) mottles	
20								515.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Boring Information: R103 Boring No: R103 Well No: R103

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
	5		3.5				Grey (5/1 10YR) sandy CLAY, with trace gravel, coal, and shale	
25							Grey (5/1 10YR) clayey SAND, with gravel	510.0
	6		4.1				Grey (5/1 10YR) weathered SHALE, with yellow (8/4 5Y)	
							Dark grey (3/1 10YR) SHALE, with lighter grey (5/1 10YR) bands	
30							End of Boring = 30 Feet	505.0
35								500.0
40								495.0

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Latitude & Longitude
Northing: 39.77018579
Easting: -89.59899292

Weather: Sunny, 80F

Boring Information:
Boring No: RW-3S
Well No: RW-3S
Surf Elev.: 535.9

Depth Information:
Total: 15.0
Auger: 15.0
Core: 0.0

Dates:
Start: 5/15/2025
Finish: 5/15/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	535.9
0	1		4.75				Grey (5/1 10YR) clayey SILT, with orgnics and gravel	535.0
							Greyish brown (5/2 10YR) silty CLAY, with reddish yellow (6/8 7.5YR) mottles and organics	
5	2		4.0				Greenish grey (8/1 5GY) SILT, with clay, brown (5/8 10YR) mottles, trace sand near bottom	530.0
10							Pale brown (6/3 10YR) SAND, wet	
							Greenish grey (8/1 5GY) SILT, with clay, brown (5/8 10YR) mottles, trace sand near bottom	525.0
	3		3.75				Pale brown (6/3 10YR)to grey (6/1 10YR) silty SAND, wet, with organics	
15							Grey (6/1 10YR) clayey SAND, wet, with organics	
							End of Boring = 15 Feet	520.0
20								

Notes:

Andrews Engineering, Inc.
3300 Ginger Creek Drive
Springfield, IL 62711

FIELD BORING LOG

Site Information:
Name: Springfield City Water, Light, and Power
Location: Springfield, IL
County: Sangamon
Site No.: 1678250020
AEI No.: 240338|0011

Location:
Coord. System: Latitude & Longitude
Northing: 39.77037607
Easting: -89.60084024

Weather: Sunny, 70F

Boring Information:
Boring No: T4S
Well No: T4S
Surf Elev.: 546.8

Depth Information:
Total: 15.0
Auger: 15.0
Core: 0.0

Dates:
Start: 5/20/2025
Finish: 5/20/2025

Drilling Contractor:
Contractor Name: Skinner LTD
City: Hindsburo, IL
Equipment: 4.25" HSA with 5' CB

Personnel:
Geologist: N. Beck
Driller: T. Skinner
Helper(s): C. Vonbrehens, T. Buckler

- Continuous Barrel (CB) - Split Spoon (SS) - Shelby Tube - Core - Blind Drill

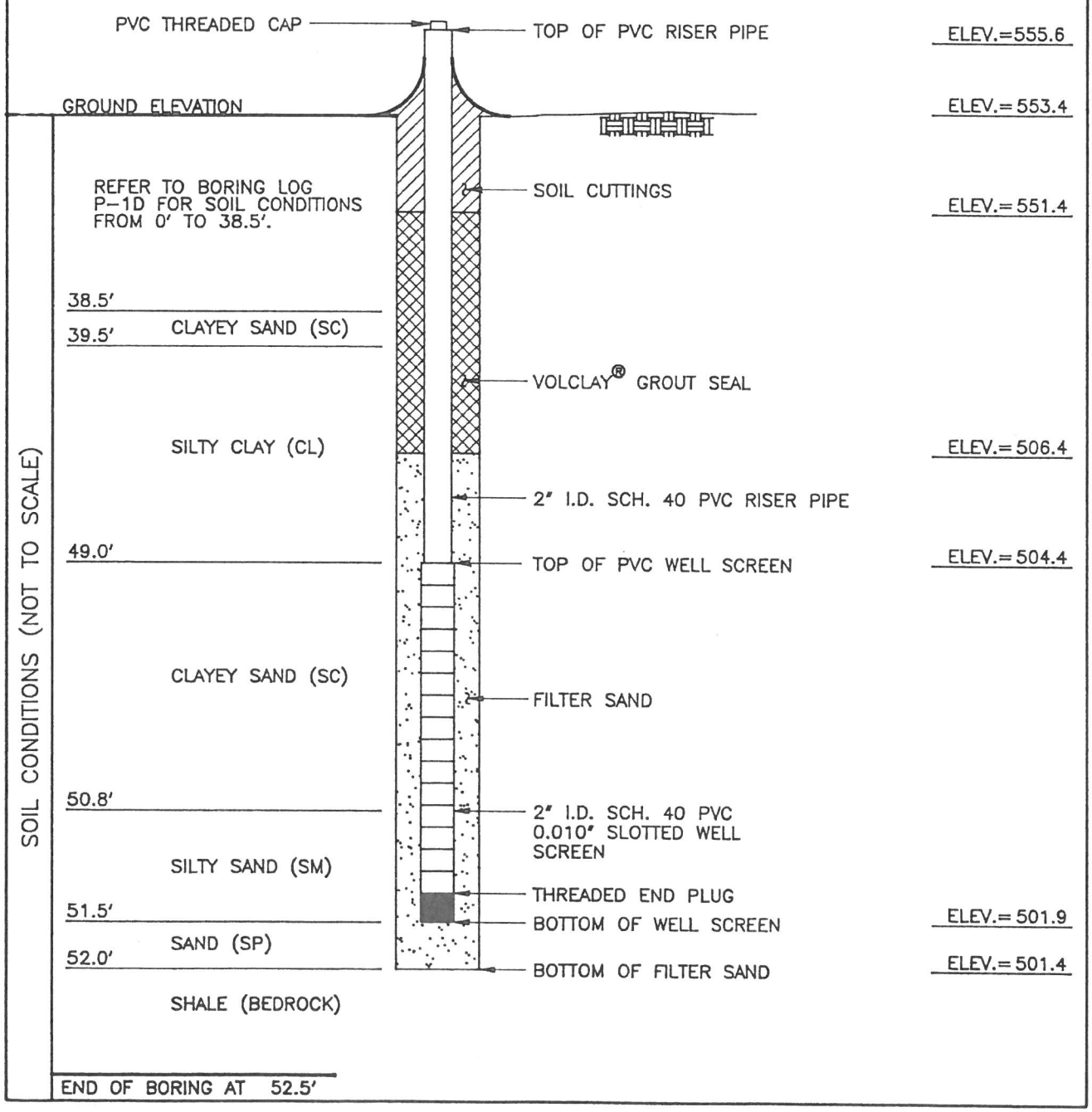
Depth (ft)	Run No.	Sample Type	Sample Recov.	Blow Count	qu/su (tsf)	Lithology	Description/Comments	Elev. (MSL)
							Ground Surface	546.8
0							Dark brown (3/3 10YR) clayey SILT, moist	
	1		4.75				Yellowish brown (5/8 10YR) silty CLAY, moist, with organics	545.0
5	2		1.9				Pale brown (8/4 10YR) SILT, with clay, organics, trace sand, dry	540.0
	3		3				hard	
10	4		1.5				Pale brown (8/4 10YR) sandy SILT, with black mottles	535.0
	5		0.5				Pale brown (7/3 10YR), sandy CLAY, with black mottles, organics, moist	
	6		2.3				Light grey (7/2 10YR) clayey SAND, moist, with black mottles, organics, and trace gravel	
15							End of Boring = 15 Feet	530.0
20								

Notes:

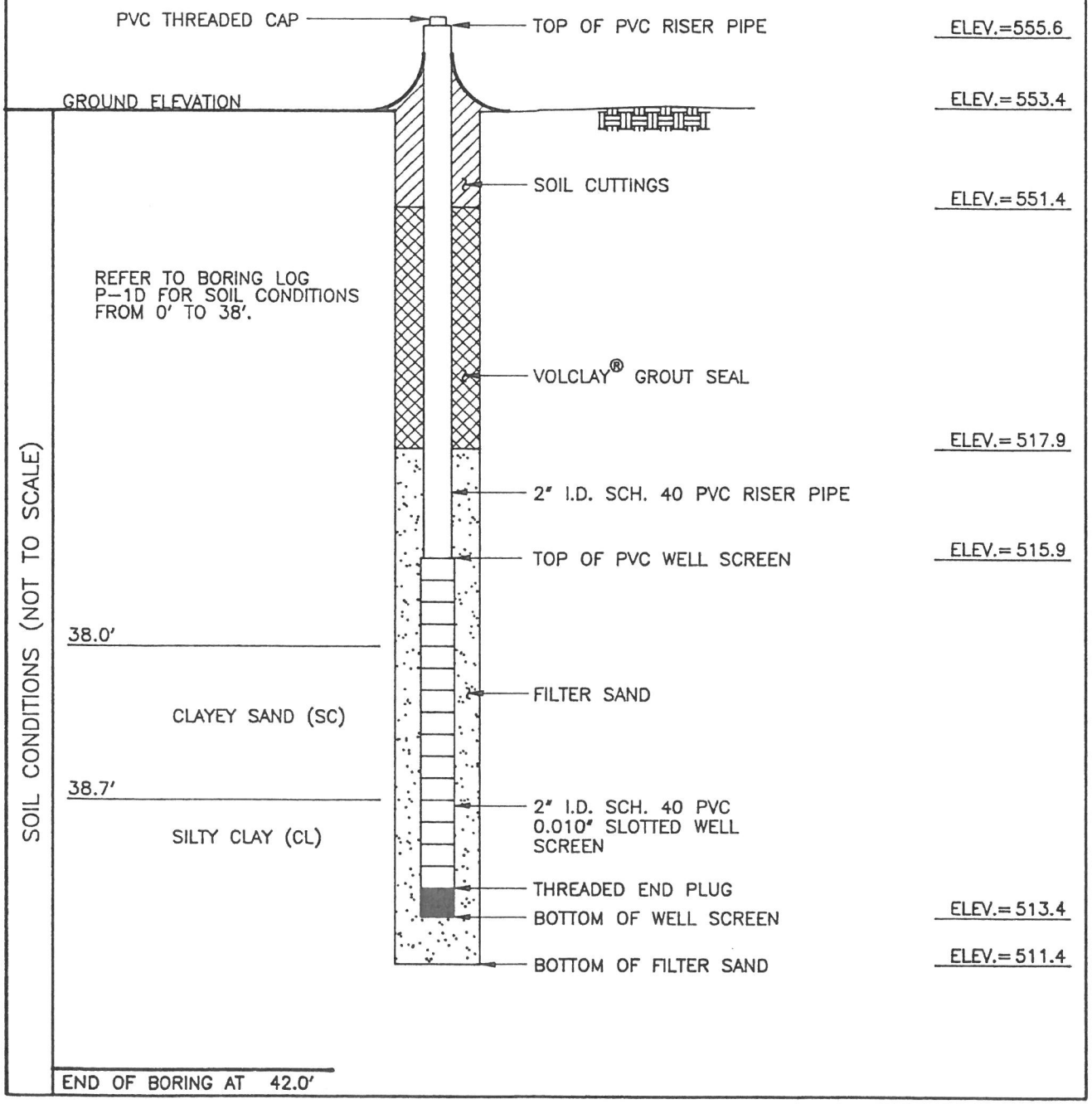
APPENDIX B:
WELL CONSTRUCTION REPORTS

APPENDIX B1:
FGDS UNIT 2 LANDFILL WELL/PIEZOMETER CONSTRUCTION REPORTS

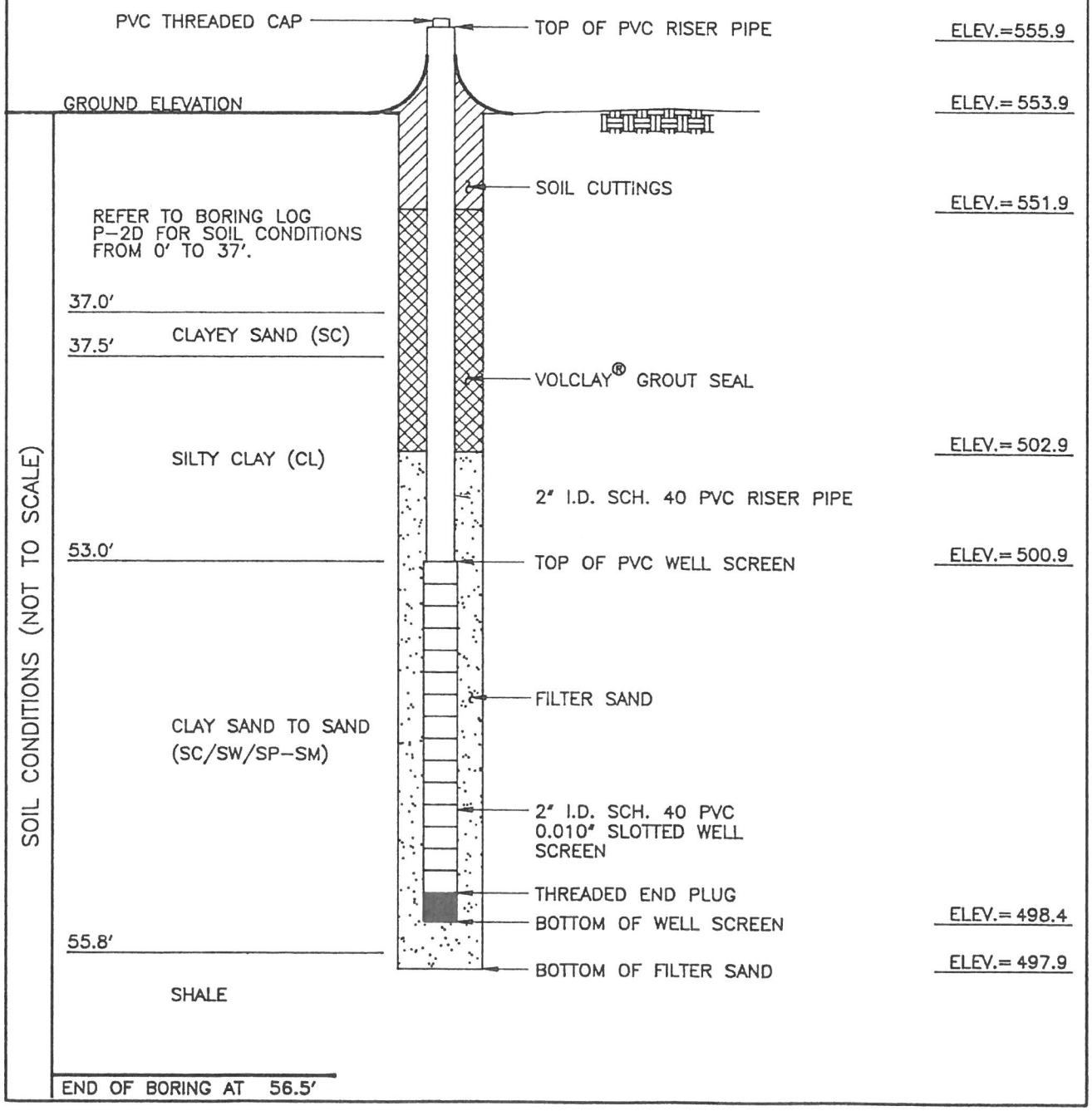
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-1D PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-1D LOCATION N 4806.1 E 1973.1 INSTALLATION DATE 7/21/92 WEATHER CLOUDY, 70'S



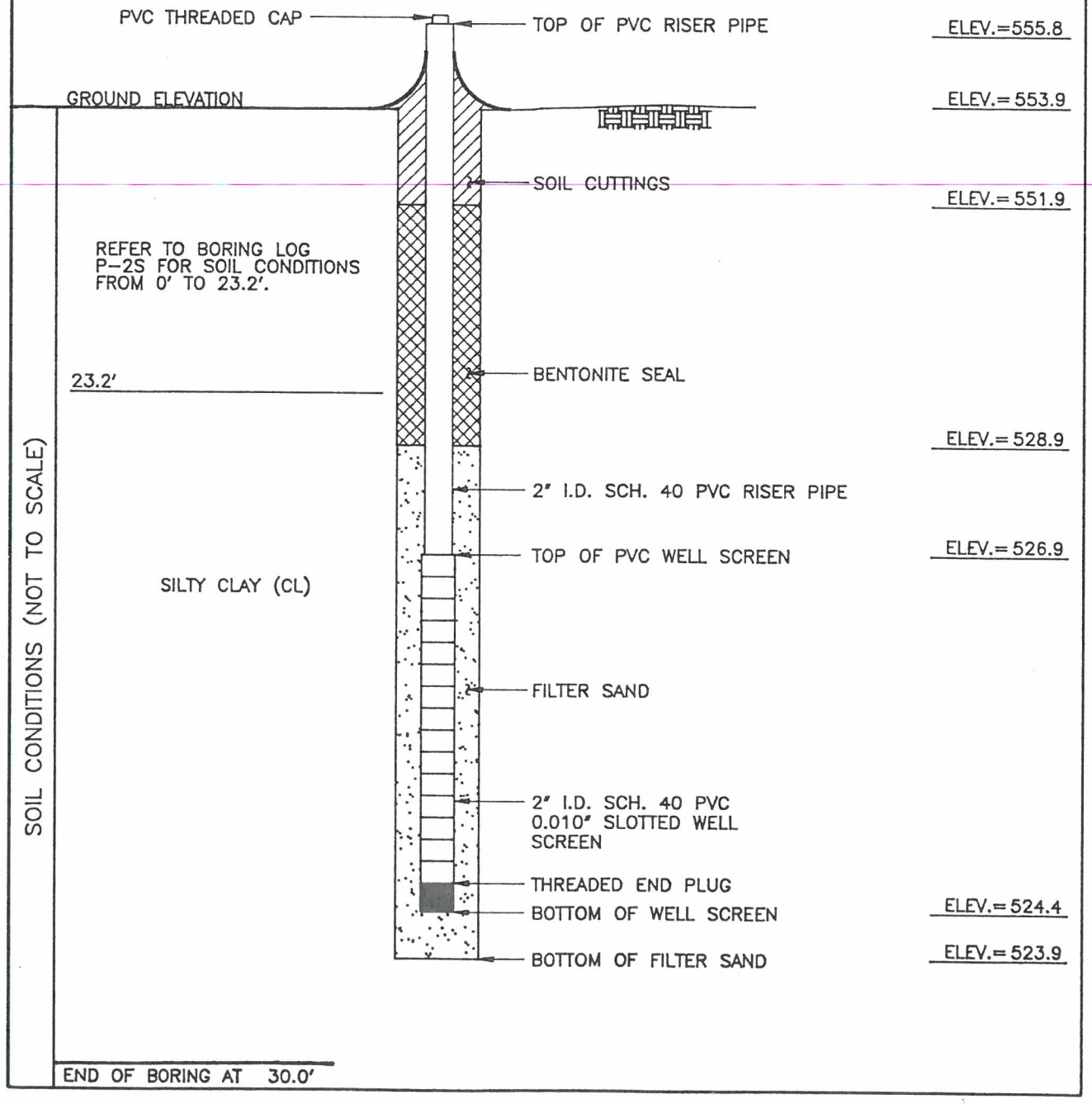
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-1S PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-1S LOCATION N 4821.3 E 1973.9 INSTALLATION DATE 7/21/92 WEATHER P. CLOUDY, 70'S



PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-2D PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-2D LOCATION N 5526.0 E 1975.9 INSTALLATION DATE 7/22/92 WEATHER CLOUDY, RAINY, 70'S

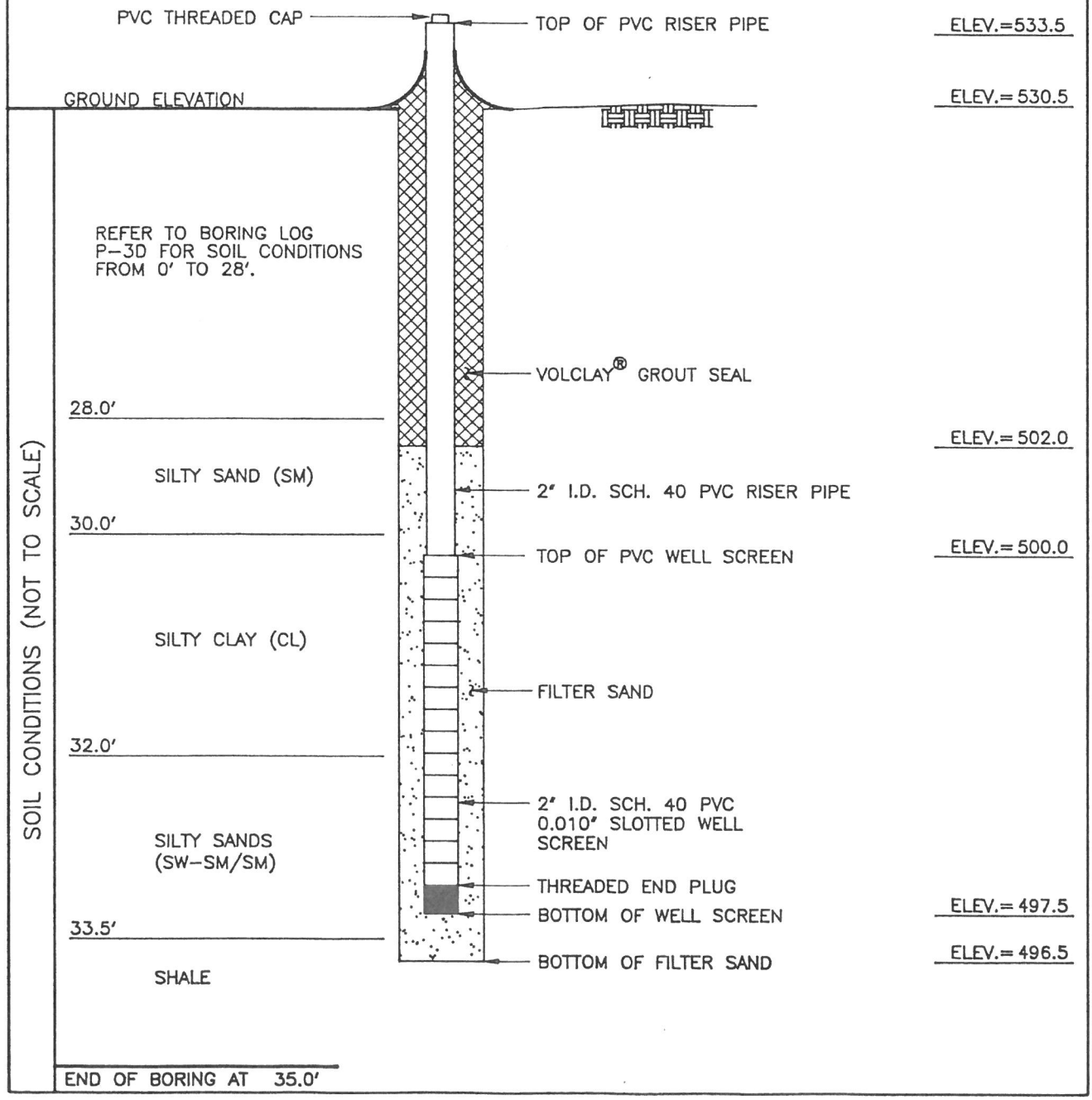


PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-2S PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-2S LOCATION N 5237.1 E 1976.3 INSTALLATION DATE 7/22/92 WEATHER CLOUDY, RAINY, 70'S

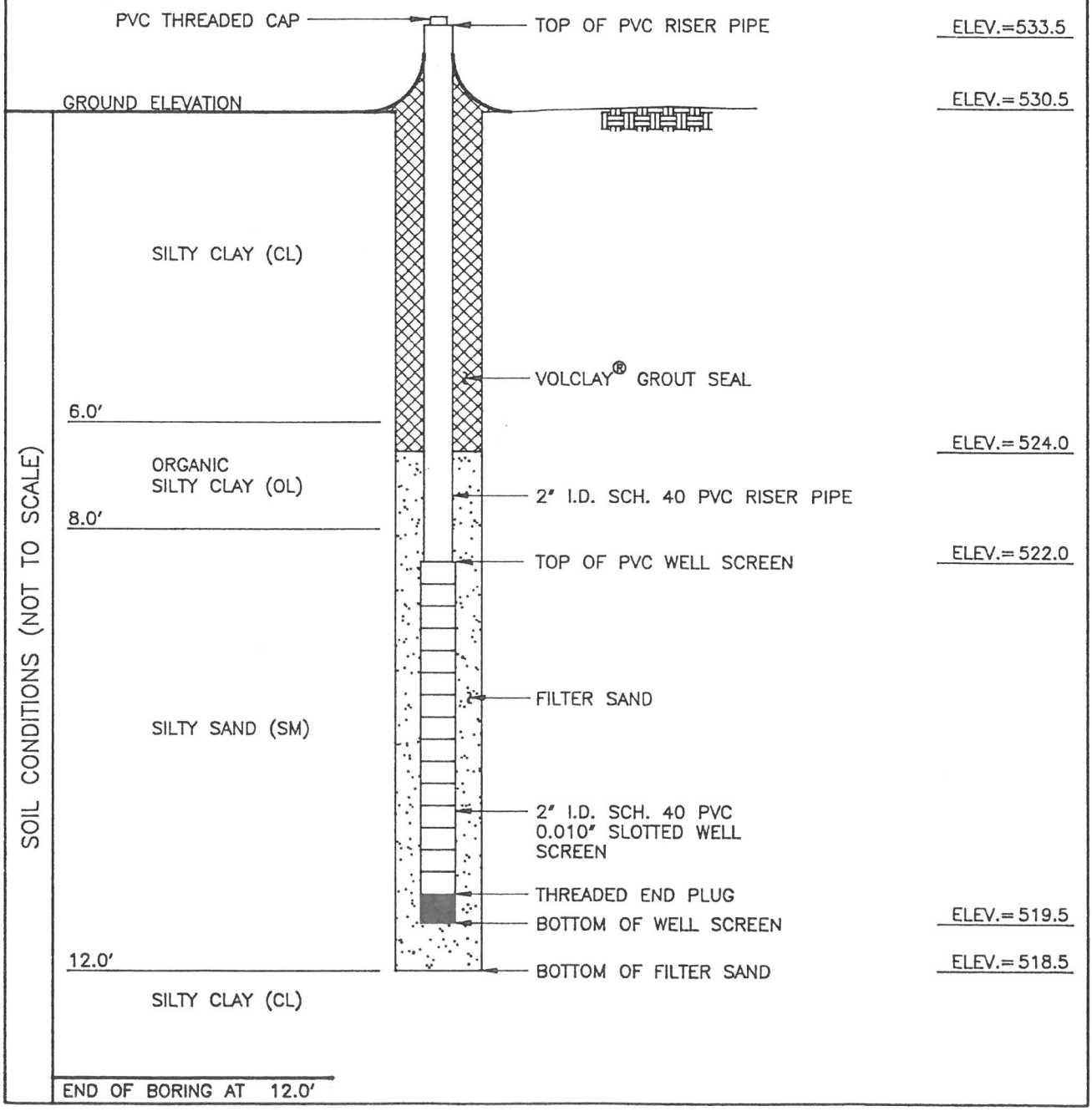


PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-3D PROJ. NO. 496B

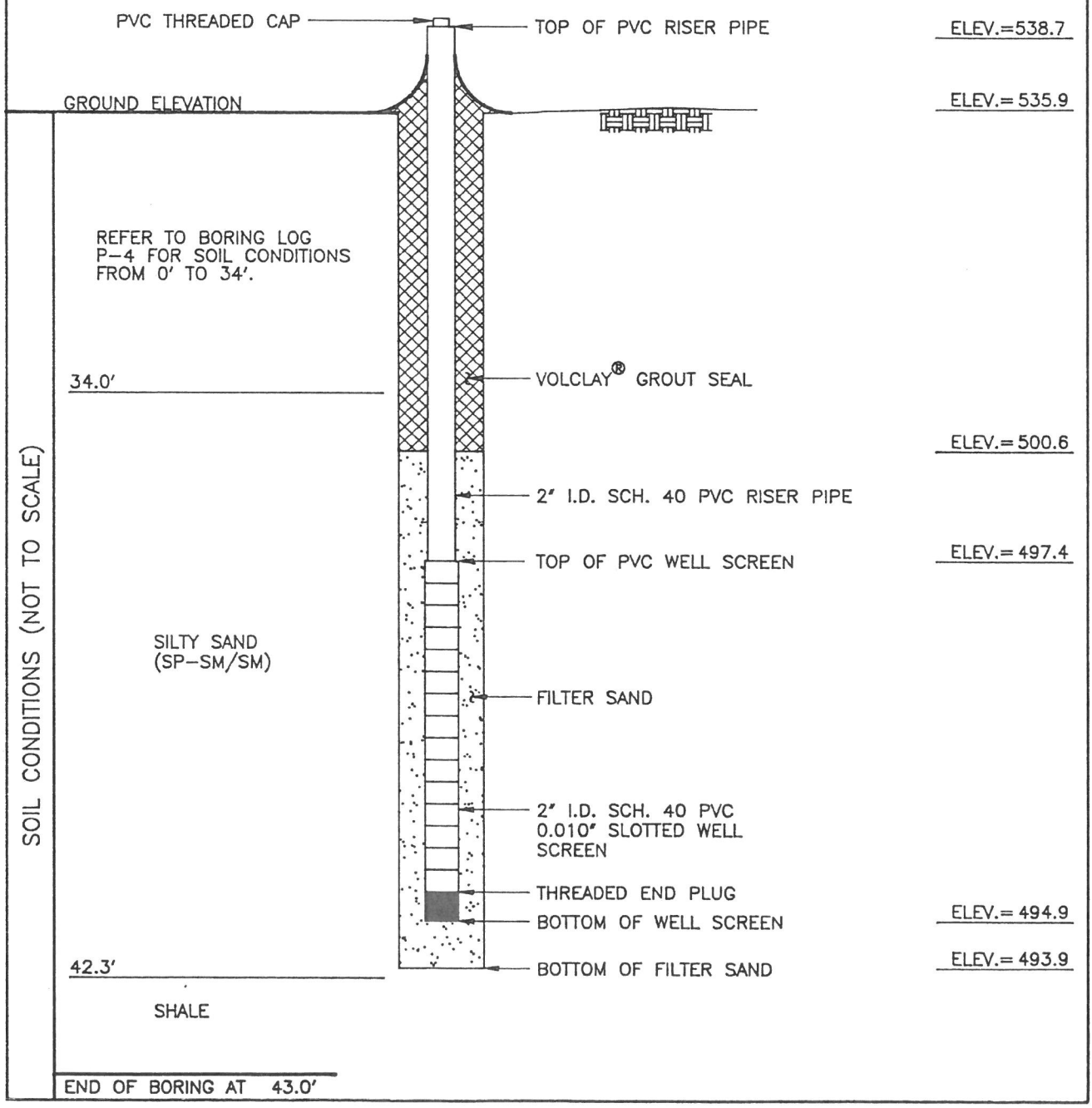
PROJECT FGDS LANDFILL	BORING NO. P-3D
LOCATION SPRINGFIELD, ILLINOIS	LOCATION N 5672.5
CLIENT CWL&P	E 2645.4
ENGINEER KRISHNA REDDY	INSTALLATION DATE 8/17/92
DRILLER KEVIN SHAMWAY	WEATHER SUNNY, 70'S



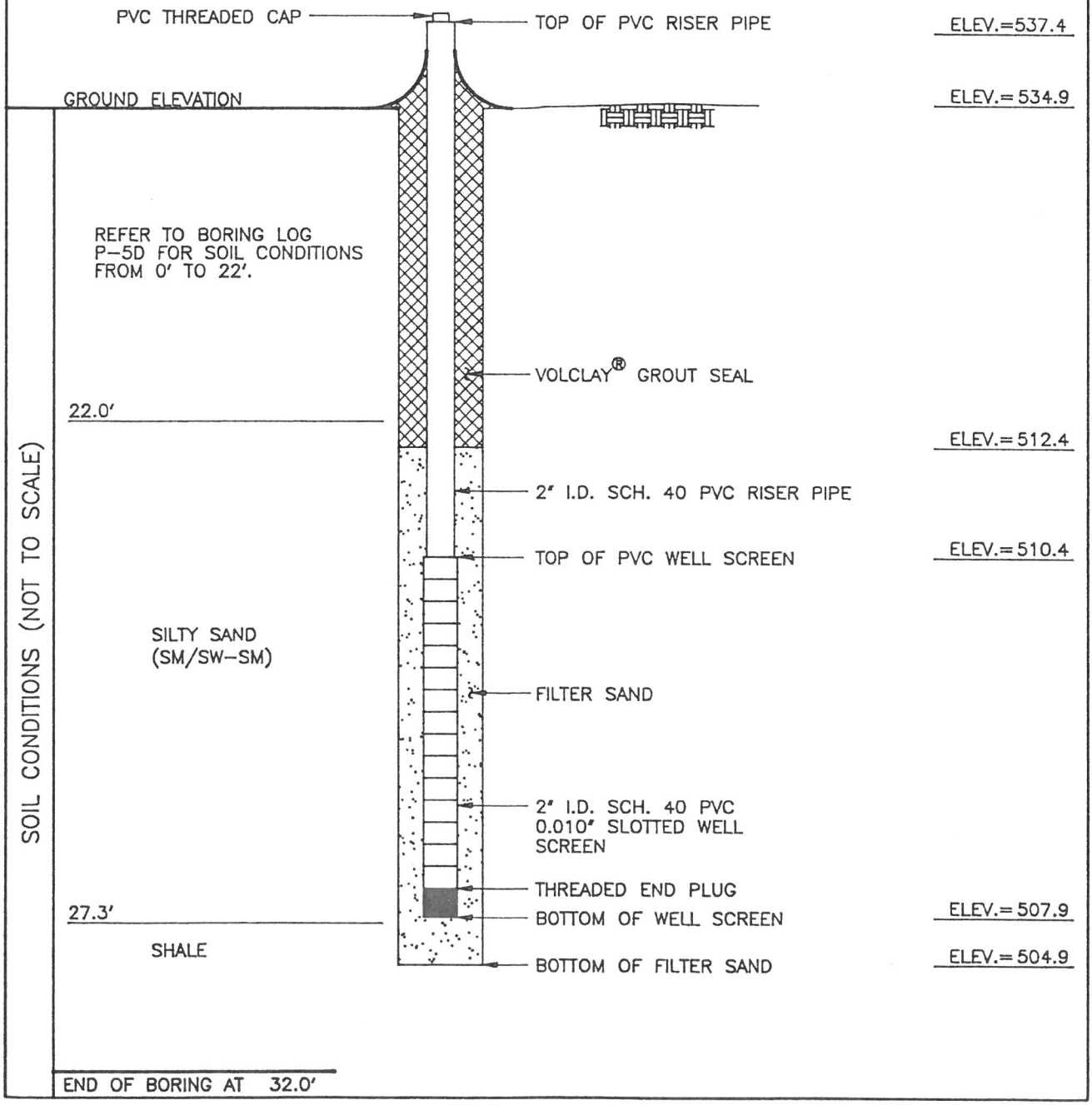
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-3S PROJ. NO. 496B
PROJECT FGDS LANDFILL		BORING NO. P-3S
LOCATION SPRINGFIELD, ILLINOIS		LOCATION N 5672.5 E 2651.4
CLIENT CWL&P		INSTALLATION DATE 8/17/92
ENGINEER KRISHNA REDDY		WEATHER SUNNY, 70'S
DRILLER KEVIN SHAMWAY		



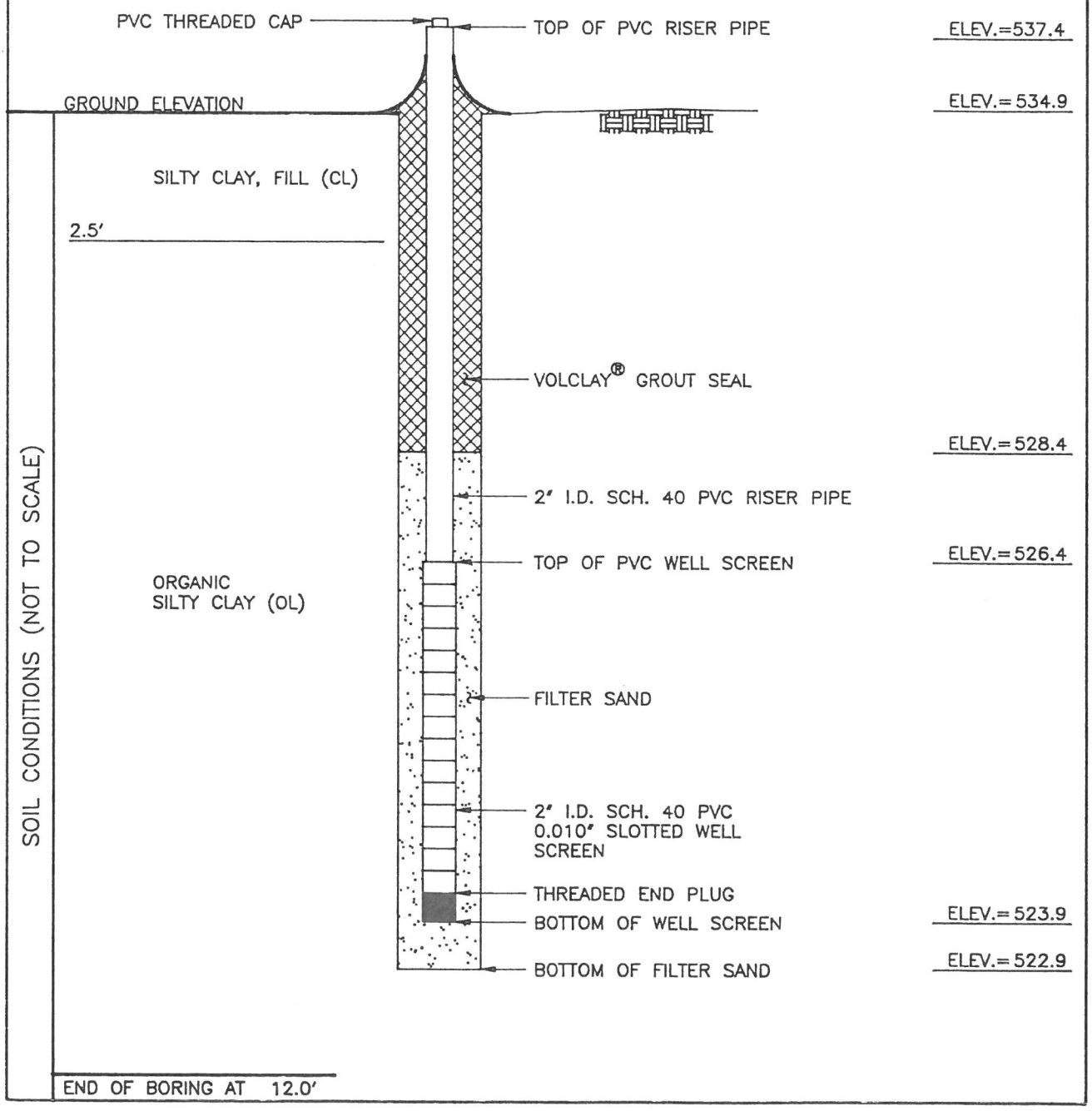
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-4 PROJ. NO. 496B
PROJECT FGDS LANDFILL		BORING NO. P-4
LOCATION SPRINGFIELD, ILLINOIS		LOCATION N 5156.3
CLIENT CWL&P		E 2880.7
ENGINEER KRISHNA REDDY		INSTALLATION DATE 8/16/92
DRILLER KEVIN SHAMWAY		WEATHER SUNNY, 70'S



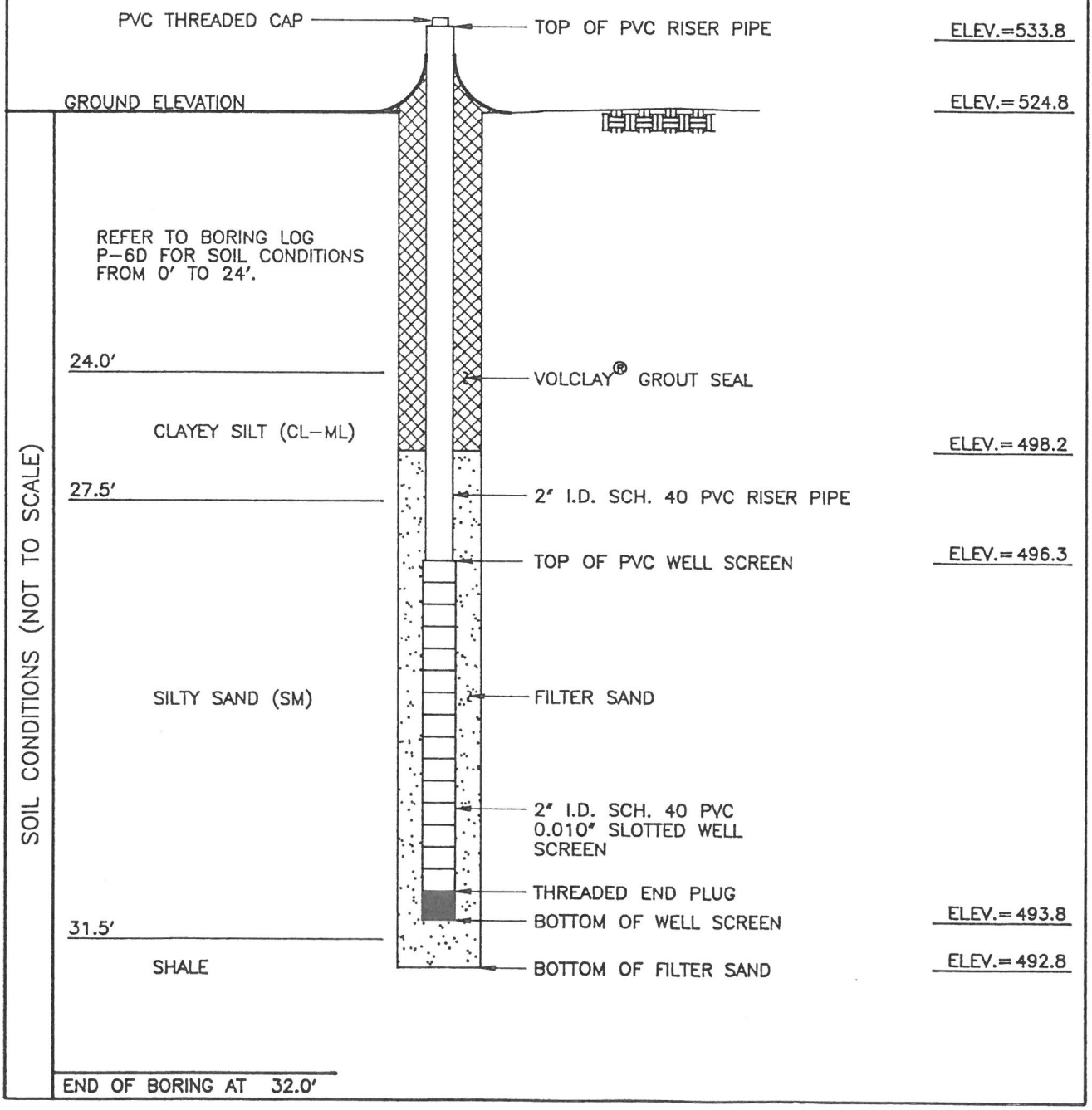
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-5D PROJ. NO. 496B
PROJECT FGDS LANDFILL		BORING NO. P-5D
LOCATION SPRINGFIELD, ILLINOIS		LOCATION N 4516.7
CLIENT CWL&P		E 2885.0
ENGINEER KRISHNA REDDY		INSTALLATION DATE 8/16/92
DRILLER KEVIN SHAMWAY		WEATHER SUNNY, 70'S



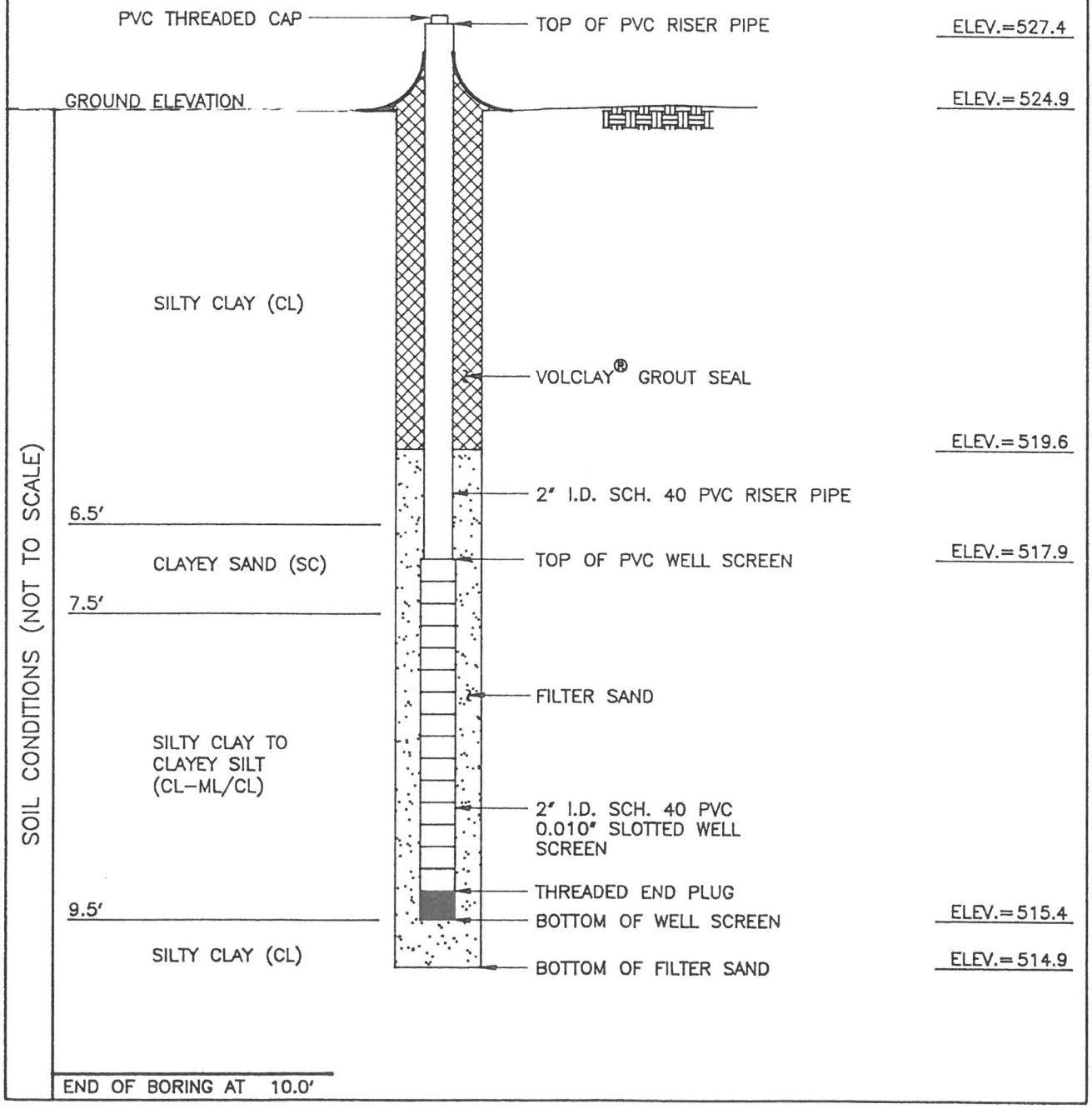
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-5S PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-5S LOCATION N 4510.7 E 2887.0 INSTALLATION DATE 8/16/92 WEATHER SUNNY, 70'S



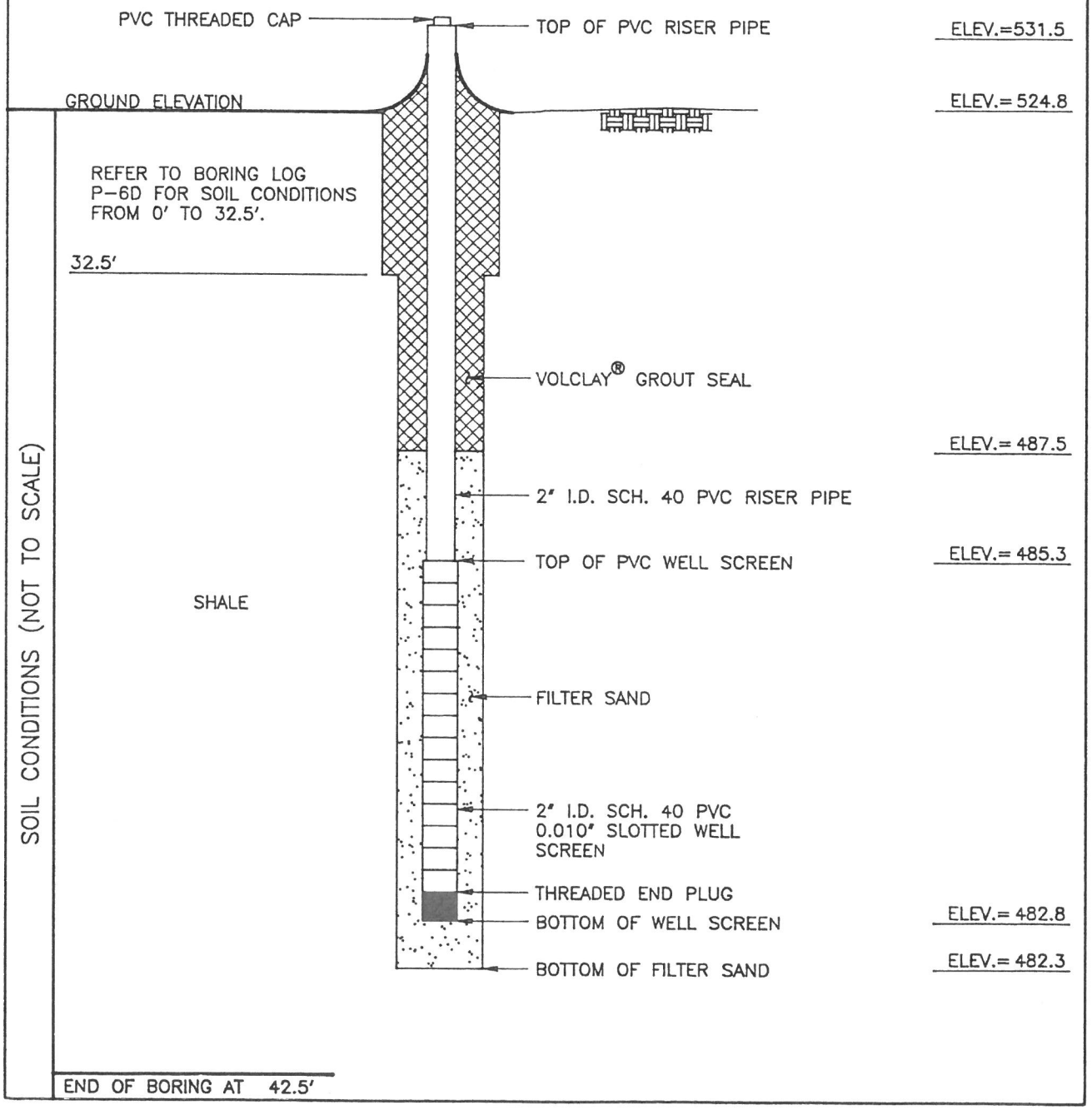
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-6D PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-6D LOCATION N 4717.0 E 2186.8 INSTALLATION DATE 8/12/92 WEATHER SUNNY, 70'S



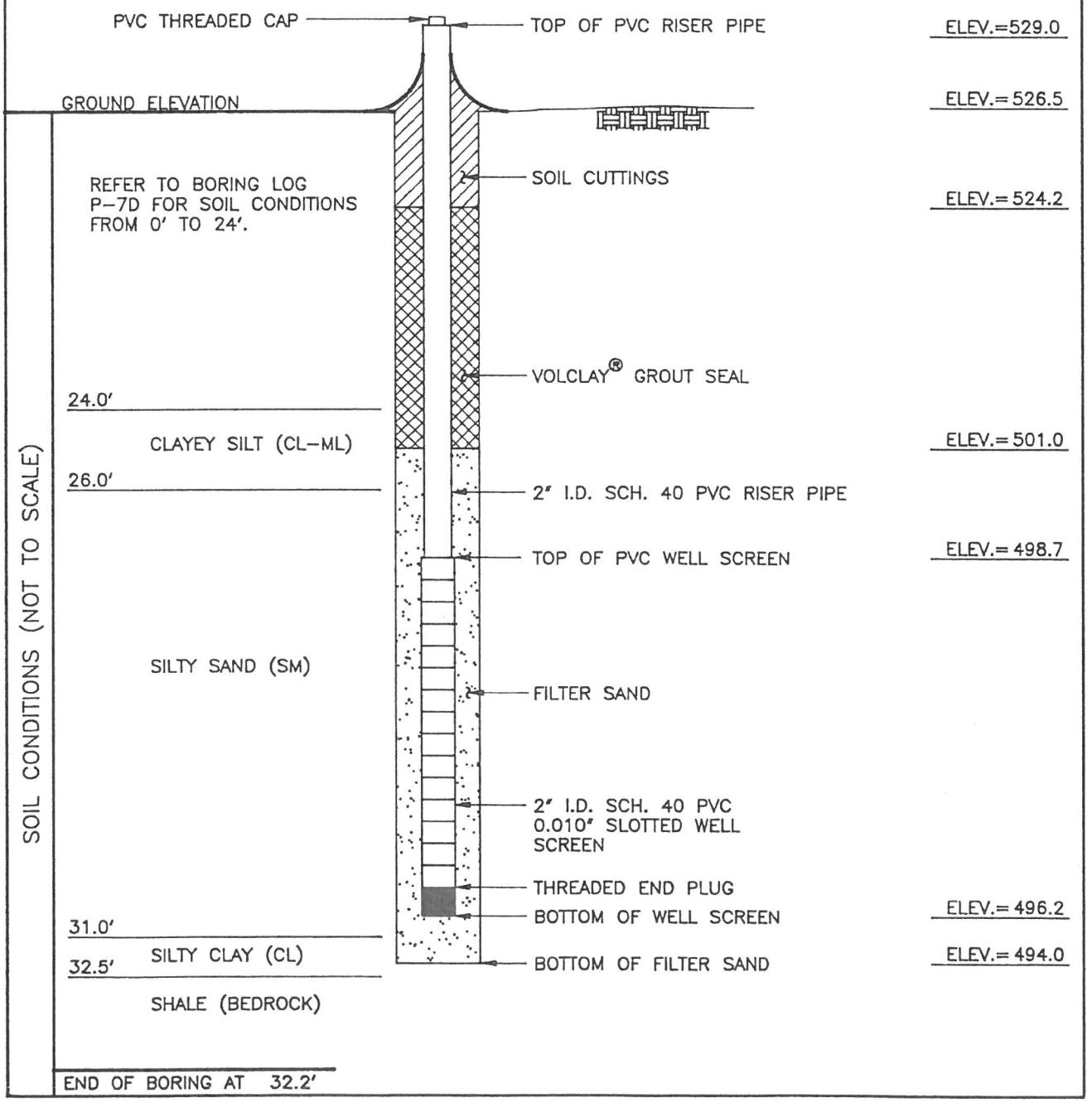
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-6S PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-6S LOCATION N 4725.7 E 2191.4 INSTALLATION DATE 8/12/92 WEATHER SUNNY, 70'S



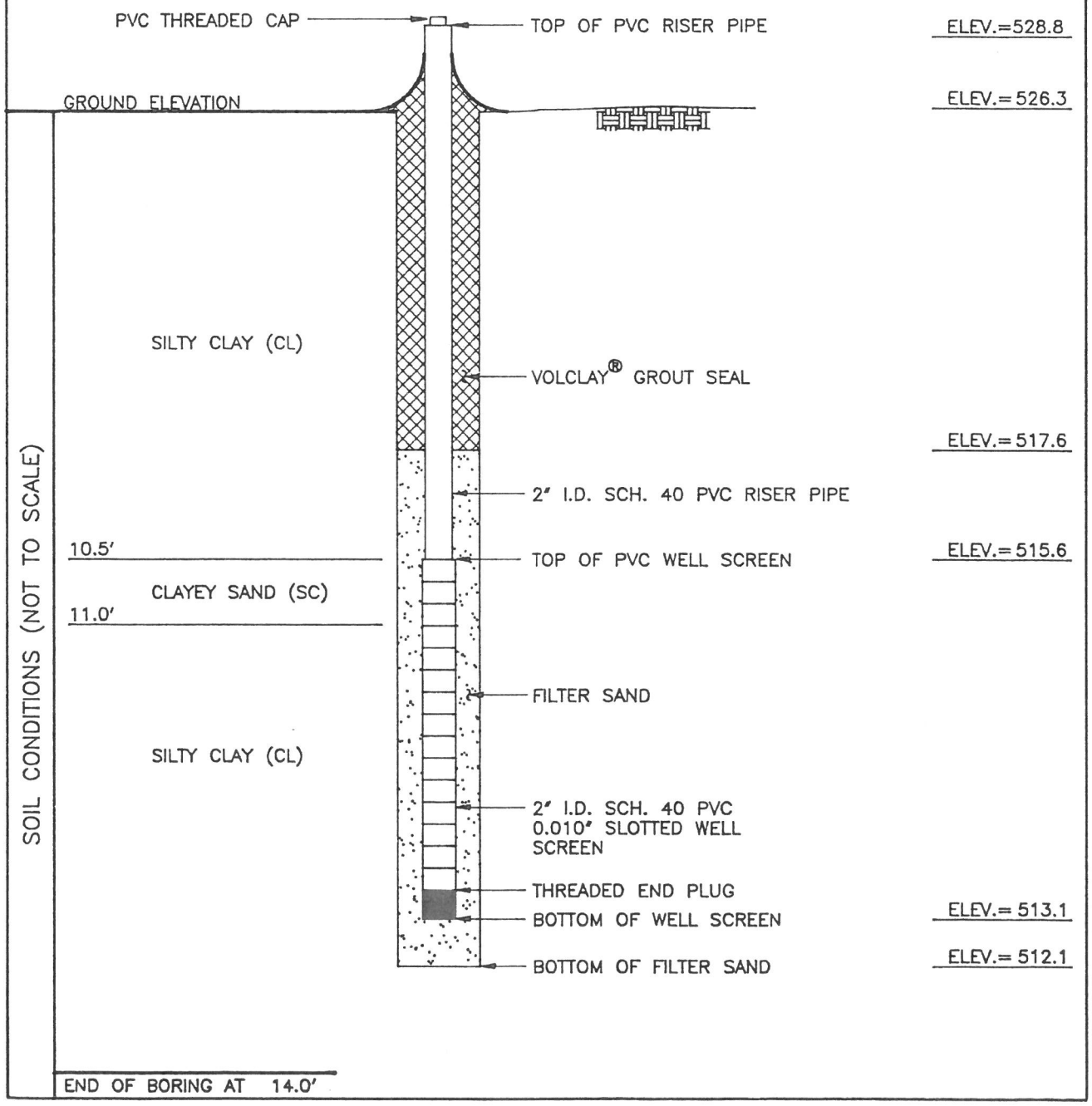
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-6R PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-6R LOCATION N 4719.5 E 2175.7 INSTALLATION DATE 8/6/92 WEATHER SUNNY, 70'S



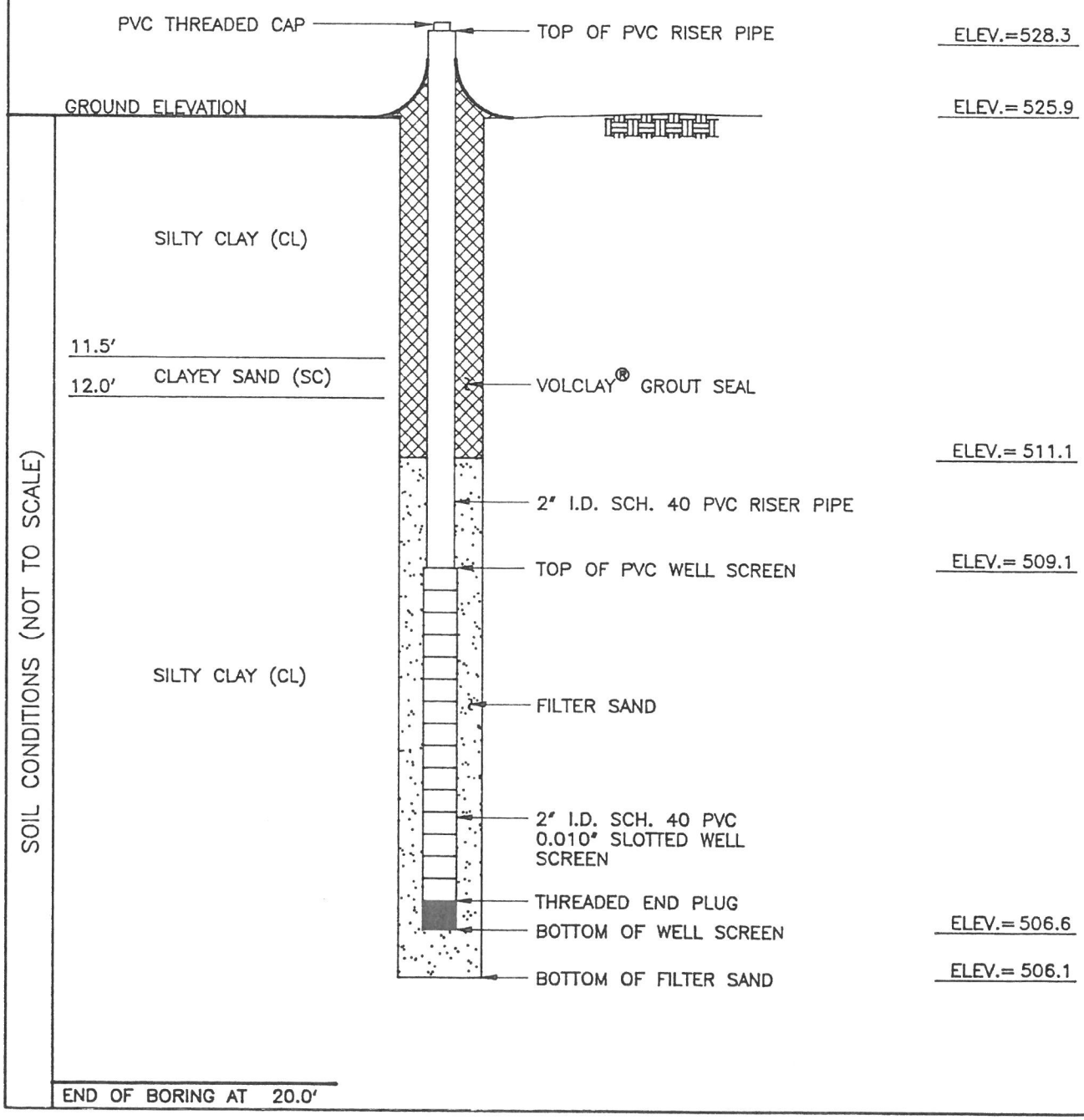
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-7D PROJ. NO. 496B
PROJECT FGDS LANDFILL		BORING NO. P-7D
LOCATION SPRINGFIELD, ILLINOIS		LOCATION N 5345.8
CLIENT CWL&P		E 2429.5
ENGINEER KRISHNA REDDY		INSTALLATION DATE 7/30/92
DRILLER KEVIN SHAMWAY		WEATHER RAIN, WARM, 80'S



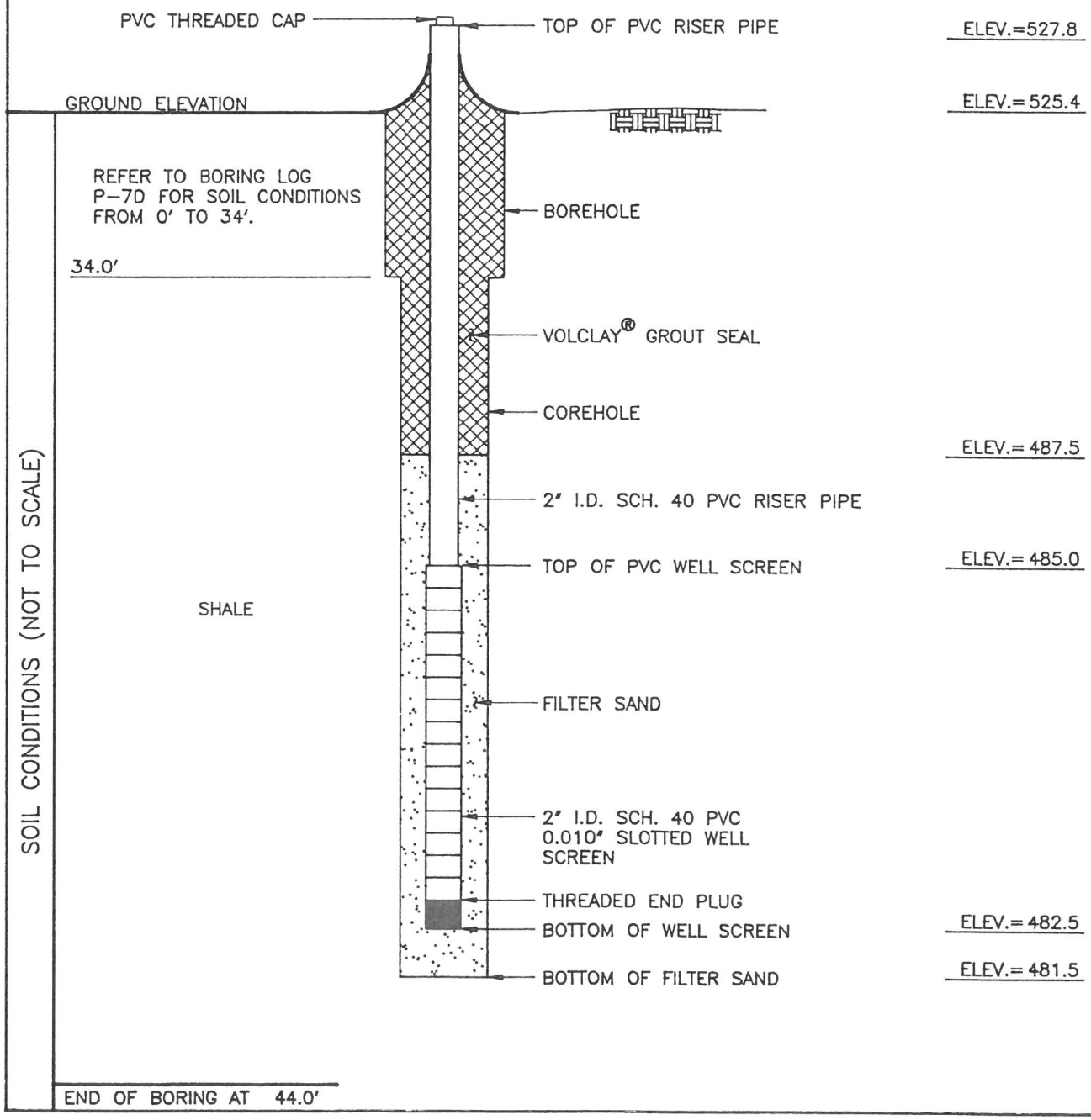
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-7S PROJ. NO. 496B
PROJECT FGDS LANDFILL		BORING NO. P-7S
LOCATION SPRINGFIELD, ILLINOIS		LOCATION N 5337.1
CLIENT CWL&P		E 2426.3
ENGINEER KRISHNA REDDY		INSTALLATION DATE 7/30/92
DRILLER KEVIN SHAMWAY		WEATHER RAIN, WARM, 80'S



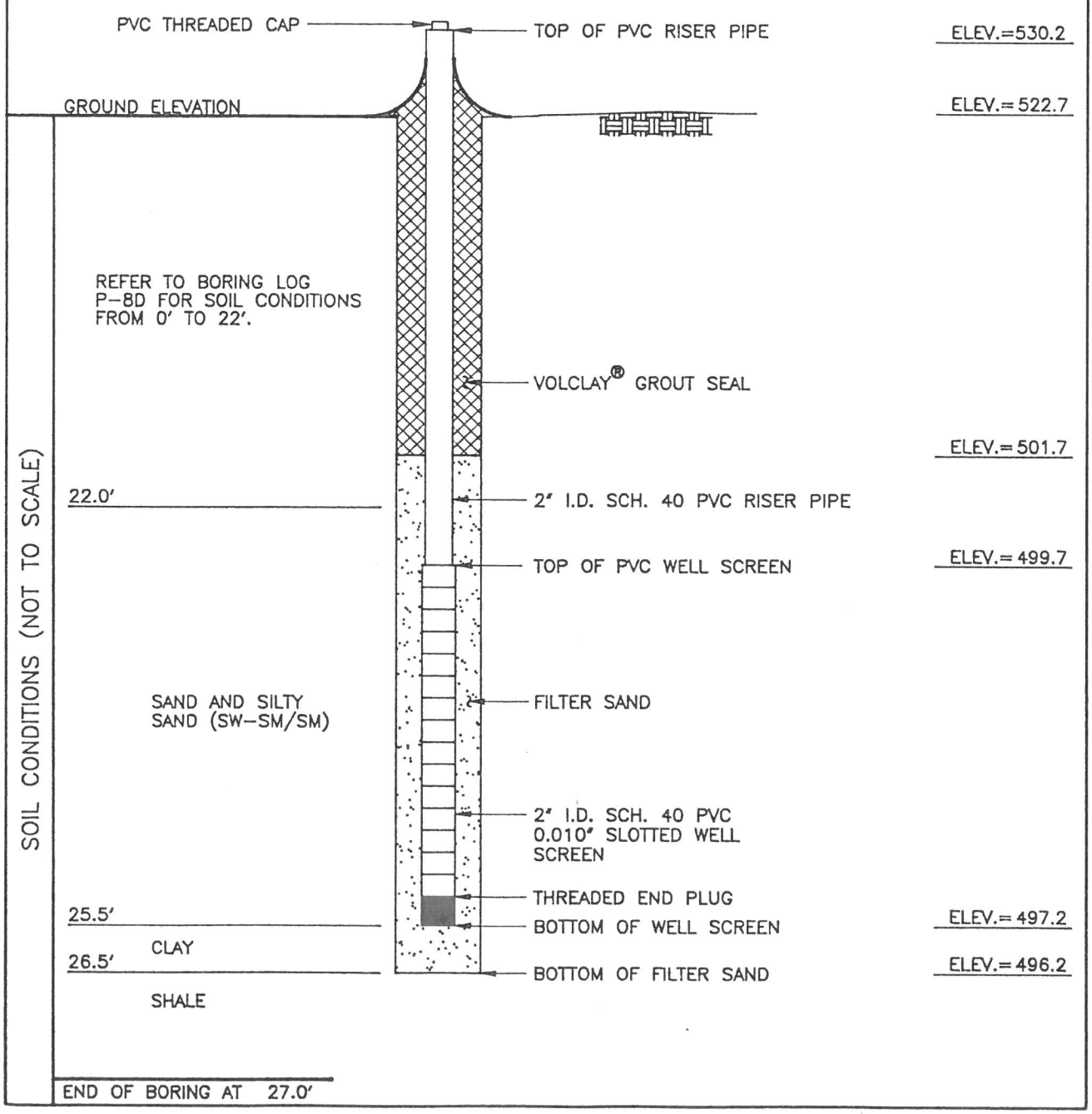
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-7M PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-7M LOCATION N 5337.0 E 2432.8 INSTALLATION DATE 7/30/92 WEATHER RAIN, WARM, 80'S



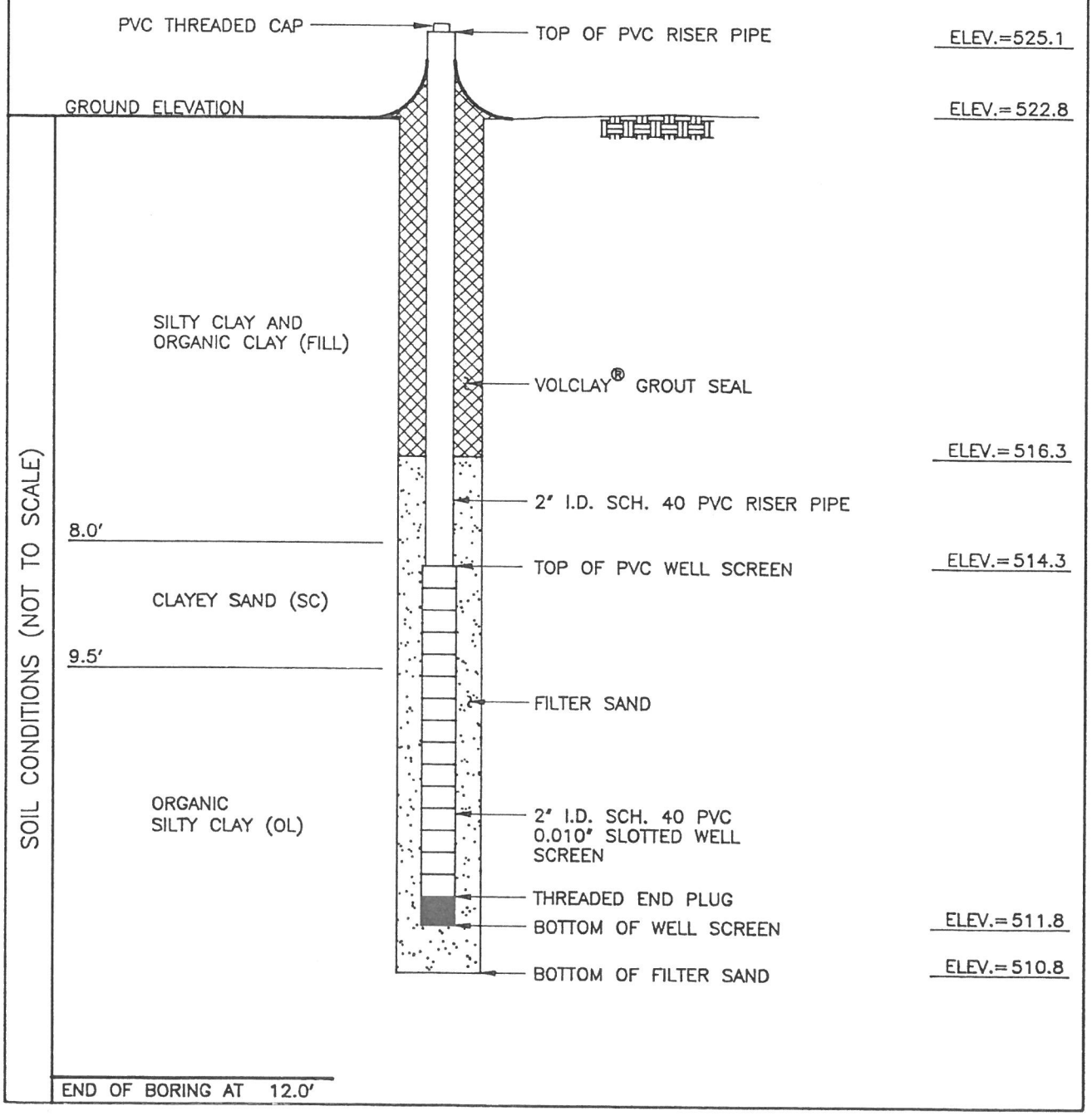
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-7R PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-7R LOCATION N 5326.9 E 2424.5 INSTALLATION DATE 7/31/92 WEATHER CLOUDY, DRIZZLE, 70'S



PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-8D PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-8D LOCATION N 4939.7 E 2482.7 INSTALLATION DATE 8/13/92 WEATHER CLOUDY, 70'S



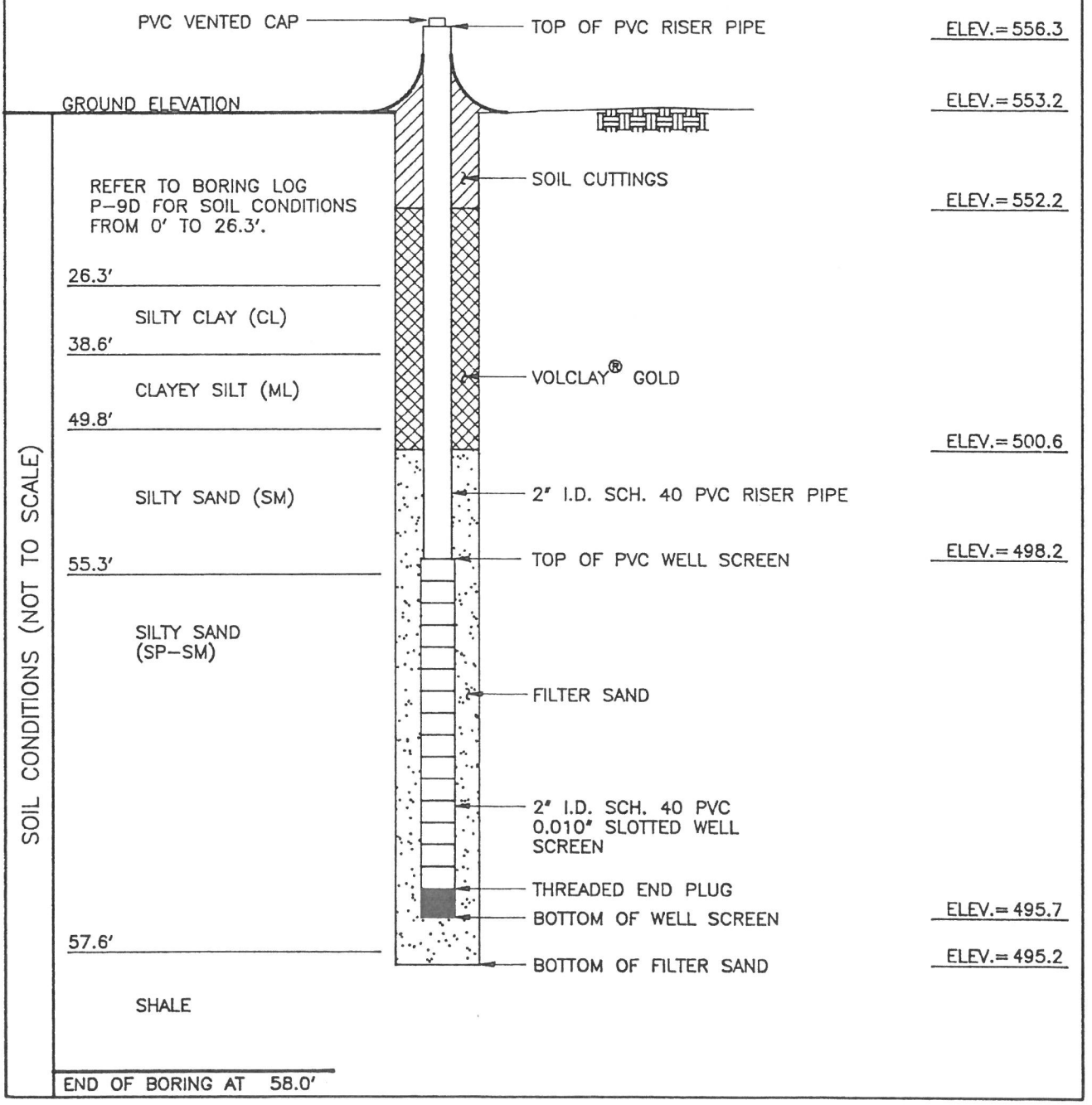
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-8S PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P ENGINEER KRISHNA REDDY DRILLER KEVIN SHAMWAY		BORING NO. P-8S LOCATION N 4933.1 E 2486.0 INSTALLATION DATE 8/13/92 WEATHER CLOUDY, 70'S



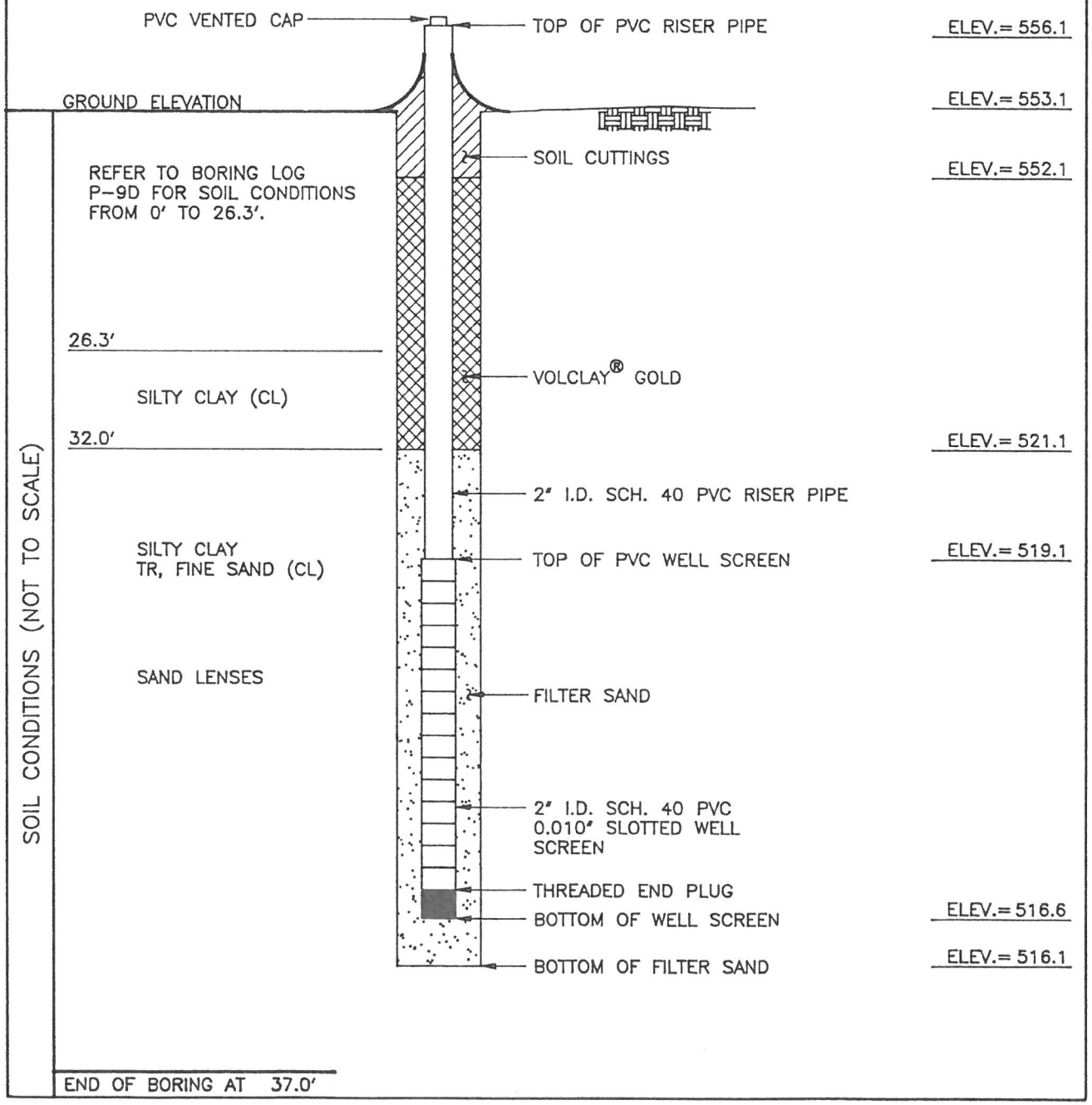
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-9D PROJ. NO. 496B

PROJECT FGDS LANDFILL
LOCATION SPRINGFIELD, ILLINOIS
CLIENT CWL&P
ENGINEER/GEOLOGIST STEVE SCHILLING
DRILLER KEVIN SHAMWAY

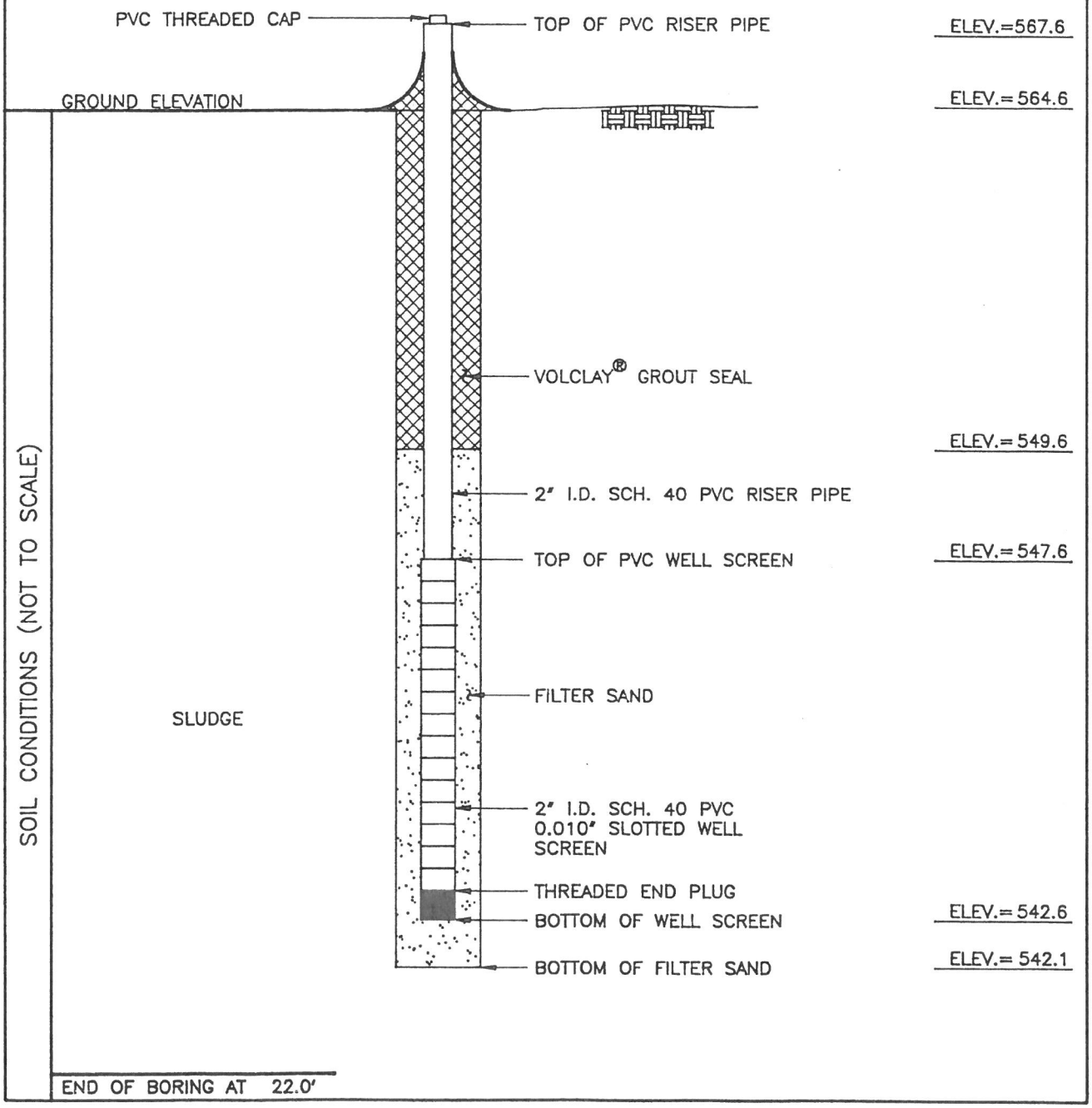
BORING NO. P-9D
LOCATION N 4446.3
E 2422.4
INSTALLATION DATE 8/18/92
WEATHER PTLY CLDY, 70'S



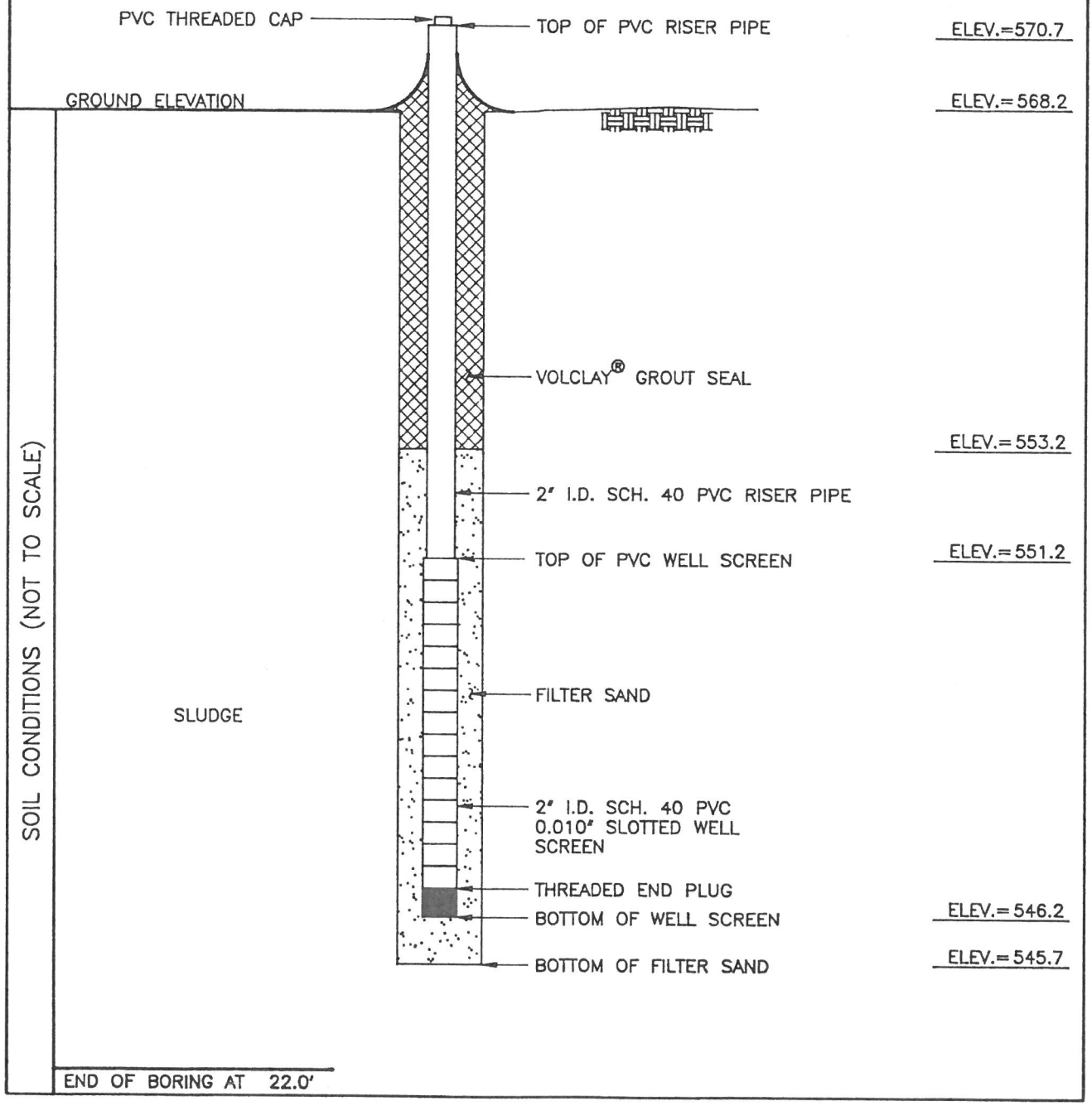
PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. P-9S PROJ. NO. 496B
PROJECT FGDS LANDFILL		BORING NO. P-9S
LOCATION SPRINGFIELD, ILLINOIS		LOCATION N 4447.3
CLIENT CWL&P		E 2415.6
ENGINEER/GEOLOGIST STEVE SCHILLING		INSTALLATION DATE 8/19/92
DRILLER KEVIN SHAMWAY		WEATHER CLOUDY, 70'S



PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. LP-1 PROJ. NO. 496B
PROJECT FGDS LANDFILL		BORING NO. LP-1
LOCATION SPRINGFIELD, ILLINOIS		LOCATION N 4326.5
CLIENT CWL&P		E 2639.9
GEOLOGIST STEVE VANHOOK		INSTALLATION DATE 7/25/92
DRILLER MANUAL ROSARIO		WEATHER CLOUDY, 70'S



PATRICK ENGINEERING INC.	PIEZOMETER INSTALLATION REPORT	PIEZ. NO. LP-2 PROJ. NO. 496B
PROJECT FGDS LANDFILL LOCATION SPRINGFIELD, ILLINOIS CLIENT CWL&P GEOLOGIST STEVE VANHOOK DRILLER MANUAL ROSARIO		BORING NO. LP-2 LOCATION N 4257.5 E 2365.8 INSTALLATION DATE 7/25/92 WEATHER CLOUDY, 70'S



APPENDIX B2:
FGDS UNIT 2 LANDFILL MONITORING WELL CONSTRUCTION REPORTS

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: R-101

Site Name: CWLP - Ash Disposal Facility Grid Coordinate: Northing 623.22 Easting 1426.13

Drilling Contractor: Professional Service Industries, Inc. Date Drilled Start: January 15, 1990

Driller: B. Williamson Geologist: -- Date Completed: January 15, 199

Drilling Method: Hollow Stem Auger - 3¼" I.D. Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite Grout

Amount of cement: # of bags 3 lbs. per bag 94

Amount of bentonite: # of bags 0.1 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 0.8 lbs. per bag 50

Type of Sand Pack: Silica Sand (Marco-Sandblasting)

Source of Sand: Henry Nelch & Son Co., Springfield, IL

Amount of Sand: # of bags 1.8 lbs. per bag 100

Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint			--	
Riser pipe above w.t.			2"	
Riser pipe below w.t.			2"	
Screen			2"	
Coupling joint screen to riser			--	
Protective casing				6"X5' Steel

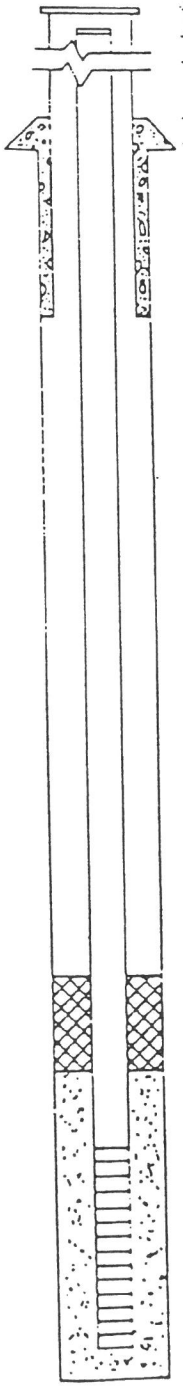
Measurements

to .01 ft. (where applicable)

Riser pipe length	31.6'
Protective casing length	5'
Screen length	6'
Bottom of screen to end cap	0.3'
Top of screen to first joint	0.3'
Total length of casing	37.6'
Screen slot size	0.010
# of openings in screen	--
Diameter of borehole (in)	6
ID of riser pipe (in)	2

Elevations — .01 ft.

546	83	MSL Top of Protective Casing
546	68	MSL Top of Riser Pipe
	+2.9	ft. Casing Stickup
543	78	MSL Ground Surface
	-3.1	ft. Top of annular sealant
	-21.3	ft. Top of Seal
	2.8	ft. Total Seal Interval
	-24.1	ft. Top of Sand
	-25.8	ft. Top of Screen
	6.0	ft. Total Screen Interval
	-31.8	ft. Bottom of Screen
	-34.0	ft. Bottom of Borehole



Completed by: Surveyed by: Ill. registration #

PDF_2265

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: R-102

Site Name: CWLP - Ash Disposal Facility Grid Coordinate: Northing 2294.50 Easting 674.54

Drilling Contractor: Professional Service Industries, Inc. Date Drilled Start: January 11, 1990

Driller: B. Williamson Geologist: -- Date Completed: January 11, 19

Drilling Method: Hollow Stem Auger - 3¼" I.D. Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite Grout

Amount of cement: # of bags 4 lbs. per bag 94

Amount of bentonite: # of bags 0.1 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 0.7 lbs. per bag 50

Type of Sand Pack: Silica Sand (Marco-Sandblasting)

Source of Sand: Henry Nelch & Son Co., Springfield, IL

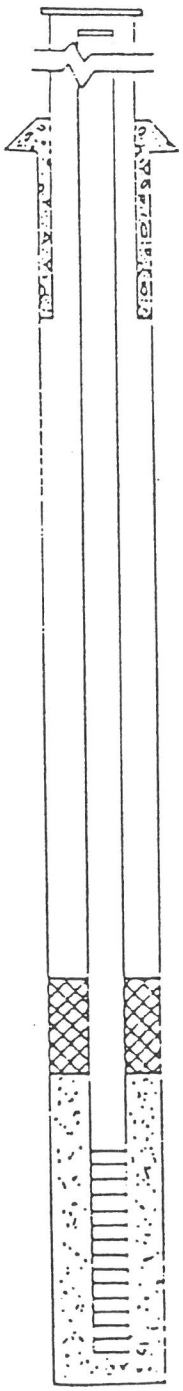
Amount of Sand: # of bags 2.0 lbs. per bag 100

Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint			--	
Riser pipe above w.t.			2"	
Riser pipe below w.t.			2"	
Screen			2"	
Coupling joint screen to riser			--	
Protective casing				6"X5' Steel

Measurements to .01 ft. (where applicable)

Riser pipe length	34.6'
Protective casing length	5'
Screen length	6'
Bottom of screen to end cap	0.3'
Top of screen to first joint	0.3'
Total length of casing	40.6'
Screen slot size	0.010
# of openings in screen	--
Diameter of borehole (in)	6
ID of riser pipe (in)	2



Elevations — .01 ft.

539 35		MSL Top of Protective Casi
539 16		MSL Top of Riser Pipe
	+3.4	ft. Casing Stickup
535 76		MSL Ground Surface
	-3.0	ft. Top of annular sealant
	-25.5	ft. Top of Seal
	2.9	ft. Total Seal Interval
	-28.4	ft. Top of Sand
	-31.2	ft. Top of Screen
	6.0	ft. Total Screen Interval
	-37.2	ft. Bottom of Screen
	-38.0	ft. Bottom of Borehole

Completed by: Surveyed by: Ill. registration #

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: R-103

Site Name: CWLP - Ash Disposal Facility Grid Coordinate: Northing 2208.19 Easting 1504.46

Drilling Contractor: Professional Service Industries, Inc. Date Drilled Start: January 13, 1990

Driller: B. Williamson Geologist: -- Date Completed: January 13, 19

Drilling Method: Hollow Stem Auger - 3¼" I.D. Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite Grout

Amount of cement: # of bags 3 lbs. per bag 94

Amount of bentonite: # of bags 0.1 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 0.8 lbs. per bag 50

Type of Sand Pack: Silica Sand (Marco-Sandblasting)

Source of Sand: Henry Nelch & Son Co., Springfield, IL

Amount of Sand: # of bags 1.7 lbs. per bag 100

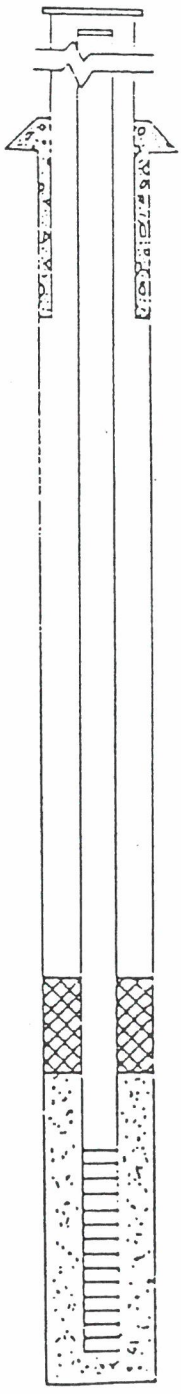
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint			--	
Riser pipe above w.t.			2"	
Riser pipe below w.t.			2"	
Screen			2"	
Coupling joint screen to riser			--	
Protective casing				6"X5' Steel

Measurements to .01 ft. (where applicable)

Riser pipe length	28.8'
Protective casing length	5'
Screen length	6'
Bottom of screen to end cap	0.3'
Top of screen to first joint	0.3'
Total length of casing	34.8
Screen slot size	0.010
% of openings in screen	--
Diameter of borehole (in)	6
ID of riser pipe (in)	2

Elevations — .01 ft.



538 66 MSL Top of Protective Casi

538 58 MSL Top of Riser Pipe

+2.5 ft. Casing Stickup

536 08 MSL Ground Surface

-3.2 ft. Top of annular sealant

-20.5 ft. Top of Seal

2.9 ft. Total Seal Interval

-23.4 ft. Top of Sand

-26.3 ft. Top of Screen

6.0 ft. Total Screen Interval

-32.3 ft. Bottom of Screen

-33.0 ft. Bottom of Borehole

Completed by: Surveyed by: Ill. registration #

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G-104

Site Name: CWLP - Ash Disposal Facility Grid Coordinate: Northing 2296.94 Easting 938.06

Drilling Contractor: Professional Service Industries, Inc. Date Drilled Start: January 12, 1990

Driller: B. Williamson Geologist: -- Date Completed: January 12, 19

Drilling Method: Hollow Stem Auger - 3¼" I.D. Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite Grout

Amount of cement: # of bags 3.3 lbs. per bag 94

Amount of bentonite: # of bags 0.1 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 0.6 lbs. per bag 50

Type of Sand Pack: Silica Sand (Marco-Sandblasting)

Source of Sand: Henry Nelch & Son Co., Springfield, IL

Amount of Sand: # of bags 1.9 lbs. per bag 100

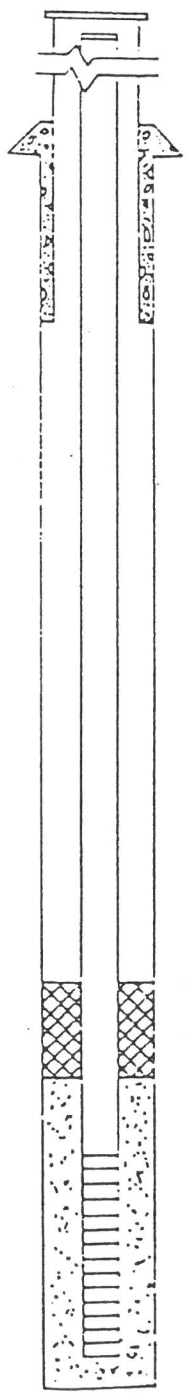
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint			--	
Riser pipe above w.t.			2"	
Riser pipe below w.t.			2"	
Screen			2"	
Coupling joint screen to riser			--	
Protective casing				6"X5' Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	27.9'
Protective casing length	5'
Screen length	6'
Bottom of screen to end cap	0.3'
Top of screen to first joint	0.3'
Total length of casing	33.9
Screen slot size	0.010
# of openings in screen	--
Diameter of borehole (in)	6
ID of riser pipe (in)	2



Elevations — .01 ft.

533	52	MSL Top of Protective Cast
532	95	MSL Top of Riser Pipe
	+2.3	ft. Casing Stickup
530	65	MSL Ground Surface
	-2.8	ft. Top of annular sealant
	21.5	ft. Top of Seal
	2.1	ft. Total Seal Interval
	-23.6	ft. Top of Sand
	-25.6	ft. Top of Screen
	6.0	ft. Total Screen Interval
	-31.6	ft. Bottom of Screen
	-36.0	ft. Bottom of Borehole

Completed by: Surveyed by: Ill. registration #

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G-105 / G120

Site Name: CWLP - Ash Disposal Facility Grid Coordinate. Northing: 1641.61 Easting: 610.10

Drilling Contractor: Professional Service Industries, Inc. Date Drilled Start: January 9, 1990

Driller: B. Williamson Geologist: -- Date Completed: January 16, 19 (Re-Drilled w/4¼" I.D.)

Drilling Method: Hollow Stem Auger - 3¼" I.D & 4¼" I.D Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite Grout

Amount of cement: # of bags 6 lbs. per bag 94

Amount of bentonite: # of bags 0.2 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 0.5 lbs. per bag 50

Type of Sand Pack: Silica Sand (Marco-Sandblasting)

Source of Sand: Henry Nelch & Son Co., Springfield, IL

Amount of Sand: # of bags 1.8 lbs. per bag 100

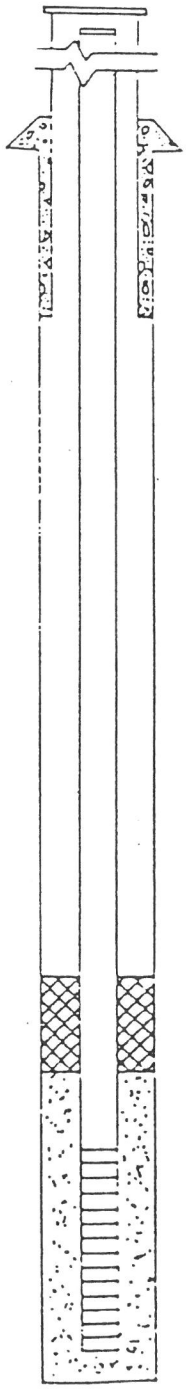
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint			--	
Riser pipe above w.t.			2"	
Riser pipe below w.t.			2"	
Screen			2"	
Coupling joint screen to riser			--	
Protective casing				6"X5' Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	43.9
Protective casing length	Flush Mount
Screen length	6'
Bottom of screen to end cap	0.3'
Top of screen to first joint	0.3'
Total length of casing	49.9
Screen slot size	0.010
# of openings in screen	--
Diameter of borehole (in)	8
ID of riser pipe (in)	2



Elevations — .01 ft.

553	49	MSL Top of Protective Cas
553	25	MSL Top of Riser Pipe
	+0.1	ft. Casing Stickup
553	49	MSL Ground Surface
	-2.9	ft. Top of annular sealant
	-40.5	ft. Top of Seal
	2.0	ft. Total Seal Interval
	-42.5	ft. Top of Sand
	-43.8	ft. Top of Screen
	6.0	ft. Total Screen Interval
	-49.8	ft. Bottom of Screen
	-53.0	ft. Bottom of Borehole

Completed by: _____ Surveyed by: _____ Ill. registration # _____

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G-106

Site Name: CWLP Ash Disposal Facility Grid Coordinate: Northing 1760.44 Easting 983.64

Drilling Contractor: Professional Service Industries, Inc. Date Drilled Start: February 23, 1990

Driller: B. Williamson Geologist: -- Date Completed: February 23, 199

Drilling Method: Hollow stem auger- 3¼" I.D. Drilling Fluids (type): none

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite grout

Amount of cement: # of bags 4 lbs. per bag 94

Amount of bentonite: # of bags 0.1 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Pellet

Amount of bentonite: # of Bags 0.8 lbs. per bag 50

Type of Sand Pack: Silica Sand (Marco - Sandblasting)

Source of Sand: Henry Nelch & Son Co. Springfield, IL

Amount of Sand: # of bags 2.0 lbs. per bag 100.0

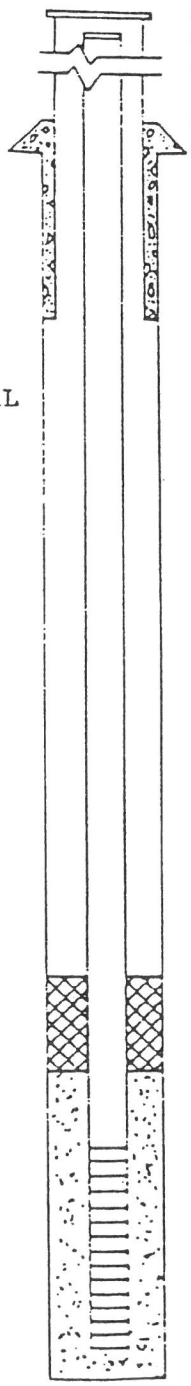
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint			--	
Riser pipe above w.t.			3"	
Riser pipe below w.t.			3"	
Screen			3"	
Coupling joint screen to riser			--	
Protective casing				6"x5'

Measurements

to .01 ft. (where applicable)

Riser pipe length	31.3'
Protective casing length	5'
Screen length	8'
Bottom of screen to end cap	0.3'
Top of screen to first joint	0.3'
Total length of casing	39.3'
Screen slot size	0.010
# of openings in screen	--
Diameter of borehole (in)	6
ID of riser pipe (in)	3



Elevations — .01 ft.

525	49	MSL Top of Protective Casing
525	37	MSL Top of Riser Pipe
	1.2	ft. Casing Stickup
524	17	MSL Ground Surface
	-3.0	ft. Top of annular sealant
	-16.5	ft. Top of Seal
	5.6	ft. Total Seal Interval
	-22.1	ft. Top of Sand
	-27.0	ft. Top of Screen
	8.0	ft. Total Screen Interval
	-35.0	ft. Bottom of Screen
	-35.0	ft. Bottom of Borehole

Completed by: Surveyed by: Ill. registration #

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G-110

Site Name: EGDS Landfill/ City Water, Light and Power Grid Coordinate: Northing 3728.6 Easting 2315.7

Drilling Contractor: AE Exploration Corporation Date Drilled Start: 07/12/93

Driller: M. Moore Geologist: B. Hunsberger Date Completed: 07/12/93

Drilling Method: Hollow Stem Auger Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite

Amount of cement: # of bags 8 lbs. per bag 94

Amount of bentonite: # of bags 1 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Grout

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: #10-20 Silica Sand

Source of Sand: Best Environmental - Chardon, OH

Amount of Sand: # of bags 10 lbs. per bag 50

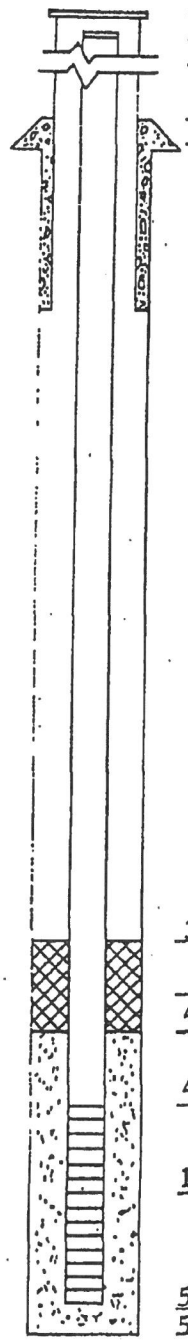
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	Flush			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	Flush			
Protective casing				Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	47.11'
Protective casing length	5.0'
Screen length	10.0'
Bottom of screen to end cap	0.21
Top of screen to first joint	0.065
Total length of casing	57.11'
Screen slot size	.01"
# of openings in screen	---
Diameter of borehole (in)	8.0"
Diameter riser pipe (in)	2.0"



Elevations — .01 ft.

557	20	MSL Top of Protective Casing
557	11	MSL Top of Riser Pipe
2	61	ft. Casing Stickup
554	50	MSL Ground Surface
3	0	ft. Top of annular sealant
37	0	ft. Top of Seal
5	0	ft. Total Seal Interval
42	0	ft. Top of Sand
44	5	ft. Top of Screen
10	0	ft. Total Screen Interval
54	5	ft. Bottom of Screen
59	5	ft. Bottom of Borehole

Completed by: Brad Hunsberger Surveyed by: City Water, Light and Power Rich Davis IL registration #: 2098

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G-111

Site Name: City Water, Light & Power Grid Coordinate: Northing 4445.0 Easting 2249.0

Drilling Contractor: AE Exploration Corporation Date Drilled Start: July 20, 1993

Driller: A. Weisenhofer Geologist: R. Hasenyager Date Completed: July 21, 1993

Drilling Method: Hollow Stem Auger Drilling Fluids (type): N/A

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite

Amount of cement: # of bags 8 lbs. per bag 94

Amount of bentonite: # of bags 1/2 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Bentonite Grout

Amount of bentonite: # of Bags 1/2 lbs. per bag 50

Type of Sand Pack: Quartz sand (1020)

Source of Sand: Best Sand

Amount of Sand: # of bags 4 1/2 lbs. per bag 50

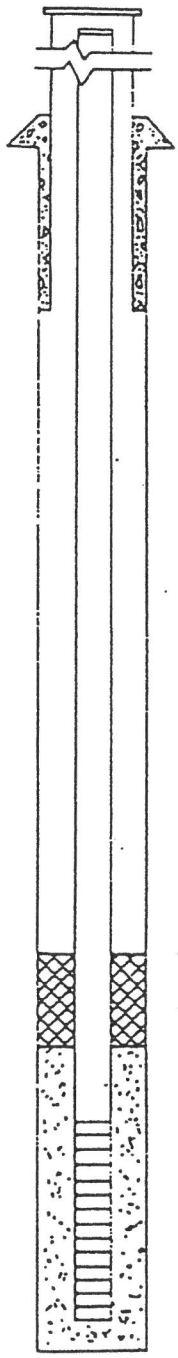
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	304		Sch 40	
Riser pipe above w.t.			Sch 40	
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	304			
Protective casing				Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	56.55 feet
Protective casing length	5.0 feet
Screen length	4.72 feet
Bottom of screen to end cap	0.27 feet
Top of screen to first joint	0.21 feet
Total length of casing	61.75 feet
Screen slot size	0.01 inches
% of openings in screen	
Diameter of borehole (in)	8.0 inches
ID of riser pipe (in)	2.0 inches



Elevations — .01 ft.

555	.83	MSL Top of Protective Casing
555	.63	MSL Top of Riser Pipe
2	.03	ft. Casing Stickup
553	.6	MSL Ground Surface
3	.60	ft. Top of annular sealant
48	.00	ft. Top of Seal
5	.08	ft. Total Seal Interval
53	.08	ft. Top of Sand
54	.61	ft. Top of Screen
4	.72	ft. Total Screen Interval
59	.33	ft. Bottom of Screen
59	.60	ft. Bottom of Borehole

Completed by: Rhonald Haseyanger Surveyed by: CWLP Rich Davis Ill. registration # 2098

Illinois Environmental Protection Agency — **Well Completion Report**

Site Number: 1678250020 County: Sangamon

Site Name: City Water Light & Power Landfill Well #: R111

State Plane Coordinate: X E2456708.31 Y N1129507.08 (or) Latitude: ° ' " Longitude: ° ' " Borehole #: R111

Surveyed by: IL Registration #:

Drilling Contractor: SKS Engineers, Inc. Driller: D. Baldwin

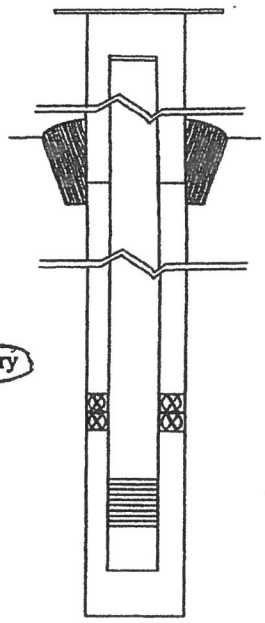
Consulting Firm: Geologist: N/A

Drilling Method: Hollow Stem Auger Drilling Fluid (Type): None

Logged By: D. Baldwin (SKS Engineers, Inc.) Date Started: 5/26/09 Date Finished: 5/29/09

Report Form Completed By: D. Baldwin Date: 7/2/09

ANNULAR SPACE DETAILS



Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite

Installation Method: Slurry

Setting Time:

Type of Bentonite Seal - - Granular, Pellet, (Slurry) (Choose One)

Installation Method: Tremie

Setting Time:

Type of Sand Pack: Quartz Sand

Grain Size: 1020 (Sieve Size)

Installation Method: Free Drop

Type of Backfill Material: (if applicable)

Installation Method:

	Elevations (MSL)*	Depths (BGS)	(.01ft.)
	552.69	0.0	Top of Protective Casing
	552.39	.30	Top of Riser Pipe
	552.69	0.0	Ground Surface
	549.69	3.0	Top of Annular Sealant
			Static Water Level (After Completion)
	549.69	3.0	Top of Seal
	502.59	50.1	Top of Sand Pack
	501.49	51.2	Top of Screen
	495.89	56.8	Bottom of Screen
	495.59	57.1	Bottom of Well
	495.59	57.1	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or (Other)
Riser Pipe Above W.T.	SS304, SS316, PTFE, (PVC) or Other
Riser Pipe Below W.T.	(SS304) SS316, PTFE, PVC, or Other
Screen	(SS304) SS316, PTFE, PVC, or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	Flush Mount
Riser Pipe Length (feet)	51.2
Bottom of Screen to End Cap (feet)	.31
Screen Length (1st slot to last slot) (feet)	4.72
Total Length of Casing (feet)	56.8
Screen Slot Size **	.010

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G-112

Site Name: City Water, Light & Power Grid Coordinate: Northing 4450.9 Easting 2560.6

Drilling Contractor: AE Exploration Corporation Date Drilled Start: July 21, 1993

Driller: A. Weisenhofer Geologist: R. Hasenyager Date Completed: July 23, 1993

Drilling Method: Hollow Stem Auger Drilling Fluids (type): N/A

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Cement/Bentonite

Amount of cement: # of bags 8 lbs. per bag 94

Amount of bentonite: # of bags 1/2 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Bentonite Grout

Amount of bentonite: # of Bags 1/2 lbs. per bag 50

Type of Sand Pack: Quartz Sand (1020)

Source of Sand: Best Sand

Amount of Sand: # of bags 6 lbs. per bag 50

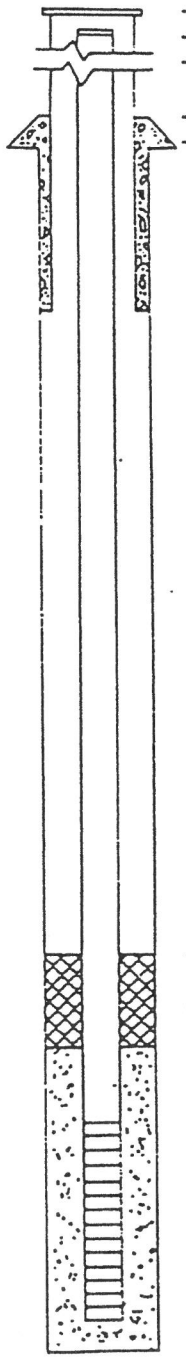
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	304		Sch 40	
Riser pipe above w.t.			Sch 40	
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	304			
Protective casing				Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	54.81 feet
Protective casing length	5.0 feet
Screen length	4.73 feet
Bottom of screen to end cap	0.29 feet
Top of screen to first joint	0.21 feet
Total length of casing	60.04 feet
Screen slot size	0.01 inches
# of openings in screen	
Diameter of borehole (in)	8.0 inches
ID of riser pipe (in)	2.0 inches



Elevations — .01 ft.

555	.06	MSL Top of Protective Casing
554	.88	MSL Top of Riser Pipe
2	.18	ft. Casing Stickup
552	.7	MSL Ground Surface
4	.10	ft. Top of annular sealant
46	.10	ft. Top of Seal
5	.07	ft. Total Seal Interval
51	.17	ft. Top of Sand
52	.78	ft. Top of Screen
4	.73	ft. Total Screen Interval
57	.51	ft. Bottom of Screen
57	.80	ft. Bottom of Borehole

Completed by: Rhonald Hasenyager Surveyed by: CWLP-Rich Davis Ill. registration # 2098

Illinois Environmental Protection Agency — **Well Completion Report**

Site Number: 1678250020 County: Sangamon

Site Name: FGDS Development Landfill Well #: AW-1

State Plane Coordinate: X ____ Y ____ (or) Latitude: ___ ___ ___ Longitude: ___ ___ ___ Borehole #: AW-1

N 4512.2 E 2030.49

Surveyed by: David Mihelsic IL Registration #: 3762

Drilling Contractor: Reynolds Drilling Corp. Driller: Andrew Rachford

Consulting Firm: Rapps Engineering & Applied Science Geologist: Ken Miller

Drilling Method: HSA Drilling Fluid (Type): NA

Logged By: Ken Miller Date Started: 12/29/08 Date Finished: 12/30/08

Report Form Completed By: Ken Miller Date: 5/18/09

ANNULAR SPACE DETAILS

Type of Surface Seal: Cement

Type of Annular Sealant: Bentonite Grout

Installation Method: Tremie

Setting Time: >24 hrs

Type of Bentonite Seal - - Granular, (Pellet), Slurry (Choose One)

Installation Method: Poured

Setting Time: 20 hrs

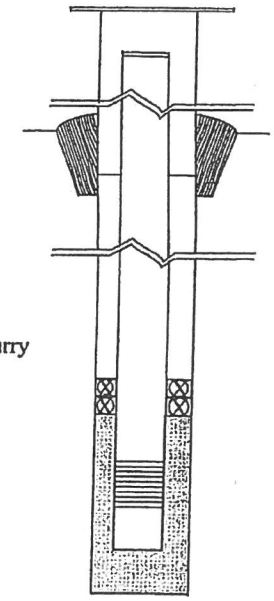
Type of Sand Pack: Quartz Sand

Grain Size: 50 (Sieve Size)

Installation Method: Poured

Type of Backfill Material: ____ (if applicable)

Installation Method: ____



Elevations (MSL)*	Depths (BGS)	(.01ft.)
____	____	Top of Protective Casing
555.60	-2.75	Top of Riser Pipe
552.85	0	Ground Surface
549.85	3.00	Top of Annular Sealant
____	____	Static Water Level (After Completion)
513.90	38.95	Top of Seal
510.90	41.95	Top of Sand Pack
508.90	43.95	Top of Screen
498.90	53.95	Bottom of Screen
498.51	54.34	Bottom of Well
498.51	54.34	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL
(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or (Other)
Riser Pipe Above W.T.	SS304, SS316, PTFE, (PVC), or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, (PVC), or Other
Screen	SS304, SS316, PTFE, (PVC), or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8.25
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	5
Riser Pipe Length (feet)	46.70
Bottom of Screen to End Cap (feet)	0.4
Screen Length (1st slot to last slot) (feet)	10
Total Length of Casing (feet)	57.09
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency — **Well Completion Report**

Site Number: 1678250020 County: Sangamon

Site Name: FGDS Development Landfill Well #: AW-2

State Plane Coordinate: X ____ Y ____ (or) Latitude: ____ ' " Longitude: ____ ' " Borehole #: AW-2

N 5480.91 E 2361.46

Surveyed by: David Mihelsic IL Registration #: 3762

Drilling Contractor: Reynolds Drilling Corp. Driller: Kerry Doetzel

Consulting Firm: Rapps Engineering & Applied Science Geologist: Ken Miller

Drilling Method: HSA Drilling Fluid (Type): NA

Logged By: Ken Miller Date Started: 1/2/09 Date Finished: 1/2/09

Report Form Completed By: Ken Miller Date: 5/18/09

ANNULAR SPACE DETAILS

Type of Surface Seal: Cement

Type of Annular Sealant: Bentonite Chips

Installation Method: Poured

Setting Time: >24 hrs

Type of Bentonite Seal - - Granular, (Pellet), Slurry (Choose One)

Installation Method: Poured

Setting Time: >24 hrs

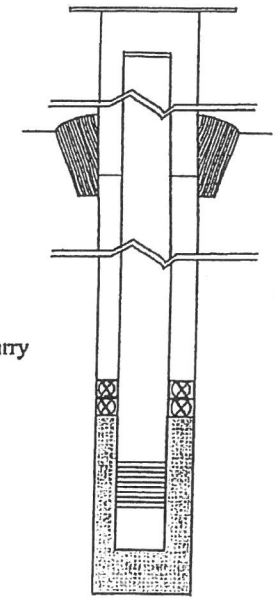
Type of Sand Pack: Quartz Sand

Grain Size: 50 (Sieve Size)

Installation Method: Poured

Type of Backfill Material: ____ (If applicable)

Installation Method: ____



Elevations (MSL)*	Depths (BGS)	(.01ft.)
____	____	Top of Protective Casing
529.98	-3.30	Top of Riser Pipe
526.68	0	Ground Surface
523.68	3.00	Top of Annular Sealant
____	____	Static Water Level (After Completion)
509.86	16.82	Top of Seal
506.86	19.82	Top of Sand Pack
504.86	21.82	Top of Screen
494.86	31.82	Bottom of Screen
494.46	32.22	Bottom of Well
494.46	32.22	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or (Other)
Riser Pipe Above W.T.	SS304, SS316, PTFE, (PVC), or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, (PVC), or Other
Screen	SS304, SS316, PTFE, (PVC), or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8.25
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	5
Riser Pipe Length (feet)	25.12
Bottom of Screen to End Cap (feet)	0.4
Screen Length (1st slot to last slot) (feet)	10
Total Length of Casing (feet)	35.52
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency — Well Completion Report

Site Number: 1678250020 County: Sangamon

Site Name: FGDS Development Landfill Well #: AW-3

State Plane Coordinate: X ____ Y ____ (or) Latitude: ____ ° ____ ' ____ " Longitude: ____ ° ____ ' ____ " Borehole #: AW-3

Surveyed by: David Mihelsic IL Registration #: 3762

Drilling Contractor: Reynolds Drilling Corp. Driller: Andrew Rachford

Consulting Firm: Rapps Engineering & Applied Science Geologist: Ken Miller

Drilling Method: HSA Drilling Fluid (Type): NA

Logged By: Ken Miller Date Started: 12/30/08 Date Finished: 12/31/08

Report Form Completed By: Ken Miller Date: 5/18/09

ANNULAR SPACE DETAILS

Type of Surface Seal: Cement

Type of Annular Sealant: Bentonite Chips

Installation Method: Poured

Setting Time: >24 hrs

Type of Bentonite Seal - - Granular, (Pellet), Slurry (Choose One)

Installation Method: Poured

Setting Time: 16 hrs

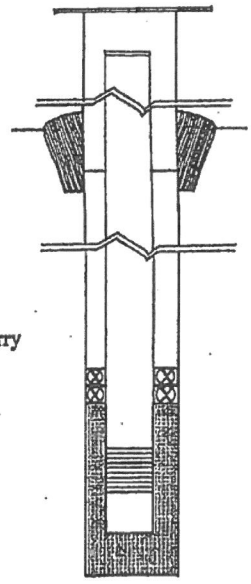
Type of Sand Pack: Quartz Sand

Grain Size: 50 (Sieve Size)

Installation Method: Poured

Type of Backfill Material: _____ (If applicable)

Installation Method: _____



Elevations (MSL)*	Depths (BGS)	(.01ft.)
____	____	Top of Protective Casing
540.33	-2.58	Top of Riser Pipe
537.75	0	Ground Surface
534.75	3.00	Top of Annular Sealant
____	____	Static Water Level (After Completion)
511.32	26.43	Top of Seal
508.32	29.43	Top of Sand Pack
506.32	31.43	Top of Screen
496.32	41.43	Bottom of Screen
495.92	41.83	Bottom of Well
495.92	41.83	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or (Other)
Riser Pipe Above W.T.	SS304, SS316, PTFE, (PVC), or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, (PVC), or Other
Screen	SS304, SS316, PTFE, (PVC), or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8.25
ID of Riser Pipe (inches)	2
Protective Casing Length (feet)	5
Riser Pipe Length (feet)	34.01
Bottom of Screen to End Cap (feet)	0.4
Screen Length (1st slot to last slot) (feet)	10
Total Length of Casing (feet)	44.41
Screen Slot Size **	0.010

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G121

Site Name: City Water, Light & Power – FGDS Development Borehole #: B96-1

Coordinates: X 2,481.5 Y 5,615.9 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed by: Richard Davis, City Water, Light & Power IL Registration #: LS-2098

Drilling Contractor: AE Exploration Corp. Consulting Firm: Andrews Environmental Engineering, Inc.

Driller: A. Wiesenhofer Geologist: R. Hasenyager

Drilling Method: Hollow stem auger Logged by: R. Hasenyager

Drilling Fluids (type): n/a Report Form Completed by: R. Hasenyager

Date Well Started: 05/16/96 Date Well Finished: 05/16/96 Date Form Completed: 07/12/96

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: High-solids bentonite

Installation method: Tremi

Setting time: 24+ hours

Type of bentonite seal – *Ganular*, Pellet, Slurry (circle one)

Installation method: Free drop

Setting time: 70 minutes

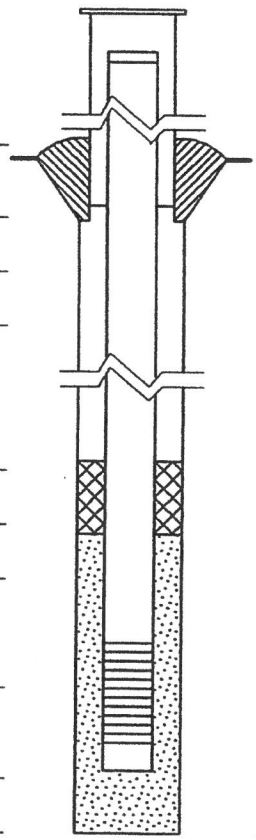
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
556.04	-2.24	Top of Protective Casing
555.67	-1.87	Top of Riser Pipe
553.80	.00	Ground Surface
552.30	1.50	Top of Annular Sealant
528.55	25.25	Static Water Level Measured on 5/24/96 (after completion)
506.60	47.20	Top of Seal
504.00	49.80	Top of Sandpack
501.93	51.87	Top of Screen
497.96	55.84	Bottom of Screen
496.86	56.94	Bottom of Well
497.10	56.70	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (–) values above GS

NOTES:

CASING MEASUREMENTS

Diameter of Borehole (in)	8.0
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	53.74
Bottom of Screen to End Cap (ft)	1.10
Screen Length [1st slot to last slot] (ft)	3.97
Total Length of Casing (ft)	58.81
Screen Slot Size‡	#10 (0.01")

‡Hand-slotted well screens are unacceptable.

WELL CONSTRUCTION MATERIALS (circle one)

Protective Casing	SS304, SS316, PTFE, PVC or *Other: Steel*
Riser Pipe Above W.T.	SS304, SS316, PTFE, *PVC* or Other:
Riser Pipe Below W.T.	SS304, SS316, PTFE, *PVC* or Other:
Screen	SS304, SS316, PTFE, *PVC* or Other:

(AE950315)

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G122

Site Name: City Water, Light & Power – FGDS Development Borehole #: B96-2

Coordinates: X 2,305.1 Y 5,613.2 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Richard Davis, City Water, Light & Power IL Registration #: LS-2098

Drilling Contractor: AE Exploration Corp. Consulting Firm: Andrews Environmental Engineering, Inc.

Driller: A. Wiesenhofer Geologist: R. Hasenyager

Drilling Method: Hollow stem auger Logged by: R. Hasenyager

Drilling Fluids (type): n/a Report Form Completed by: R. Hasenyager

Date Well Started: 05/20/96 Date Well Finished: 05/20/96 Date Form Completed: 07/12/96

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: High-solids bentonite

Installation method: Tremi

Setting time: 24+ hours

Type of bentonite seal – *Ganular*, Pellet, Slurry (circle one)

Installation method: Free drop

Setting time: 45 minutes

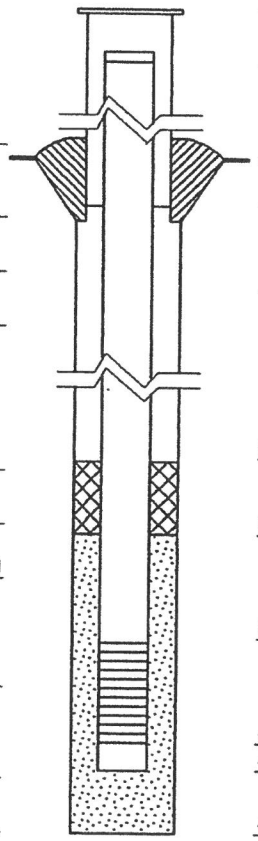
Type of sand pack: Quartz sand/formation sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
554.87	-2.17	Top of Protective Casing
554.44	-1.74	Top of Riser Pipe
552.70	.00	Ground Surface
551.70	1.00	Top of Annular Sealant
526.51	26.19	Static Water Level Measured on 5/24/96 (after completion)
507.20	45.50	Top of Seal
504.90	47.80	Top of Sandpack
501.07	51.63	Top of Screen
497.10	55.60	Bottom of Screen
496.00	56.70	Bottom of Well
494.00	58.70	Bottom of Borehole

NOTES:

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS (circle one)

Protective Casing	SS304, SS316, PTFE, PVC or *Other: Steel*
Riser Pipe Above W.T.	SS304, SS316, PTFE, *PVC* or Other:
Riser Pipe Below W.T.	SS304, SS316, PTFE, *PVC* or Other:
Screen	SS304, SS316, PTFE, *PVC* or Other:

(AE950315)

CASING MEASUREMENTS

Diameter of Borehole (in)	8.0
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	53.37
Bottom of Screen to End Cap (ft)	1.10
Screen Length [1st slot to last slot] (ft)	3.97
Total Length of Casing (ft)	58.44
Screen Slot Size‡	#10 (0.01")

‡Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 1678250020 County: Sangamon Well #: G123

Site Name: City Water, Light & Power – FGDS Development Borehole #: B96-3

Coordinates: X 2,481.5 Y 5,615.9 (or) Latitude: ° ' " Longitude: ° ' "

Surveyed by: Richard Davis, City Water, Light & Power IL Registration #: LS-2098

Drilling Contractor: AE Exploration Corp. Consulting Firm: Andrews Environmental Engineering, Inc.

Driller: A. Wiesenhofer Geologist: Rhonald Hasenyager

Drilling Method: Hollow stem auger Logged by: Rhonald Hasenyager

Drilling Fluids (type): n/a Report Form Completed by: Rhonald Hasenyager

Date Well Started: 05/16/96 Date Well Finished: 05/16/96 Date Form Completed: 07/12/96

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: High-solids bentonite

Installation method: Tremi

Setting time: 24+ hours

Type of bentonite seal – *Ganular*, Pellet, Slurry (circle one)

Installation method: Free drop

Setting time: 30 minutes

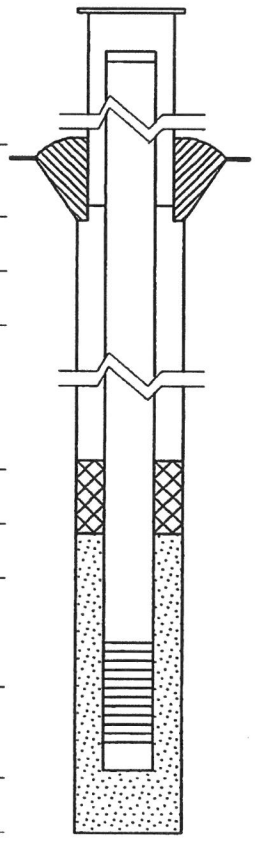
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: Bentonite chips (if applicable)

Installation method: Free drop



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
554.30	-2.10	Top of Protective Casing
553.90	-1.70	Top of Riser Pipe
552.20	.00	Ground Surface
550.70	1.50	Top of Annular Sealant
526.35	25.85	Static Water Level Measured on 5/24/96 (after completion)
515.40	36.80	Top of Seal
513.70	38.50	Top of Sandpack
511.77	40.43	Top of Screen
507.81	44.39	Bottom of Screen
506.70	45.50	Bottom of Well
495.20	57.00	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

NOTES:

WELL CONSTRUCTION MATERIALS (circle one)

Protective Casing	SS304, SS316, PTFE, PVC or *Other: Steel*
Riser Pipe Above W.T.	SS304, SS316, PTFE, *PVC* or Other:
Riser Pipe Below W.T.	SS304, SS316, PTFE, *PVC* or Other:
Screen	SS304, SS316, PTFE, *PVC* or Other:

(AE950315)

CASING MEASUREMENTS

Diameter of Borehole (in)	8.0
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	42.13
Bottom of Screen to End Cap (ft)	1.11
Screen Length [1st slot to last slot] (ft)	3.96
Total Length of Casing (ft)	47.20
Screen Slot Size*	#10 (0.01")

*Hand-slotted well screens are unacceptable.

APPENDIX B3:
IMPOUNDMENT MONITORING WELL CONSTRUCTION REPORTS

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-1R

Site Name: City Water, Light, & Power Borehole #: AP-1R

Coordinates: X 831.70 Y 5132.40 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: _____ IL Registration #: _____

Drilling Contractor: Terra Drill, Inc. Consulting Firm: Andrews Engineering, Inc.

Driller: J. Brown Geologist: M. Hewitt

Drilling Method: 4¼" HSA w/ 5' Continuous Barrel Logged by: M. Hewitt

Drilling Fluids (type): _____ Report Form Completed by: J. Rhoades

Date Well Started: 1/30/2012 Date Well Finished: 1/30/2012 Date Form Completed: 2/27/2012

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: 2 Hours

Type of bentonite seal: Bentonite Chips

Installation method: Free drop

Setting time: 2 Hours

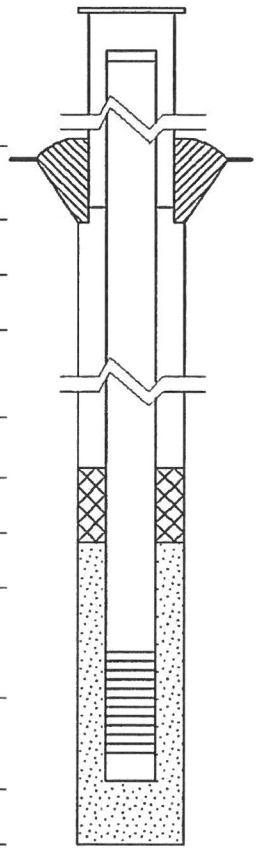
Type of sand pack: Unimin Sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: _____ (if applicable)

Installation method: _____



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
535.60	-2.50	Top of Protective Casing
.00	533.10	Top of Riser Pipe
533.10	.00	Ground Surface
530.10	3.00	Top of Annular Sealant
n/a	n/a	Static Water Level Measured on (after completion)
517.00	16.10	Top of Seal
513.51	19.59	Top of Sandpack
-21.59	554.69	Top of Screen
-30.97	564.07	Bottom of Screen
-31.50	564.60	Bottom of Well
500.60	32.50	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	SS304, SS316, PTFE, PVC or *Other:Steel*
Riser Pipe Above W.T.	SS304, SS316, PTFE, *PVC*, or Other:
Riser Pipe Below W.T.	SS304, SS316, PTFE, *PVC*, or Other:
Screen	SS304, SS316, PTFE, *PVC*, or Other:

CASING MEASUREMENTS

Diameter of Borehole (in)	8.0
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	21.59
Bottom of Screen to End Cap (ft)	.53
Screen Length [1st slot to last slot] (ft)	9.38
Total Length of Casing (ft)	31.50
Screen Slot Size*	0.01"

*Hand-slotted well screens are unacceptable.

(AE950315)

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-2R

Site Name: City Water, Light, & Power Borehole #: AP-2R

Coordinates: X 725.50 Y 4184.70 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: _____ IL Registration #: _____

Drilling Contractor: Terra Drill, Inc. Consulting Firm: Andrews Engineering, Inc.

Driller: J. Brown Geologist: M. Hewitt

Drilling Method: 4¼" HSA w/ 5' Continuous Barrel Logged by: M. Hewitt

Drilling Fluids (type): _____ Report Form Completed by: J. Rhoades

Date Well Started: 1/31/2012 Date Well Finished: 1/31/2012 Date Form Completed: 2/27/2012

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: 2 Hours

Type of bentonite seal: Bentonite Chips

Installation method: Free drop

Setting time: 2 Hours

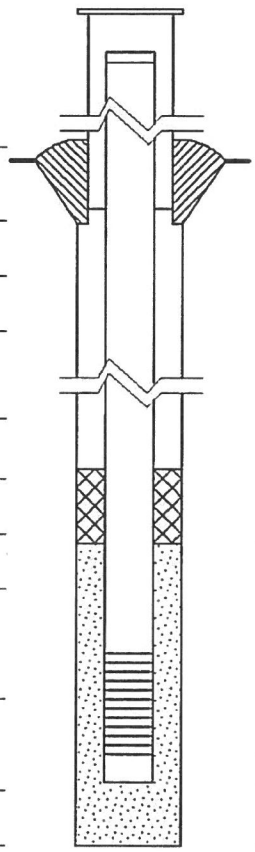
Type of sand pack: Unimin Sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: _____ (if applicable)

Installation method: _____



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
535.60	-2.50	Top of Protective Casing
536.1	533.10	Top of Riser Pipe
533.6	.00	Ground Surface
530.10	3.00	Top of Annular Sealant
n/a	n/a	Static Water Level Measured on (after completion)
528.96	4.14	Top of Seal
526.96	6.14	Top of Sandpack
-8.14	541.24	Top of Screen
-17.47	550.57	Bottom of Screen
-18.00	551.10	Bottom of Well
514.60	18.50	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	SS304, SS316, PTFE, PVC or *Other:Steel*
Riser Pipe Above W.T.	SS304, SS316, PTFE, *PVC*, or Other:
Riser Pipe Below W.T.	SS304, SS316, PTFE, *PVC*, or Other:
Screen	SS304, SS316, PTFE, *PVC*, or Other:

CASING MEASUREMENTS

Diameter of Borehole (in)	8.0
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	8.14
Bottom of Screen to End Cap (ft)	.53
Screen Length [1st slot to last slot] (ft)	9.33
Total Length of Casing (ft)	18.00
Screen Slot Size*	0.01"

*Hand-slotted well screens are unacceptable.

(AE950315)

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-2A

Site Name: Springfield City Water, Light, and Power Borehole #: _____

Coordinates: X 735.9 Y 4185.2 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Springfield City Water, Light, and Power IL Registration #: _____

Drilling Contractor: Bulldog Drilling, Inc. Consulting Firm: Andrews Engineering, Inc.

Driller: J. Edwards Geologist: C. Myrvold

Drilling Method: AMS Powerprobe w/ 4.25" HSA and 5' MC Logged by: C. Myrvold

Drilling Fluids (type): na Report Form Completed by: C. Myrvold

Date Well Started: 2/16/2016 Date Well Finished: 2/16/2016 Date Form Completed: 3/06/2016

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: N/A

Installation method: _____

Setting time: _____

Type of bentonite seal: Bentonite chips

Installation method: Free drop

Setting time: 24+ hours

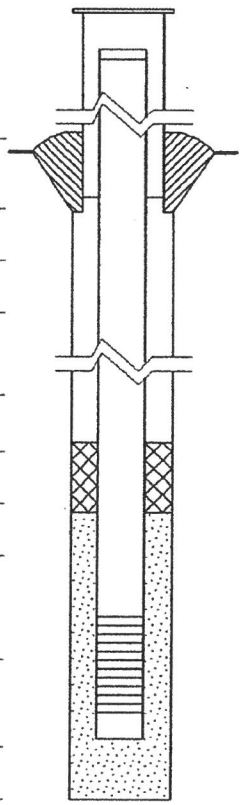
Type of sand pack: Silica sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: N/A (if applicable)

Installation method: _____



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
536.50	-2.90	Top of Protective Casing
536.10	-2.50	Top of Riser Pipe
533.60	0.00	Ground Surface
_____	N/A	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
530.60	3.00	Top of Seal
527.19	6.41	Top of Sandpack
525.19	8.41	Top of Screen
515.54	18.06	Bottom of Screen
515.10	18.50	Bottom of Well
514.60	19.00	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

Notes:

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	10.91
Bottom of Screen to End Cap (ft)	0.44
Screen Length [1st slot to last slot] (ft)	9.65
Total Length of Casing (ft)	21.00
Screen Slot Size‡	#10 (0.01)

‡Hand-slotted well screens are unacceptable.

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-5

Site Name: City Water, Light, & Power Borehole #: AP-5

Coordinates: X 3203.10 Y 3164.10 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: _____ IL Registration #: _____

Drilling Contractor: Terra Drill, Inc. Consulting Firm: Andrews Engineering, Inc.

Driller: J. Brown Geologist: M. Hewitt

Drilling Method: 4¼" HSA w/ 5' CB & 2' SS Logged by: M. Hewitt

Drilling Fluids (type): _____ Report Form Completed by: J. Rhoades

Date Well Started: 2/1/2012 Date Well Finished: 2/1/2012 Date Form Completed: 2/27/2012

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: 2 Hours

Type of bentonite seal: Bentonite Chips

Installation method: Free drop

Setting time: 2 Hours

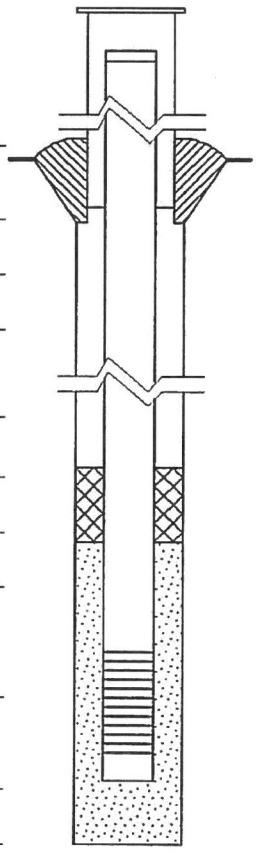
Type of sand pack: Unimin Sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: Bentonite Chips (if applicable)

Installation method: Free drop



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
584.30	-2.70	Top of Protective Casing
583.90	-2.30	Top of Riser Pipe
581.60	.00	Ground Surface
578.60	3.00	Top of Annular Sealant
n/a	n/a	Static Water Level Measured on (after completion)
565.48	16.12	Top of Seal
563.48	18.12	Top of Sandpack
563.78	17.82	Top of Screen
554.44	27.16	Bottom of Screen
553.90	27.70	Bottom of Well
551.10	30.50	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

NOTES:

•Borehole AP-5 sampled to 49.0 feet below ground surface (BGS) and backfilled with bentonite chips to 30.5 feet BGS

WELL CONSTRUCTION MATERIALS

Protective Casing	SS304, SS316, PTFE, PVC or *Other:Steel*
Riser Pipe Above W.T.	SS304, SS316, PTFE, *PVC*, or Other:
Riser Pipe Below W.T.	SS304, SS316, PTFE, *PVC*, or Other:
Screen	SS304, SS316, PTFE, *PVC*, or Other:

CASING MEASUREMENTS

Diameter of Borehole (in)	8.0
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	20.12
Bottom of Screen to End Cap (ft)	.54
Screen Length [1st slot to last slot] (ft)	9.34
Total Length of Casing (ft)	30.00
Screen Slot Size*	0.01"

*Hand-slotted well screens are unacceptable.

(AE950315)

Illinois Environmental Protection Agency — **Well Completion Report**

Site Number: _____ County: Sangamon

Site Name: City Water, Light & Power (CWLP) Ash Ponds — Well #: TW3E

State Plane Coordinate: X _____ Y _____ (or) Latitude: ____ ____ ____ Longitude: ____ ____ ____ — Borehole #: TW3E

Surveyed by: _____ IL Registration #: _____

Drilling Contractor: Bulldog Drilling, Inc. Driller: J. Gates

Consulting Firm: Andrews Engineering, Inc. Geologist: D. Ghosh

Drilling Method: CME 55 w/ 4.25" HSA Drilling Fluid (Type): none

Logged By: D. Ghosh Date Started: 6/27/17 Date Finished: 6/27/17

Report Form Completed By: M. Hewitt Date: 9/18/17

ANNULAR SPACE DETAILS

Type of Surface Seal: Bentonite Grout

Type of Annular Sealant: Bentonite Grout

Installation Method: Tremi

Setting Time: 24 hours

Type of Bentonite Seal - - Granular, Pellet, Slurry (Choose One)

Installation Method: Free drop

Setting Time: N/A

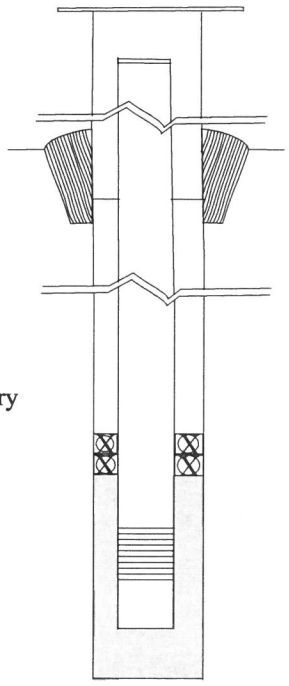
Type of Sand Pack: Silica Sand

Grain Size: 10/20 (Sieve Size)

Installation Method: Free Drop

Type of Backfill Material: None (if applicable)

Installation Method: N/A



	Elevations (MSL)*	Depths (BGS)	(.01ft.)
			Top of Protective Casing
		-2.17	Top of Riser Pipe
		0	Ground Surface
		0	Top of Annular Sealant
		9.14	Static Water Level (After Completion)
		28.0	Top of Seal
		28.2	Top of Sand Pack
		30.22	Top of Screen
		39.82	Bottom of Screen
		40.5	Bottom of Well
		40.5	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, PVC, or Other
Screen	SS304, SS316, PTFE, PVC, or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8.25
ID of Riser Pipe (inches)	2.049
Protective Casing Length (feet)	
Riser Pipe Length (feet)	32.39
Bottom of Screen to End Cap (feet)	0.68
Screen Length (1st slot to last slot) (feet)	9.6
Total Length of Casing (feet)	42.67
Screen Slot Size **	0.01

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency — **Well Completion Report**

Site Number: _____ County: Sangamon

Site Name: City Water, Light & Power (CWLP) Ash Ponds — Well #: TW3N / RW-3

State Plane Coordinate: X _____ Y _____ (or) Latitude: ____ ____ ____ Longitude: ____ ____ ____ — Borehole #: TW3N

Surveyed by: _____ — IL Registration #: _____

Drilling Contractor: Bulldog Drilling, Inc. — Driller: J. Gates

Consulting Firm: Andrews Engineering, Inc. — Geologist: D. Ghosh

Drilling Method: CME 55 w/ 4.25" HSA — Drilling Fluid (Type): none

Logged By: D. Ghosh — Date Started: 6/26/17 Date Finished: 6/27/17

Report Form Completed By: M. Hewitt — Date: 9/18/17

ANNULAR SPACE DETAILS

Type of Surface Seal: Bentonite Grout

Type of Annular Sealant: Bentonite Grout

Installation Method: Tremi

Setting Time: 24 hours

Type of Bentonite Seal - - Granular, Pellet, Slurry (Choose One)

Installation Method: Free drop

Setting Time: N/A

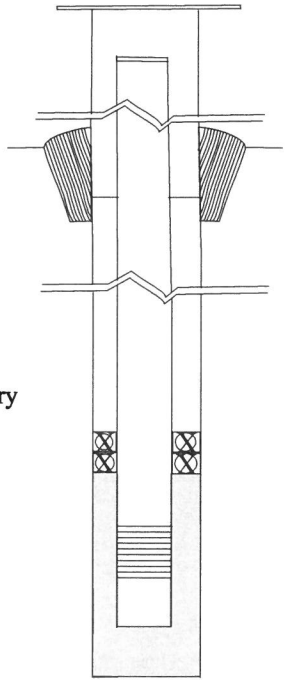
Type of Sand Pack: Silica Sand

Grain Size: 10/20 (Sieve Size)

Installation Method: Free Drop

Type of Backfill Material: None (if applicable)

Installation Method: N/A



	Elevations (MSL)*	Depths (BGS)	(.01ft.)
Top of Protective Casing			
Top of Riser Pipe	539.5	-2.5	
Ground Surface	536.8	0	
Top of Annular Sealant	533.8	3	
Static Water Level (After Completion)	528.09	8.71	
Top of Seal	509.8	27	
Top of Sand Pack	507.2	29.6	
Top of Screen	505.66	31.14	
Bottom of Screen	496.08	40.72	
Bottom of Well	495.4	41.4	
Bottom of Borehole	495.2	41.6	

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, PVC, or Other
Screen	SS304, SS316, PTFE, PVC, or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8.25
ID of Riser Pipe (inches)	2.049
Protective Casing Length (feet)	
Riser Pipe Length (feet)	33.84
Bottom of Screen to End Cap (feet)	0.68
Screen Length (1st slot to last slot) (feet)	9.58
Total Length of Casing (feet)	44.1
Screen Slot Size **	0.01

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency — **Well Completion Report**

Site Number: _____ County: Sangamon

Site Name: City Water, Light & Power (CWLP) Ash Ponds — Well #: TW3W

State Plane Coordinate: X _____ Y _____ (or) Latitude: ____ ____ ____ Longitude: ____ ____ ____ — Borehole #: TW3W

Surveyed by: _____ IL Registration #: _____

Drilling Contractor: Bulldog Drilling, Inc. Driller: J. Gates

Consulting Firm: Andrews Engineering, Inc. Geologist: D. Ghosh

Drilling Method: CME 55 w/ 4.25" HSA Drilling Fluid (Type): none

Logged By: D. Ghosh Date Started: 6/26/17 Date Finished: 6/26/17

Report Form Completed By: M. Hewitt Date: 9/18/17

ANNULAR SPACE DETAILS

Type of Surface Seal: Bentonite Grout

Type of Annular Sealant: Bentonite Grout

Installation Method: Tremi

Setting Time: 24 hours

Type of Bentonite Seal - - Granular, Pellet, Slurry (Choose One)

Installation Method: Free drop

Setting Time: N/A

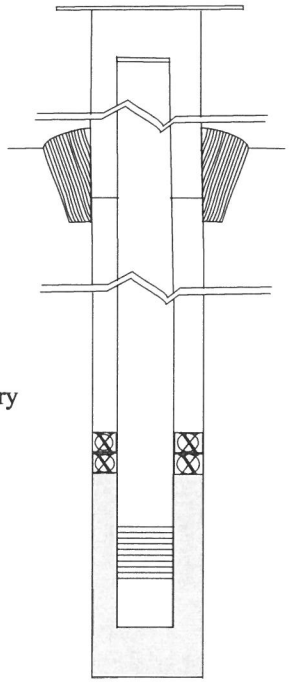
Type of Sand Pack: Silica Sand

Grain Size: 10/20 (Sieve Size)

Installation Method: Free Drop

Type of Backfill Material: None (if applicable)

Installation Method: N/A



	Elevations (MSL)*	Depths (BGS)	(.01ft.)
	_____	_____	Top of Protective Casing
	_____	-2.58	Top of Riser Pipe
	536.80	0	Ground Surface
	_____	0	Top of Annular Sealant
	_____	9.32	Static Water Level (After Completion)
	_____	9.6	Top of Seal
	_____	11.85	Top of Sand Pack
	_____	13.54	Top of Screen
	_____	23.12	Bottom of Screen
	_____	23.8	Bottom of Well
	_____	23.8	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIAL

(Choose one type of material for each area)

Protective Casing	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Above W.T.	SS304, SS316, PTFE, PVC, or Other
Riser Pipe Below W.T.	SS304, SS316, PTFE, PVC, or Other
Screen	SS304, SS316, PTFE, PVC, or Other

CASING MEASURMENTS

Diameter of Borehole (inches)	8.25
ID of Riser Pipe (inches)	2.049
Protective Casing Length (feet)	
Riser Pipe Length (feet)	16.12
Bottom of Screen to End Cap (feet)	0.68
Screen Length (1st slot to last slot) (feet)	9.58
Total Length of Casing (feet)	26.38
Screen Slot Size **	0.01

**Hand-Slotted Well Screens are Unacceptable

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: GP1

Site Name: Springfield CWLP Ash Pond Borehole #: GP1

Coordinates: X _____ Y _____ (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Bulldog drilling Consulting Firm: Andrews Engineering, Inc.

Driller: C. Clines Geologist: B. Kenning

Drilling Method: CME 55cc 4.25 in HSA w/ 5'MC and 2' SS Logged by: B. Kenning

Drilling Fluids (type): N/A Report Form Completed by: B. Kenning

Date Well Started: 6/14/19 Date Well Finished: 6/14/19 Date Form Completed: 7/19/2019

ANNULAR SPACE DETAILS

Type of surface seal: _____

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: > 24 hours

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

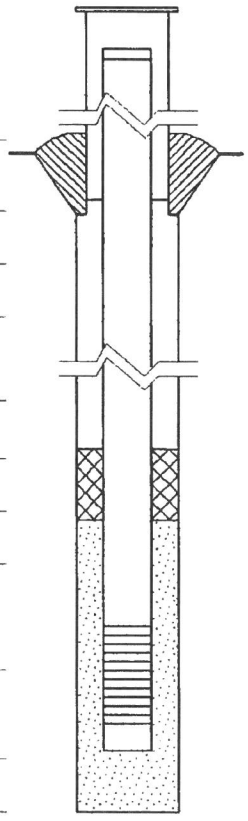
Type of sand pack: Silica Sand Pre-Pack

Grain size: 10/20 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	_____	_____
Top of Riser Pipe	539.44	- 2.82'
Ground Surface	537.06	0.00'
Top of Annular Sealant	534.06	3.00'
Static Water Level Measured on (after completion)	_____	_____
Top of Seal	511.72	25.34'
Top of Sandpack	509.72	27.34'
Top of Screen	507.97	29.34'
Bottom of Screen	498.27	39.04'
Bottom of Well	497.81	39.50'
Bottom of Borehole	497.06	40.00'

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	#2
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	31.91
Bottom of Screen to End Cap (ft)	0.46
Screen Length (1st slot to last slot) (ft)	9.70
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: GP2 /AP-7

Site Name: Springfield CWLP Ash Pond Borehole #: GP2

Coordinates: X _____ Y _____ (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Bulldog drilling Consulting Firm: Andrews Engineering, Inc.

Driller: C. Clines Geologist: B. Kenning

Drilling Method: CME 55cc 4.25 in HSA w/ 5'MC Logged by: B. Kenning

Drilling Fluids (type): N/A Report Form Completed by: B. Kenning

Date Well Started: 6/14/19 Date Well Finished: 6/14/19 Date Form Completed: 7/19/2019

ANNULAR SPACE DETAILS

Type of surface seal: _____

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: > 24 hours

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

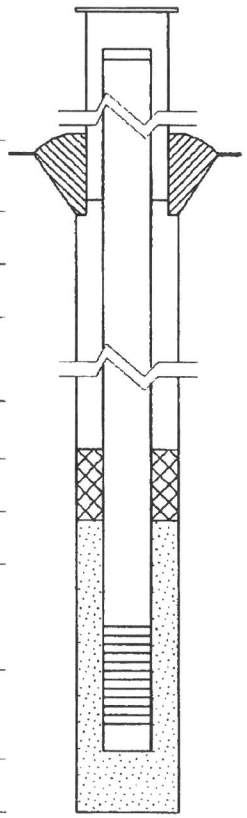
Type of sand pack: Silica Sand Pre-Pack

Grain size: 10/20 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
Top of Protective Casing	_____	_____	
Top of Riser Pipe	539.02	-2.66	
Ground Surface	536.36	0.00'	
Top of Annular Sealant	533.36	3.00'	
Static Water Level Measured on (after completion)	_____	_____	
Top of Seal	511.02	24.9'	
Top of Sandpack	509.02	24.9'	
Top of Screen	507.46	28.9'	
Bottom of Screen	497.76	38.6'	
Bottom of Well	497.3	39.06'	
Bottom of Borehole	496.36	40.00'	

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	#2
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	31.56
Bottom of Screen to End Cap (ft)	0.46
Screen Length (1st slot to last slot) (ft)	9.70
Total Length of Casing (ft)	N/A
Screen Slot Size‡	#10 (0.01)

‡Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: GP3

Site Name: Springfield CWLP Ash Pond Borehole #: GP3

Coordinates: X _____ Y _____ (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Bulldog drilling Consulting Firm: Andrews Engineering, Inc.

Driller: C. Clines Geologist: B. Kenning

Drilling Method: CME 55cc 4.25 in HSA w/ 5'MC Logged by: B. Kenning

Drilling Fluids (type): N/A Report Form Completed by: B. Kenning

Date Well Started: 6/13/19 Date Well Finished: 6/13/19 Date Form Completed: 7/19/2019

ANNULAR SPACE DETAILS

Type of surface seal: _____

Type of annular sealant: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

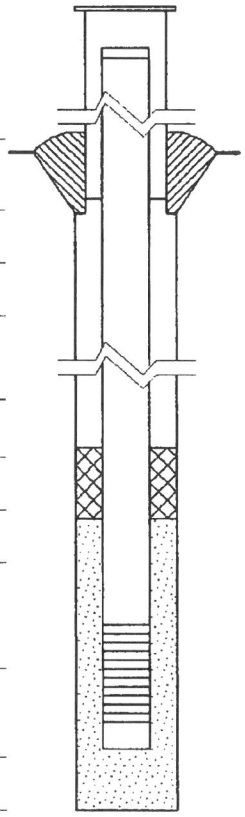
Type of sand pack: Silica Sand Pre-Pack

Grain size: 10/20 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
_____	_____	Top of Protective Casing
551.82	-2.7	Top of Riser Pipe
549.12	0.00'	Ground Surface
546.12	3.00'	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
549.12	3.00'	Top of Seal
532.05	17.07'	Top of Sandpack
531.49	17.63	Top of Screen
526.81	22.31	Bottom of Screen
526.26	22.86	Bottom of Well
524.32	24.80'	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
+ positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	#2
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	20.33
Bottom of Screen to End Cap (ft)	0.55
Screen Length (1st slot to last slot) (ft)	4.68
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: GP4

Site Name: Springfield CWLP Ash Pond Borehole #: GP4

Coordinates: X _____ Y _____ (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Bulldog drilling Consulting Firm: Andrews Engineering, Inc.

Driller: J. Edwards Geologist: C. Myrvold

Drilling Method: CME 55cc 4.25 in HSA w/ 5'MC Logged by: C.Myrvold

Drilling Fluids (type): N/A Report Form Completed by: B. Kenning

Date Well Started: 5/17/19 Date Well Finished: 5/17/19 Date Form Completed: 7/19/2019

ANNULAR SPACE DETAILS

Type of surface seal: _____

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: > 24 hours

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

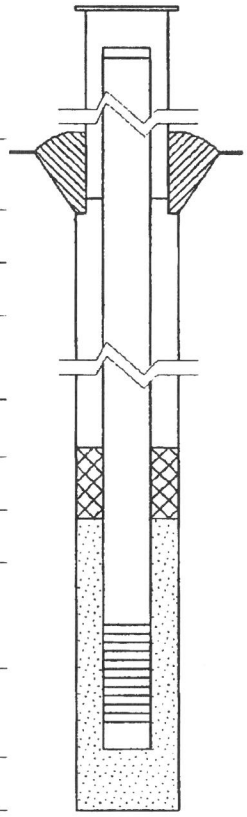
Type of sand pack: Silica Sand Pre-Pack

Grain size: 10/20 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
Top of Protective Casing			
Top of Riser Pipe		- 3.00'	
Ground Surface		0.00'	
Top of Annular Sealant		3.00'	
Static Water Level Measured on (after completion)			
Top of Seal		23.43'	
Top of Sandpack		25.43'	
Top of Screen		27.43'	
Bottom of Screen		37.20'	
Bottom of Well		37.50'	
Bottom of Borehole		38.00'	

* Referenced to a National Geodetic Vertical Datum
+ positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	#2
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	30.18
Bottom of Screen to End Cap (ft)	0.30
Screen Length [1st slot to last slot] (ft)	9.77
Total Length of Casing (ft)	N/A
Screen Slot Size‡	#10 (0.01)

‡Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: GP6 /AP-6

Site Name: Springfield CWLP Ash Pond Borehole #: GP6

Coordinates: X _____ Y _____ (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Bulldog drilling Consulting Firm: Andrews Engineering, Inc.

Driller: J. Edwards Geologist: C. Myrvold

Drilling Method: CME 55cc 4.25 in HSA w/ 5'MC Logged by: C.Myrvold

Drilling Fluids (type): N/A Report Form Completed by: B. Kenning

Date Well Started: 5/17/19 Date Well Finished: 5/17/19 Date Form Completed: 7/19/2019

ANNULAR SPACE DETAILS

Type of surface seal: _____

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: > 24 hours

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

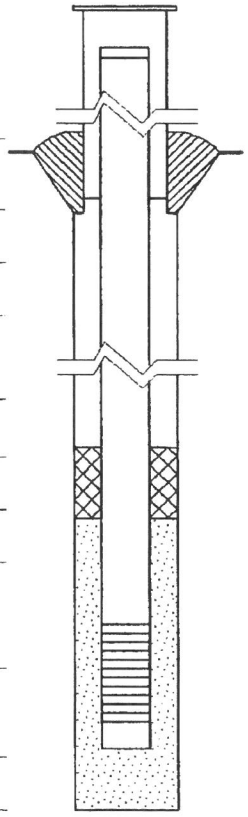
Type of sand pack: Silica Sand Pre-Pack

Grain size: 10/20 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	_____	_____
Top of Riser Pipe	537.82	-2.42
Ground Surface	535.4	0.00'
Top of Annular Sealant	532.4	3.00'
Static Water Level Measured on (after completion)	_____	_____
Top of Seal	512.97	22.43'
Top of Sandpack	510.97	24.43'
Top of Screen	508.64	26.76'
Bottom of Screen	498.87	36.53'
Bottom of Well	498.57	36.83'
Bottom of Borehole	498.4	37.00'

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	#2
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	29.18
Bottom of Screen to End Cap (ft)	0.30
Screen Length (1st slot to last slot) (ft)	9.77
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: GP7

Site Name: Springfield CWLP Ash Pond Borehole #: GP7

Coordinates: X _____ Y _____ (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Bulldog drilling Consulting Firm: Andrews Engineering, Inc.

Driller: J. Edwards Geologist: C. Myrvold

Drilling Method: CME 55cc 4.25 in HSA w/ 5'MC Logged by: C.Myrvold

Drilling Fluids (type): N/A Report Form Completed by: B. Kenning

Date Well Started: 5/16/2019 Date Well Finished: 5/16/2019 Date Form Completed: 7/19/2019

ANNULAR SPACE DETAILS

Type of surface seal: _____

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: > 24 hours

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

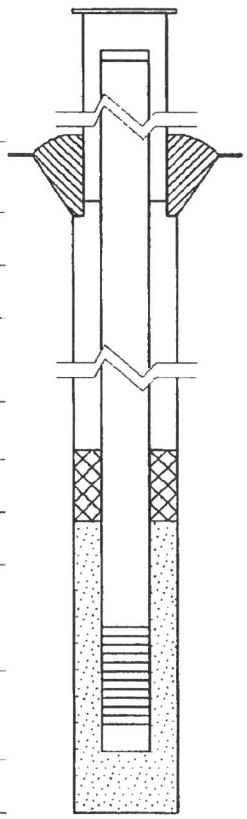
Type of sand pack: Silica Sand Pre-Pack

Grain size: 10/20 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
Top of Protective Casing			
Top of Riser Pipe		- 3.08'	
Ground Surface		0.00'	
Top of Annular Sealant		3.00'	
Static Water Level Measured on (after completion)			
Top of Seal		21.93'	
Top of Sandpack		23.93'	
Top of Screen		25.93'	
Bottom of Screen		35.70'	
Bottom of Well		36.00'	
Bottom of Borehole		36.50'	

* Referenced to a National Geodetic Vertical Datum
+ positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	#2
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	28.76
Bottom of Screen to End Cap (ft)	0.30
Screen Length (1st slot to last slot) (ft)	9.77
Total Length of Casing (ft)	N/A
Screen Slot Size‡	#10 (0.01)

‡Hand-slotted well screens are unacceptable

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: GP8

Site Name: Springfield CWLP Ash Pond Borehole #: GP8

Coordinates: X _____ Y _____ (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Bulldog drilling Consulting Firm: Andrews Engineering, Inc.

Driller: J. Edwards Geologist: C. Myrvold

Drilling Method: CME 55cc 4.25 in HSA w/ 5'MC Logged by: C.Myrvold

Drilling Fluids (type): N/A Report Form Completed by: B. Kenning

Date Well Started: 5/15/19 Date Well Finished: 5/16/19 Date Form Completed: 7/19/2019

ANNULAR SPACE DETAILS

Type of surface seal: _____

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: > 24 hours

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

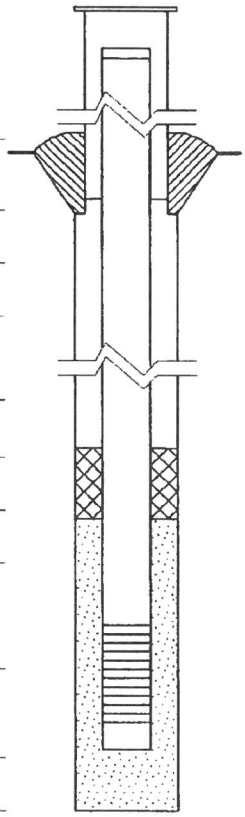
Type of sand pack: Silica Sand Pre-Pack

Grain size: 10/20 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
Top of Protective Casing			
Top of Riser Pipe	533.12	3.00'	
Ground Surface	530.08	0.00'	
Top of Annular Sealant		3.00'	
Static Water Level Measured on (after completion)			
Top of Seal		27.43'	
Top of Sandpack		29.43'	
Top of Screen		31.43'	
Bottom of Screen		41.20'	
Bottom of Well		41.50'	
Bottom of Borehole		42.00'	

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.50
ID of Riser Pipe (in)	#2
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	34.18
Bottom of Screen to End Cap (ft)	0.30
Screen Length [1st slot to last slot] (ft)	9.77
Total Length of Casing (ft)	N/A
Screen Slot Size¥	#10 (0.01)

¥Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-8

Site Name: Springfield CWLP Ash Pond Borehole #: W-9

Coordinates: X 1265.0 Y 3401.7 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Total Drilling Services/Skinner LTD. Consulting Firm: Andrews Engineering, Inc.

Driller: Todd Skinner Geologist: C. M. Latham

Drilling Method: CME 850 4.25 in HSA w/ 5'MC and 2' SS Logged by: C.M.Latham

Drilling Fluids (type): N/A Report Form Completed by: C.M. Latham

Date Well Started: 2/25/2021 Date Well Finished: 2/25/2021 Date Form Completed: 3/2/2021

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Chips

Installation method: Free Drop

Setting time: > 24

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

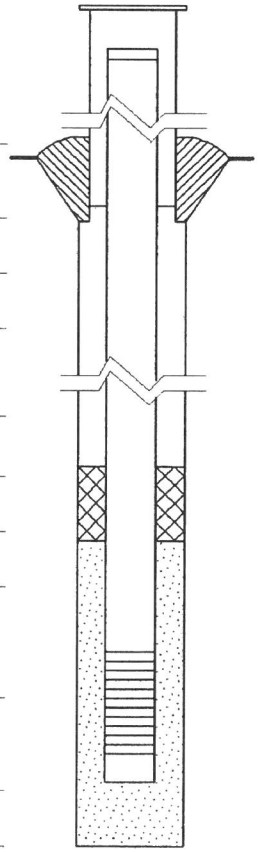
Type of sand pack: Silica Sand Pre-Pack

Grain size: 20/40 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
540.30	-3.10	Top of Protective Casing
540.30	-3.10	Top of Riser Pipe
537.20	0.00	Ground Surface
534.20	3.00	Top of Annular Sealant
530.20	7.00	Static Water Level Measured on (after completion)
_____	3.00	Top of Seal
510.60	26.60	Top of Sandpack
508.60	28.60	Top of Screen
498.02	39.18	Bottom of Screen
497.60	39.60	Bottom of Well
497.60	39.60	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	29.48'
Bottom of Screen to End Cap (ft)	0.42
Screen Length [1st slot to last slot] (ft)	9.70
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-9

Site Name: Springfield CWLP Ash Pond Borehole #: W-8

Coordinates: X 703.0 Y 5216.8 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Total Drilling Services/Skinner LTD. Consulting Firm: Andrews Engineering, Inc.

Driller: Todd Skinner Geologist: C. M. Latham

Drilling Method: CME 850 4.25 in HSA w/ 5'MC and 2' SS Logged by: C.M. Latham

Drilling Fluids (type): N/A Report Form Completed by: C.M. Latham

Date Well Started: 2/26/2021 Date Well Finished: 2/26/2021 Date Form Completed: 3/2/2021

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Chips

Installation method: Free Drop

Setting time: > 24

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

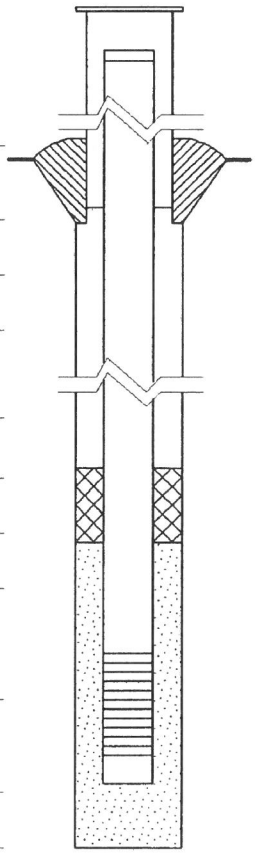
Type of sand pack: Silica Sand Pre-Pack

Grain size: 20/40 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	537.20	-2.90
Top of Riser Pipe	537.20	-2.90
Ground Surface	534.30	0.00
Top of Annular Sealant	531.30	3.00
Static Water Level Measured on (after completion)	525.00	9.30
Top of Seal	____	3.00
Top of Sandpack	514.00	20.30
Top of Screen	512.00	22.30
Bottom of Screen	502.24	32.06
Bottom of Well	501.80	32.50
Bottom of Borehole	501.80	32.50

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	24.91
Bottom of Screen to End Cap (ft)	0.44
Screen Length [1st slot to last slot] (ft)	9.76
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

* Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-10

Site Name: Springfield CWLP Ash Pond Borehole #: W-5

Coordinates: X 695.6 Y 4684.0 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Total Drilling Services/Skinner LTD. Consulting Firm: Andrews Engineering, Inc.

Driller: Todd Skinner Geologist: C. M. Latham

Drilling Method: CME 850 4.25 in HSA w/ 5'MC and 2' SS Logged by: C.M. Latham

Drilling Fluids (type): N/A Report Form Completed by: C.M. Latham

Date Well Started: 2/24/2021 Date Well Finished: 2/24/2021 Date Form Completed: 3/2/2021

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Chips

Installation method: Free Drop

Setting time: > 24

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

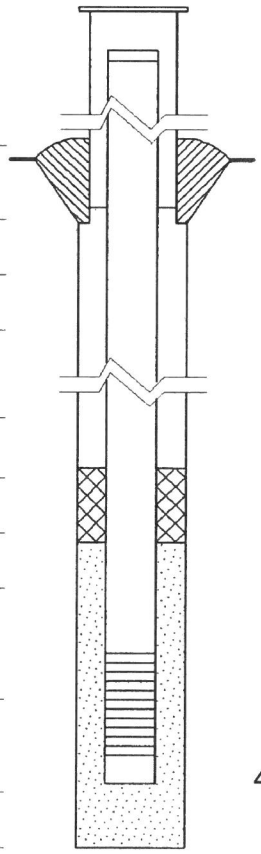
Type of sand pack: Silica Sand Pre-Pack

Grain size: 20/40 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	537.50	-3.10
Top of Riser Pipe	537.50	-3.10
Ground Surface	534.40	0.00
Top of Annular Sealant	531.40	3.00
Static Water Level Measured on (after completion)	528.38	6.02
Top of Seal	531.4	3.00
Top of Sandpack	511.80	22.60
Top of Screen	509.70	24.70
Bottom of Screen	499.9	34.41
Bottom of Well	499.53	34.87
Bottom of Borehole	499.43	34.97

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	27.8
Bottom of Screen to End Cap (ft)	0.46
Screen Length [1st slot to last slot] (ft)	9.71
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-11

Site Name: Springfield CWLP Ash Pond Borehole #: W-4

Coordinates: X 524.5 Y 4150.6 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Total Drilling Services/Skinner LTD Consulting Firm: Andrews Engineering, Inc.

Driller: Todd Skinner Geologist: S Kangas

Drilling Method: CME 850 4.25 in HSA w/ 5'MC and 2' SS Logged by: S Kangas

Drilling Fluids (type): N/A Report Form Completed by: S Kangas

Date Well Started: 2/23/2021 Date Well Finished: 2/23/2021 Date Form Completed: 3/2/2021

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Chips

Installation method: Free Drop

Setting time: >24

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

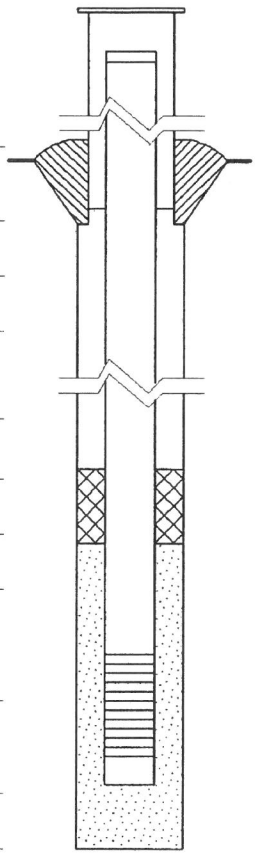
Type of sand pack: Silica Sand Pre-Pack

Grain size: 20/40 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
538.10	-2.80	Top of Protective Casing
538.10	-2.80	Top of Riser Pipe
535.30	0.00	Ground Surface
531.80	3.50	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
531.80	3.50	Top of Seal
527.60	7.70	Top of Sandpack
525.28	10.02	Top of Screen
515.58	19.72	Bottom of Screen
515.15	20.15	Bottom of Well
515.15	20.15	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	#2
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	12.82
Bottom of Screen to End Cap (ft)	0.43
Screen Length [1st slot to last slot] (ft)	9.70
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-12

Site Name: Springfield CWLP Ash Pond Borehole #: W-3

Coordinates: X 667.6 Y 3797.7 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Total Drilling Services/Skinner LTD. Consulting Firm: Andrews Engineering, Inc.

Driller: Todd Skinner Geologist: C. M. Latham

Drilling Method: CME 850 4.25 in HSA w/ 5'MC and 2' SS Logged by: Scott Krangus

Drilling Fluids (type): N/A Report Form Completed by: C.M. Latham

Date Well Started: 2/23/2021 Date Well Finished: 2/24/2021 Date Form Completed: 3/2/2021

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Chips

Installation method: Free Drop

Setting time: > 24

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

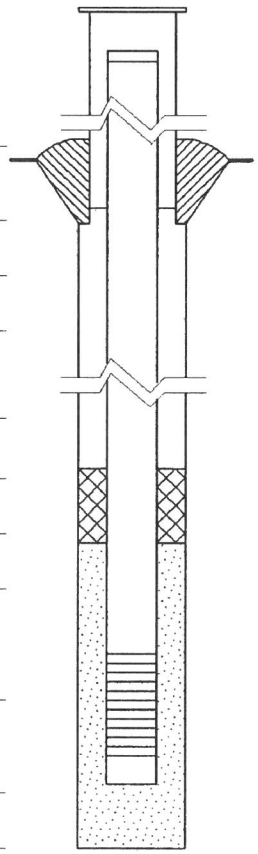
Type of sand pack: Silica Sand Pre-Pack

Grain size: 20/40 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	540.70	-2.90
Top of Riser Pipe	540.60	-2.80
Ground Surface	537.80	0.00
Top of Annular Sealant	534.80	3.00
Static Water Level Measured on (after completion)		
Top of Seal		3.00
Top of Sandpack	522.80	15.00
Top of Screen	520.80	17.00
Bottom of Screen	510.88	26.92
Bottom of Well	510.30	27.50
Bottom of Borehole	510.50	27.30

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	24.94
Bottom of Screen to End Cap (ft)	0.38
Screen Length [1st slot to last slot] (ft)	9.70
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-13

Site Name: Springfield CWLP Ash Pond Borehole #: W-2

Coordinates: X 852.1 Y 3451.2 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Total Drilling Services/Skinner LTD. Consulting Firm: Andrews Engineering, Inc.

Driller: Todd Skinner Geologist: C. M. Latham

Drilling Method: CME 850 4.25 in HSA w/ 5'MC and 2' SS Logged by: C.M. Latham

Drilling Fluids (type): N/A Report Form Completed by: C.M. Latham

Date Well Started: 2/24/2021 Date Well Finished: 2/24/2021 Date Form Completed: 3/2/2021

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Chips

Installation method: Free Drop

Setting time: > 24

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

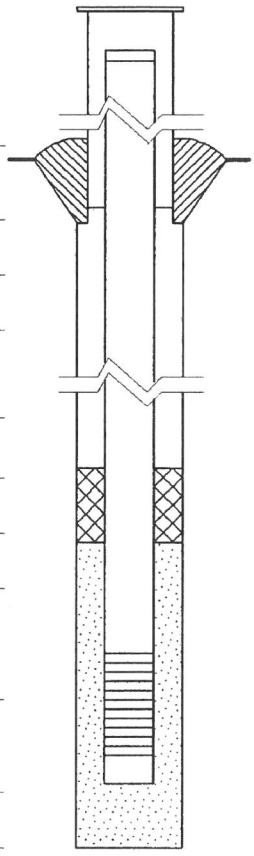
Type of sand pack: Silica Sand Pre-Pack

Grain size: 20/40 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	542.00	-3.40
Top of Riser Pipe	542.00	-3.40
Ground Surface	538.60	0.00
Top of Annular Sealant	355.60	3.00
Static Water Level Measured on (after completion)	532.35	6.25
Top of Seal	_____	3.00
Top of Sandpack	524.08	14.52
Top of Screen	522.08	16.52
Bottom of Screen	511.47	27.13
Bottom of Well	511.00	27.60
Bottom of Borehole	511.00	27.60

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	19.94'
Bottom of Screen to End Cap (ft)	0.47'
Screen Length [1st slot to last slot] (ft)	9.70
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: AP-14

Site Name: Springfield CWLP Ash Pond Borehole #: W-1

Coordinates: X 1275.2 Y 3171.5 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Total Drilling Services/Skinner LTD. Consulting Firm: Andrews Engineering, Inc.

Driller: Todd Skinner Geologist: C. M. Latham

Drilling Method: CME 850 4.25 in HSA w/ 5'MC and 2' SS Logged by: C.M. Latham

Drilling Fluids (type): N/A Report Form Completed by: C.M. Latham

Date Well Started: 2/25/2021 Date Well Finished: 2/26/2021 Date Form Completed: 3/2/2021

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Chips

Installation method: Free Drop

Setting time: > 24

Type of bentonite seal: Bentonite Chips

Installation method: Free Drop

Setting time: > 24 hours

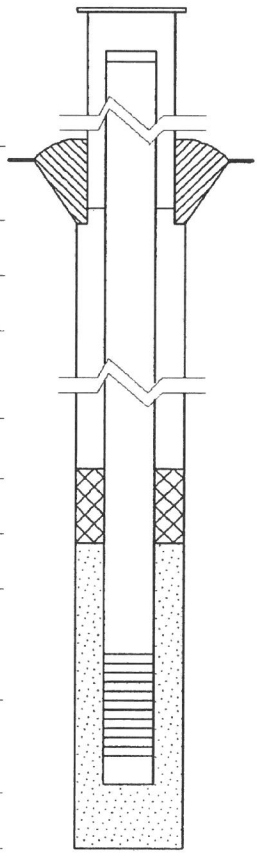
Type of sand pack: Silica Sand Pre-Pack

Grain size: 20/40 (sieve size)

Installation method: Free Drop

Type of backfill material: N/A (if applicable)

Installation method: _____



	ELEVATION (MSL)*	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	539.60	-2.80
Top of Riser Pipe	539.60	-2.80
Ground Surface	536.80	0.00
Top of Annular Sealant	533.80	3.00
Static Water Level Measured on (after completion)	534.80	2.00
Top of Seal	_____	3.00
Top of Sandpack	521.45	15.35
Top of Screen	519.45	17.35
Bottom of Screen	509.75	27.05
Bottom of Well	509.30	27.50
Bottom of Borehole	509.30	27.50

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	N/A
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	
Protective Casing Length (ft)	N/A
Riser Pipe Length (ft)	20.15
Bottom of Screen to End Cap (ft)	0.45
Screen Length [1st slot to last slot] (ft)	9.70
Total Length of Casing (ft)	N/A
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T1

Site Name: CWLP Borehole #: B1

Coordinates: X 1128150.33 Y 2455538.81 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 05/01/2024 Date Well Finished: 05/01/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite chips

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

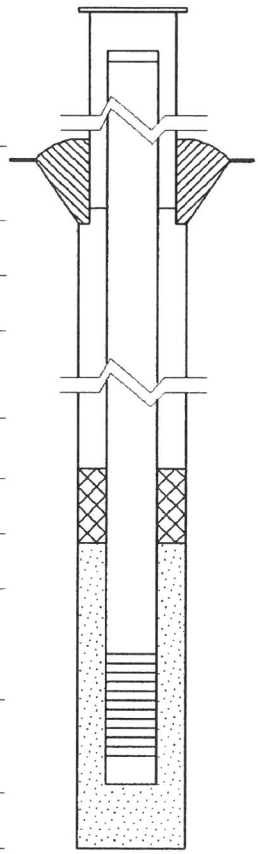
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)*	DEPTH (BGS)* (0.01 ft)	
536.10	-2.45	Top of Protective Casing
535.65	-2.00	Top of Riser Pipe
533.65	0	Ground Surface
531.83	3.50	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
529.83	5.50	Top of Seal
527.29	8.04	Top of Sandpack
525.77	9.56	Top of Screen
516.27	19.06	Bottom of Screen
515.83	19.50	Bottom of Well
515.83	19.50	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	9.88
Bottom of Screen to End Cap (ft)	0.44
Screen Length [1st slot to last slot] (ft)	9.50
Total Length of Casing (ft)	19.82
Screen Slot Size*	#10 (0.01')

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T2

Site Name: CWLP Borehole #: B2

Coordinates: X 1128803.76 Y 2455006.85 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 05/01/2024 Date Well Finished: 05/01/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

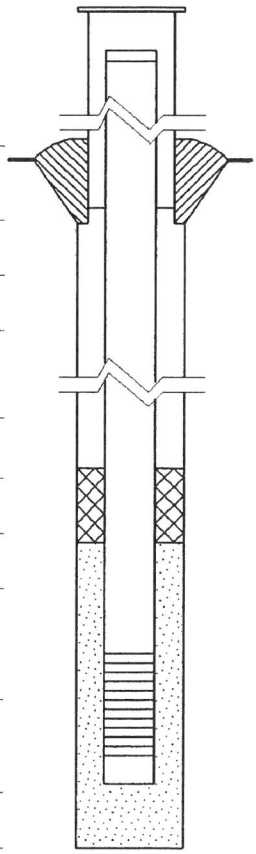
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
549.86	-2.64	Top of Protective Casing
549.62	-2.4	Top of Riser Pipe
547.22	0	Ground Surface
544.22	3.00	Top of Annular Sealant
_____	NA	Static Water Level Measured on (after completion)
526.12	21.10	Top of Seal
524.02	23.20	Top of Sandpack
522.46	24.76	Top of Screen
512.96	34.26	Bottom of Screen
512.22	35.00	Bottom of Well
512.22	35.00	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	27.16
Bottom of Screen to End Cap (ft)	0.44
Screen Length [1st slot to last slot] (ft)	9.50
Total Length of Casing (ft)	37.40
Screen Slot Size*	#10 (0.01')

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T4

Site Name: CWLP Borehole #: B4

Coordinates: X 1130726.70 Y 2455622.14 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 04/26/2024 Date Well Finished: 04/26/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

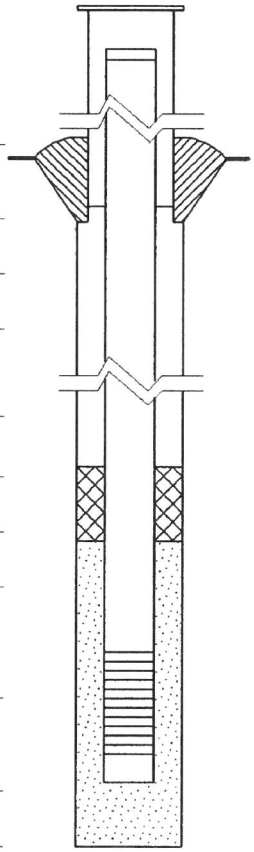
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
549.43	-2.87	Top of Protective Casing
548.94	-2.38	Top of Riser Pipe
546.56	0	Ground Surface
543.56	3.00	Top of Annular Sealant
_____	NA	Static Water Level Measured on (after completion)
534.76	11.80	Top of Seal
532.66	13.90	Top of Sandpack
531.43	15.13	Top of Screen
521.94	24.62	Bottom of Screen
521.56	25.00	Bottom of Well
521.56	25.00	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	17.51
Bottom of Screen to End Cap (ft)	0.44
Screen Length [1st slot to last slot] (ft)	9.49
Total Length of Casing (ft)	27.38
Screen Slot Size¥	#10 (0.01')

¥Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T5

Site Name: CWLP Borehole #: B5

Coordinates: X 1130996.32 Y 2455852.04 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 04/25/2024 Date Well Finished: 04/25/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

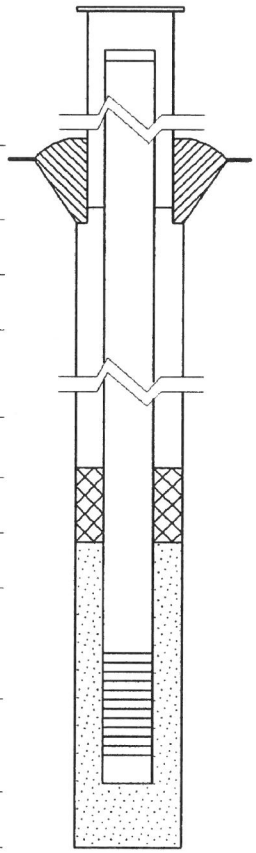
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)*	DEPTH (BGS)*	(0.01 ft)
541.00	-2.85	Top of Protective Casing
540.66	-2.51	Top of Riser Pipe
538.15	0	Ground Surface
535.15	3.00	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
531.55	6.60	Top of Seal
529.35	8.80	Top of Sandpack
528.22	9.93	Top of Screen
518.72	19.43	Bottom of Screen
518.29	19.86	Bottom of Well
518.29	19.86	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	12.44
Bottom of Screen to End Cap (ft)	0.43
Screen Length [1st slot to last slot] (ft)	9.50
Total Length of Casing (ft)	22.37
Screen Slot Size*	#10 (0.01")

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: T6

Site Name: CWLP Borehole #: B6

Coordinates: X 1131175.15 Y 2456259.47 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: Lisa Mauntel

Date Well Started: 04/25/2024 Date Well Finished: 04/25/2024 Date Form Completed: 06/06/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

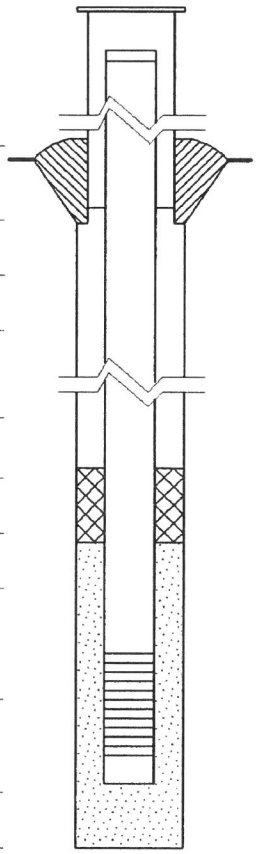
Type of sand pack: Quartz sand

Grain size: 20/40 (sieve size)

Installation method: Free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)*	DEPTH (BGS)+ (0.01 ft)	
_____	_____	Top of Protective Casing
538.32	-2.36	Top of Riser Pipe
535.96	0	Ground Surface
532.96	3.00	Top of Annular Sealant
_____	NA	Static Water Level Measured on (after completion)
507.96	28.00	Top of Seal
505.76	30.20	Top of Sandpack
503.92	32.04	Top of Screen
494.20	41.76	Bottom of Screen
493.85	42.11	Bottom of Well
493.85	42.11	Bottom of Borehole

* Referenced to a National Geodetic Vertical Datum
+ positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Anodized Aluminum
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	5.00
Riser Pipe Length (ft)	32.85
Bottom of Screen to End Cap (ft)	0.35
Screen Length [1st slot to last slot] (ft)	9.72
Total Length of Casing (ft)	42.92
Screen Slot Size¥	#10 (0.01")

¥Hand-slotted well screens are unacceptable.

APPENDIX B4:
CCR IMPOUNDMENT WELL CONSTRUCTION REPORTS

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: D1

Site Name: CWLP Borehole #: D1

Coordinates: X 1129774.64 Y 2455460.38 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: S. Van Hook

Date Well Started: 04/29/2024 Date Well Finished: 04/29/2024 Date Form Completed: 04/29/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

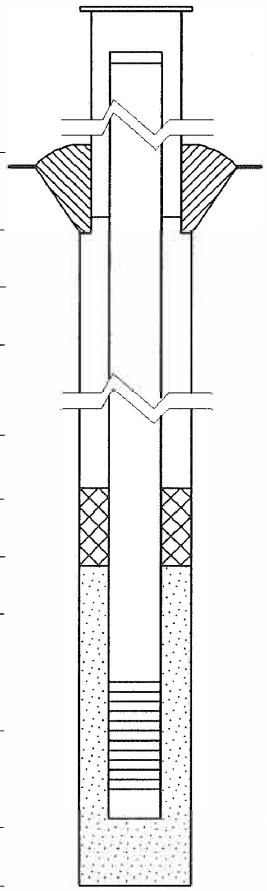
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: bentonite chips/pellets (if applicable)

Installation method: Free drop



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
		Top of Protective Casing
566.20	-2.18	Top of Riser Pipe
564.02	0	Ground Surface
561.02	3.00	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
533.72	30.3	Top of Seal
532.72	31.3	Top of Sandpack
530.75	33.27	Top of Screen
526.00	38.02	Bottom of Screen
525.52	38.5	Bottom of Well
523.52	40.5	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	NA
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.5
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	NA
Riser Pipe Length (ft)	35.44
Bottom of Screen to End Cap (ft)	0.48
Screen Length (1st slot to last slot) (ft)	4.75
Total Length of Casing (ft)	40.67
Screen Slot Size¥	#10 (0.01')

¥ Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: D2

Site Name: CWLP Borehole #: D2

Coordinates: X 1130279.34 Y 2456218.06 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: S. Van Hook

Date Well Started: 04/29/2024 Date Well Finished: 04/29/2024 Date Form Completed: 04/29/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

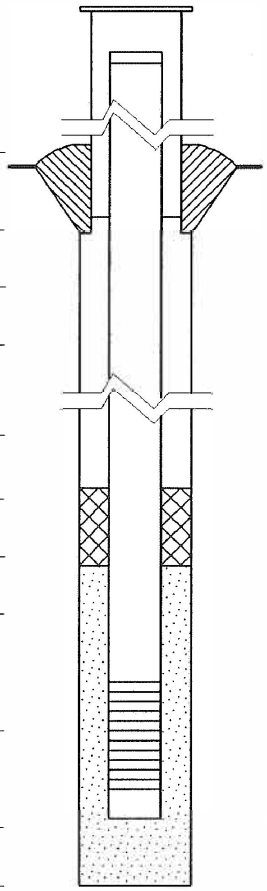
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: bentonite chips/pellets (if applicable)

Installation method: Free drop



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing		
Top of Riser Pipe	560.93	-2.93
Ground Surface	558.00	0
Top of Annular Sealant	555.00	3.00
Static Water Level Measured on (after completion)		NA
Top of Seal	531.20	26.8
Top of Sandpack	528.73	27.77
Top of Screen	523.98	29.27
Bottom of Screen	523.98	34.02
Bottom of Well	523.50	34.5
Bottom of Borehole	520.50	37.5

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	NA
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.5
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	NA
Riser Pipe Length (ft)	32.19
Bottom of Screen to End Cap (ft)	0.48
Screen Length (1st slot to last slot) (ft)	4.75
Total Length of Casing (ft)	37.42
Screen Slot Size¥	#10 (0.01')

¥ Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: D3

Site Name: CWLP Borehole #: D3

Coordinates: X 1129517.94 Y 2455925.82 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: S. Van Hook

Date Well Started: 04/30/2024 Date Well Finished: 04/30/2024 Date Form Completed: 04/30/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

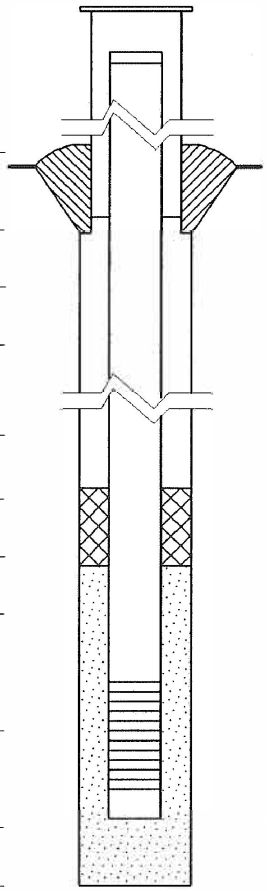
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: bentonite chips/pellets (if applicable)

Installation method: Free drop



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
		Top of Protective Casing
557.90	-2.87	Top of Riser Pipe
555.03	0	Ground Surface
552.03	3.00	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
535.14	19.9	Top of Seal
533.18	21.85	Top of Sandpack
531.76	23.27	Top of Screen
527.01	28.02	Bottom of Screen
526.53	28.5	Bottom of Well
523.53	31.5	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	NA
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.5
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	NA
Riser Pipe Length (ft)	26.13
Bottom of Screen to End Cap (ft)	0.48
Screen Length (1st slot to last slot) (ft)	4.75
Total Length of Casing (ft)	31.36
Screen Slot Size¥	#10 (0.01')

¥ Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: D4

Site Name: CWLP Borehole #: D4

Coordinates: X 1129061.39 Y 2455862.82 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: S. Van Hook

Date Well Started: 04/30/2024 Date Well Finished: 04/30/2024 Date Form Completed: 04/30/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

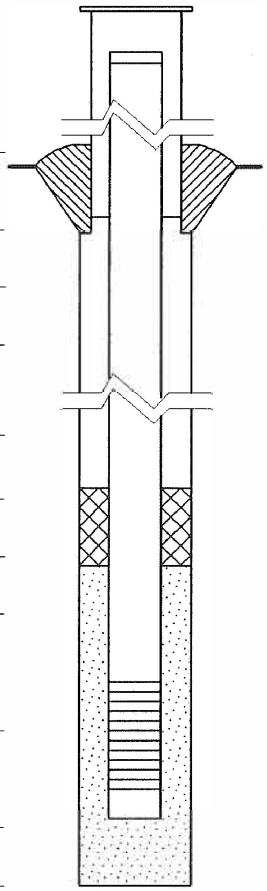
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: bentonite chips/pellets (if applicable)

Installation method: Free drop



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing		
Top of Riser Pipe	565.61	-3.81
Ground Surface	561.80	0
Top of Annular Sealant	558.80	3.00
Static Water Level Measured on (after completion)		NA
Top of Seal	537.70	24.1
Top of Sandpack	536.55	25.25
Top of Screen	535.53	26.27
Bottom of Screen	530.78	31.02
Bottom of Well	530.30	31.5
Bottom of Borehole	525.00	36.8

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	NA
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.5
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	NA
Riser Pipe Length (ft)	30.08
Bottom of Screen to End Cap (ft)	0.48
Screen Length (1st slot to last slot) (ft)	4.75
Total Length of Casing (ft)	35.31
Screen Slot Size¥	#10 (0.01')

¥ Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: L1

Site Name: CWLP Borehole #: L1

Coordinates: X 1127471.56 Y 2456542.96 (or) Latitude: ___ ° ___ ' ___ " Longitude: ___ ° ___ ' ___ "

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: S. Van Hook

Date Well Started: 05/02/2024 Date Well Finished: 05/02/2024 Date Form Completed: 05/02/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

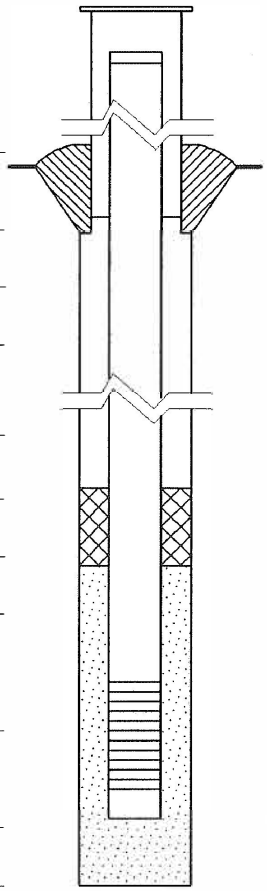
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: bentonite chips/pellets (if applicable)

Installation method: free drop



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing		
Top of Riser Pipe	572.31	-3.35
Ground Surface	568.96	0
Top of Annular Sealant	565.96	3.00
Static Water Level Measured on (after completion)		NA
Top of Seal	543.86	25.1
Top of Sandpack	541.21	27.75
Top of Screen	539.69	29.27
Bottom of Screen	534.94	34.02
Bottom of Well	534.46	34.5
Bottom of Borehole	530.96	38

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	NA
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.5
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	NA
Riser Pipe Length (ft)	32.62
Bottom of Screen to End Cap (ft)	0.48
Screen Length (1st slot to last slot) (ft)	4.75
Total Length of Casing (ft)	37.85
Screen Slot Size¥	#10 (0.01')

¥ Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: D3

Site Name: CWLP Borehole #: D3

Coordinates: X 1129517.94 Y 2455925.82 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: S. Van Hook

Date Well Started: 04/30/2024 Date Well Finished: 04/30/2024 Date Form Completed: 04/30/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

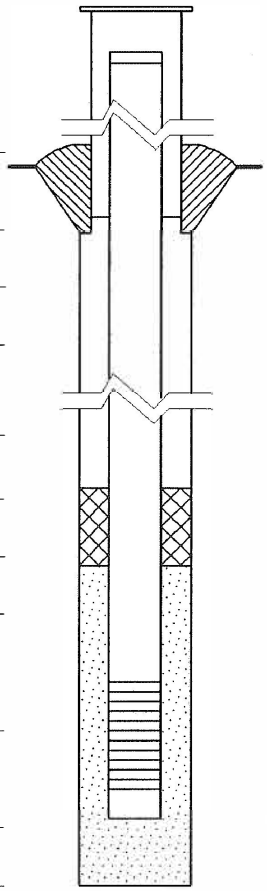
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: bentonite chips/pellets (if applicable)

Installation method: Free drop



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
		Top of Protective Casing
557.90	-2.87	Top of Riser Pipe
555.03	0	Ground Surface
552.03	3.00	Top of Annular Sealant
	NA	Static Water Level Measured on (after completion)
535.14	19.9	Top of Seal
533.18	21.85	Top of Sandpack
531.76	23.27	Top of Screen
527.01	28.02	Bottom of Screen
526.53	28.5	Bottom of Well
523.53	31.5	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	NA
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.5
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	NA
Riser Pipe Length (ft)	26.13
Bottom of Screen to End Cap (ft)	0.48
Screen Length (1st slot to last slot) (ft)	4.75
Total Length of Casing (ft)	31.36
Screen Slot Size¥	#10 (0.01')

¥ Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: D4

Site Name: CWLP Borehole #: D4

Coordinates: X 1129061.39 Y 2455862.82 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: S. Van Hook

Date Well Started: 04/30/2024 Date Well Finished: 04/30/2024 Date Form Completed: 04/30/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

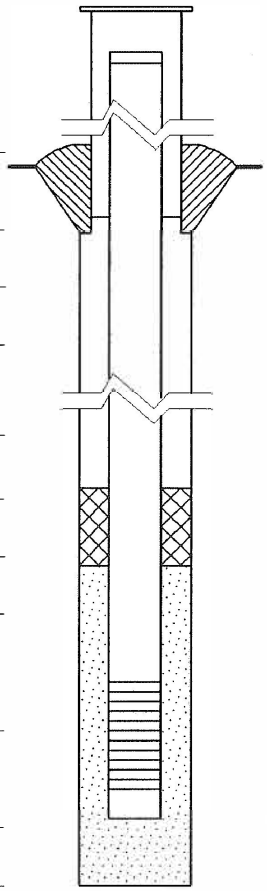
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: bentonite chips/pellets (if applicable)

Installation method: Free drop



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing		
Top of Riser Pipe	565.61	-3.81
Ground Surface	561.80	0
Top of Annular Sealant	558.80	3.00
Static Water Level Measured on (after completion)		NA
Top of Seal	537.70	24.1
Top of Sandpack	536.55	25.25
Top of Screen	535.53	26.27
Bottom of Screen	530.78	31.02
Bottom of Well	530.30	31.5
Bottom of Borehole	525.00	36.8

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	NA
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.5
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	NA
Riser Pipe Length (ft)	30.08
Bottom of Screen to End Cap (ft)	0.48
Screen Length (1st slot to last slot) (ft)	4.75
Total Length of Casing (ft)	35.31
Screen Slot Size¥	#10 (0.01')

¥ Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Springfield Well #: L5

Site Name: CWLP Borehole #: L5

Coordinates: X 1128308.68 Y 2456118.11 (or) Latitude: ___° ___' ___" Longitude: ___° ___' ___"

Surveyed by: Andrews Engineering, Inc. IL Registration #: _____

Drilling Contractor: Skinner Limited Consulting Firm: Andrews Engineering, Inc.

Driller: T. Skinner Geologist: S. Van Hook

Drilling Method: 4 1/4" HSA 5' CSD 3" Logged by: S. Van Hook

Drilling Fluids (type): NA Report Form Completed by: S. Van Hook

Date Well Started: 05/03/2024 Date Well Finished: 05/03/2024 Date Form Completed: 05/03/2024

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: Free drop

Setting time: 24+ hours

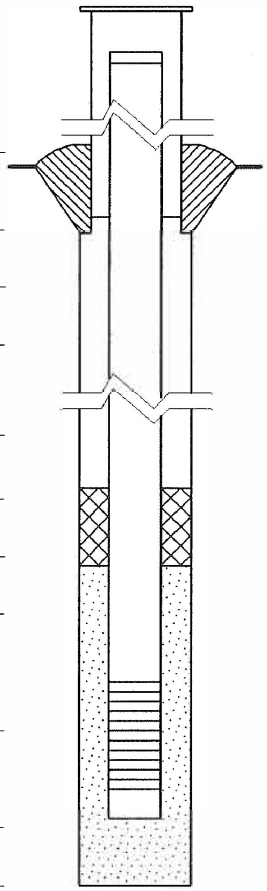
Type of sand pack: Quartz sand

Grain size: 10/20 (sieve size)

Installation method: Free drop

Type of backfill material: bentonite chips/pellets (if applicable)

Installation method: Free drop



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing		
Top of Riser Pipe	568.01	-2.82
Ground Surface	565.19	0
Top of Annular Sealant	562.19	3.00
Static Water Level Measured on (after completion)		NA
Top of Seal	541.49	23.7
Top of Sandpack	539.39	25.8
Top of Screen	535.09	30.1
Bottom of Screen	530.39	34.8
Bottom of Well	529.89	35.3
Bottom of Borehole	525.69	39.5

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	NA
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	PVC

CASING MEASUREMENTS

Diameter of Borehole (in)	8.5
ID of Riser Pipe (in)	2.00
Protective Casing Length (ft)	NA
Riser Pipe Length (ft)	32.92
Bottom of Screen to End Cap (ft)	0.48
Screen Length (1st slot to last slot) (ft)	4.75
Total Length of Casing (ft)	38.12
Screen Slot Size¥	#10 (0.01')

¥ Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: DO06

Site Name: CWLP Ash Pond Dewatering Borehole #: DO06

State Plane Coordinate: X 2,456,191.3 Y 1,129,174.1 (or) Latitude: _____ Longitude: _____

Surveyed By: Romanotto IL Registration #: _____

Drilling Contractor: Skinner Limited Driller: T. Skinner

Consulting Firm: Hanson Professional Services Inc. Geologist: Rhonald W. Hasenyager, LPG #196-000246

Drilling Method: Bucket Auger Drilling Fluid (Type): none

Logged By: Rhonald W. Hasenyager Date Started: 6/19/2025 Date Finished: 6/20/2025

Report Form Completed By: Rhonald W. Hasenyager Date: 7/2/2025

ANNULAR SPACE DETAILS

Type of Surface Seal: none

Type of Annular Sealant: none

Installation Method: _____

Setting Time: _____

Type of Bentonite Seal -- Granular Pellet Slurry (choose one)

Installation Method: _____

Setting Time: _____

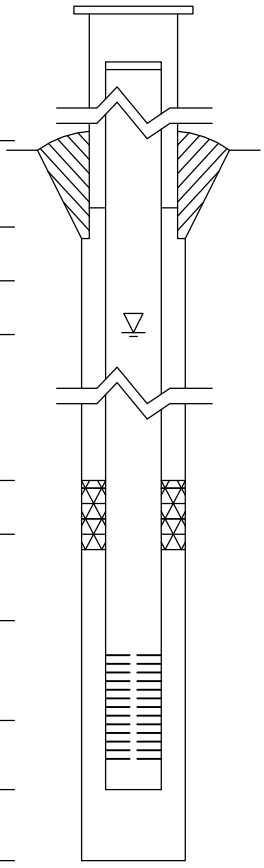
Type of Sand Pack: Sand/Gravel

Grain Size: FA4 & CA1 (sieve size)

Installation Method: Gravity

Type of Backfill Material: n/a (if applicable)

Installation Method: _____



Elevations (MSL)*	Depths (BGS) (0.01 ft.)	
_____	_____	Top of Protective Casing
553.69	-0.93	Top of Riser Pipe
552.77	0.00	Ground Surface
552.77	0.00	Top of Annular Sealant
548.00	4.77	Static Water Level (After Completion) 6/23/2025
n/a	n/a	Top of Seal
549.77	3.00	Top of Sand Pack
532.48	20.29	Top of Screen
522.84	29.93	Bottom of Screen
522.47	30.30	Bottom of Well
522.47	30.30	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIALS

(Choose one type of material for each area)

Protective Casing	SS304	SS316	PTFE	PVC	OTHER: None
Riser Pipe Above W.T.	SS304	SS316	PTFE	PVC	OTHER:
Riser Pipe Below W.T.	SS304	SS316	PTFE	PVC	OTHER:
Screen	SS304	SS316	PTFE	PVC	OTHER:

CASING MEASUREMENTS

Diameter of Borehole	(inches)	8.0
ID of Riser Pipe	(inches)	2.0
Protective Casing Length	(feet)	0.0
Riser Pipe Length	(feet)	21.13
Bottom of Screen to End Cap	(feet)	0.45
Screen Length (1st slot to last slot)	(feet)	9.64
Total Length of Casing	(feet)	31.22
Screen Slot Size **	(inches)	0.010

Well Completion Form (revised 02/06/02)

**Hand-Slotted Well Screens Are Unacceptable

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: DO07

Site Name: CWLP Ash Pond Dewatering Borehole #: DO07

State Plane Coordinate: X 2,456,095.0 Y 1,129,197.2 (or) Latitude: _____ Longitude: _____

Surveyed By: Romanotto IL Registration #: _____

Drilling Contractor: Skinner Limited Driller: T. Skinner

Consulting Firm: Hanson Professional Services Inc. Geologist: Rhonald W. Hasenyager, LPG #196-000246

Drilling Method: Hollow Stem Auger Drilling Fluid (Type): none

Logged By: Rhonald W. Hasenyager Date Started: 6/19/2025 Date Finished: 6/19/2025

Report Form Completed By: Rhonald W. Hasenyager Date: 7/2/2025

ANNULAR SPACE DETAILS

Type of Surface Seal: Bentonite chips

Type of Annular Sealant: Bentonite chips

Installation Method: Gravity

Setting Time: _____

Type of Bentonite Seal -- (Granular) Pellet Slurry (choose one)

Installation Method: Gravity

Setting Time: _____

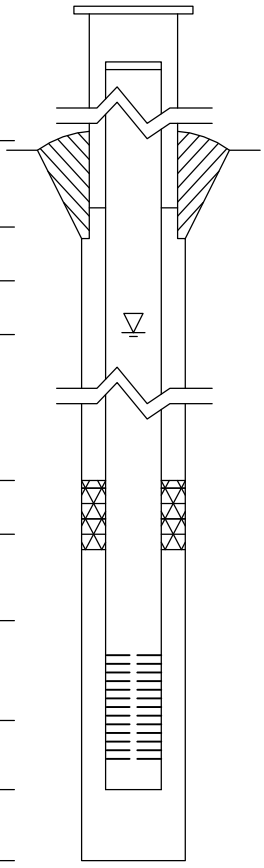
Type of Sand Pack: Silica

Grain Size: #12 (sieve size)

Installation Method: Gravity

Type of Backfill Material: n/a (if applicable)

Installation Method: _____



Elevations (MSL)*	Depths (BGS) (0.01 ft.)	
_____	_____	Top of Protective Casing
555.80	-3.04	Top of Riser Pipe
552.75	0.00	Ground Surface
552.75	0.00	Top of Annular Sealant
548.07	4.68	Static Water Level (After Completion) 6/23/2025
n/a	n/a	Top of Seal
540.05	12.70	Top of Sand Pack
538.37	14.38	Top of Screen
528.13	24.62	Bottom of Screen
527.75	25.00	Bottom of Well
525.75	27.00	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIALS

(Choose one type of material for each area)

Protective Casing	SS304	SS316	PTFE	PVC	OTHER: (None)
Riser Pipe Above W.T.	SS304	SS316	PTFE	(PVC)	OTHER:
Riser Pipe Below W.T.	SS304	SS316	PTFE	(PVC)	OTHER:
Screen	SS304	SS316	PTFE	(PVC)	OTHER:

CASING MEASUREMENTS

Diameter of Borehole	(inches)	8.0
ID of Riser Pipe	(inches)	2.0
Protective Casing Length	(feet)	0.0
Riser Pipe Length	(feet)	19.93
Bottom of Screen to End Cap	(feet)	0.53
Screen Length (1st slot to last slot)	(feet)	9.59
Total Length of Casing	(feet)	30.05
Screen Slot Size **	(inches)	0.010

Well Completion Form (revised 02/06/02)

**Hand-Slotted Well Screens Are Unacceptable

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: DO08

Site Name: CWLP Ash Pond Dewatering Borehole #: DO08

State Plane Coordinate: X 2,456,257.4 Y 1,129,401.4 (or) Latitude: _____ Longitude: _____

Surveyed By: Romanotto IL Registration #: _____

Drilling Contractor: Skinner Limited Driller: T. Skinner

Consulting Firm: Hanson Professional Services Inc. Geologist: Rhonald W. Hasenyager, LPG #196-000246

Drilling Method: Hollow Stem Auger Drilling Fluid (Type): none

Logged By: Rhonald W. Hasenyager Date Started: 6/19/2025 Date Finished: 6/19/2025

Report Form Completed By: Rhonald W. Hasenyager Date: 7/2/2025

ANNULAR SPACE DETAILS

Type of Surface Seal: Bentonite chips

Type of Annular Sealant: Bentonite chips

Installation Method: Gravity

Setting Time: _____

Type of Bentonite Seal -- (Granular) Pellet Slurry (choose one)

Installation Method: Gravity

Setting Time: _____

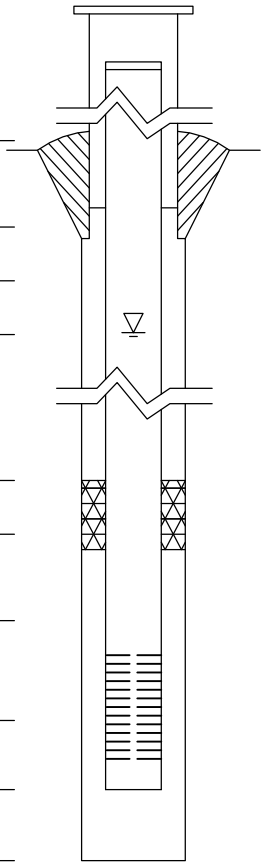
Type of Sand Pack: Silica

Grain Size: #12 (sieve size)

Installation Method: Gravity

Type of Backfill Material: n/a (if applicable)

Installation Method: _____



Elevations (MSL)*	Depths (BGS) (0.01 ft.)	
_____	_____	Top of Protective Casing
554.33	-2.53	Top of Riser Pipe
551.80	0.00	Ground Surface
551.80	0.00	Top of Annular Sealant
545.72	6.08	Static Water Level (After Completion) 6/23/2025
n/a	n/a	Top of Seal
535.90	15.90	Top of Sand Pack
534.13	17.67	Top of Screen
524.13	27.67	Bottom of Screen
523.53	28.27	Bottom of Well
523.53	28.27	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIALS

(Choose one type of material for each area)

Protective Casing	SS304	SS316	PTFE	PVC	OTHER: (None)
Riser Pipe Above W.T.	SS304	SS316	PTFE	(PVC)	OTHER:
Riser Pipe Below W.T.	SS304	SS316	PTFE	(PVC)	OTHER:
Screen	SS304	SS316	PTFE	(PVC)	OTHER:

CASING MEASUREMENTS

Diameter of Borehole	(inches)	8.0
ID of Riser Pipe	(inches)	2.0
Protective Casing Length	(feet)	0.0
Riser Pipe Length	(feet)	21.23
Bottom of Screen to End Cap	(feet)	0.55
Screen Length (1st slot to last slot)	(feet)	9.75
Total Length of Casing	(feet)	31.53
Screen Slot Size **	(inches)	0.010

Well Completion Form (revised 02/06/02)

**Hand-Slotted Well Screens Are Unacceptable

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Sangamon Well #: DW01

Site Name: CWLP Ash Pond Dewatering Borehole #: DW01

State Plane Coordinate: X 2,456,191.3 Y 1,129,174.1 (or) Latitude: _____ Longitude: _____

Surveyed By: Romanotto IL Registration #: _____

Drilling Contractor: Skinner Limited Driller: T. Skinner

Consulting Firm: Hanson Professional Services Inc. Geologist: Rhonald W. Hasenyager, LPG #196-000246

Drilling Method: Bucket Auger Drilling Fluid (Type): none

Logged By: Rhonald W. Hasenyager Date Started: 6/19/2025 Date Finished: 6/20/2025

Report Form Completed By: Rhonald W. Hasenyager Date: 7/2/2025

ANNULAR SPACE DETAILS

Type of Surface Seal: none

Type of Annular Sealant: none

Installation Method: _____

Setting Time: _____

Type of Bentonite Seal -- Granular Pellet Slurry (choose one)

Installation Method: _____

Setting Time: _____

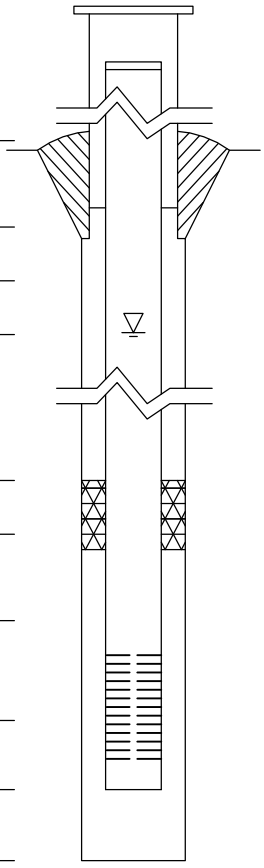
Type of Sand Pack: Sand/Gravel

Grain Size: FA4 & CA1 (sieve size)

Installation Method: Gravity

Type of Backfill Material: n/a (if applicable)

Installation Method: _____



Elevations (MSL)*	Depths (BGS) (0.01 ft.)	
_____	_____	Top of Protective Casing
554.16	-1.16	Top of Riser Pipe
553.01	0.00	Ground Surface
_____	_____	Top of Annular Sealant
547.58	5.43	Static Water Level (After Completion) 6/23/2025
n/a	n/a	Top of Seal
550.01	3.00	Top of Sand Pack
547.01	6.00	Top of Screen
523.31	29.70	Bottom of Screen
522.71	30.30	Bottom of Well
522.71	30.30	Bottom of Borehole

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIALS

(Choose one type of material for each area)

Protective Casing	SS304	SS316	PTFE	PVC	OTHER: None
Riser Pipe Above W.T.	SS304	SS316	PTFE	PVC	OTHER:
Riser Pipe Below W.T.	SS304	SS316	PTFE	PVC	OTHER:
Screen	SS304	SS316	PTFE	PVC	OTHER:

CASING MEASUREMENTS

Diameter of Borehole	(inches)	36.0
ID of Riser Pipe	(inches)	16.5
Protective Casing Length	(feet)	0.0
Riser Pipe Length	(feet)	6.45
Bottom of Screen to End Cap	(feet)	0.00
Screen Length (1st slot to last slot)	(feet)	25.00
Total Length of Casing	(feet)	31.45
Screen Slot Size **	(inches)	

Well Completion Form (revised 02/06/02)

**Hand-Slotted Well Screens Are Unacceptable

APPENDIX B5:
FLOW PATH INVESTIGATION WELL CONSTRUCTION REPORTS

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: AP6S

Site Name: FGDS Development Borehole #: AP 6SA

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 13 " Longitude: -89 ° 35 ' 57 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/13/2025 Date Well Finished: 5/13/2025 Date Form Completed: 6/10/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: n/a

Installation method: _____

Setting time: _____

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 24+ hours

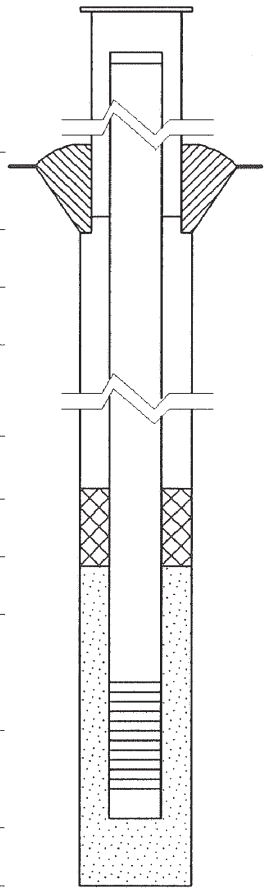
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
536.80	-2.64	Top of Protective Casing
536.47	-2.31	Top of Riser Pipe
534.16	0.0	Ground Surface
_____	_____	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
532.16	2.0	Top of Seal
527.36	6.8	Top of Sandpack
525.26	8.9	Top of Screen
520.56	13.6	Bottom of Screen
520.16	14.0	Bottom of Well
520.16	14.0	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	11.21
Bottom of Screen to End Cap (ft)	0.4
Screen Length [1st slot to last slot] (ft)	4.7
Total Length of Casing (ft)	16.31
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: AP-8S

Site Name: FGDS Development Borehole #: AP-8SA

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 10 " Longitude: 89 ° 36 ' 2 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/14/2025 Date Well Finished: 5/14/2025 Date Form Completed: 6/9/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: n/a

Installation method: _____

Setting time: _____

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 24+ hours

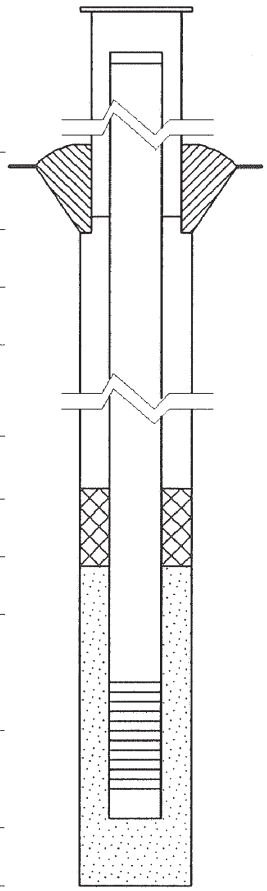
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: Sandpack (if applicable)

Installation method: free Drop



ELEVATION (MSL)®	DEPTH (BGS)*	(0.01 ft)
538.59	-2.62	Top of Protective Casing
538.53	-2.56	Top of Riser Pipe
535.97	0.0	Ground Surface
_____	_____	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
533.97	2.0	Top of Seal
528.87	7.1	Top of Sandpack
526.96	9.01	Top of Screen
522.26	13.71	Bottom of Screen
521.86	14.11	Bottom of Well
520.97	15.0	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	11.57
Bottom of Screen to End Cap (ft)	0.4
Screen Length [1st slot to last slot] (ft)	4.7
Total Length of Casing (ft)	16.67
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: AP-15D

Site Name: FGDS Development Borehole #: AP-15D

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 45 ' 46 " Longitude: -89 ° 35 ' 59 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA, 2' split spoon, and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/12/2025 Date Well Finished: 5/12/2025 Date Form Completed: 6/3/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Tremie

Setting time: 24+ Hours

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 30+ minutes

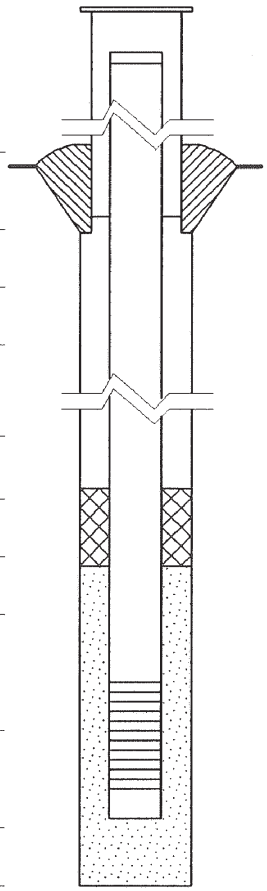
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
538.79	-2.49	Top of Protective Casing
538.61	-2.31	Top of Riser Pipe
536.30	0.0	Ground Surface
534.3	2.0	Top of Annular Sealant
		Static Water Level Measured on (after completion)
512.7	23.6	Top of Seal
510.7	25.6	Top of Sandpack
508.63	27.67	Top of Screen
506.23	30.07	Bottom of Screen
505.8	30.5	Bottom of Well
504.3	30.5	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	29.98
Bottom of Screen to End Cap (ft)	0.43
Screen Length [1st slot to last slot] (ft)	2.4
Total Length of Casing (ft)	32.81
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: AP15S

Site Name: FGDS Development Borehole #: AP15S

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 45 ' 46 " Longitude: -89 ° 35 ' 59 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/12/2025 Date Well Finished: 5/13/2025 Date Form Completed: 6/5/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite chips

Installation method: tremie

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 24+ hours

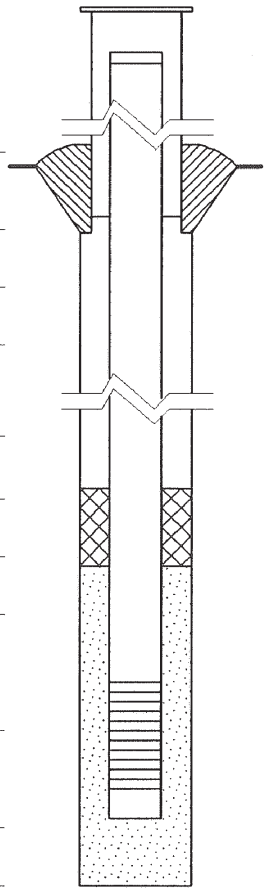
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: Quartz sand (if applicable)

Installation method: free drop



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	538.79	-2.37
Top of Riser Pipe	538.53	-2.11
Ground Surface	536.42	0.0
Top of Annular Sealant	534.42	2.0
Static Water Level Measured on (after completion)		
Top of Seal	523.62	12.8
Top of Sandpack	521.62	14.8
Top of Screen	519.61	16.81
Bottom of Screen	514.88	21.54
Bottom of Well	514.44	22.0
Bottom of Borehole	511.92	24.5

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	18.92
Bottom of Screen to End Cap (ft)	0.46
Screen Length [1st slot to last slot] (ft)	4.73
Total Length of Casing (ft)	24.11
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: AP-16

Site Name: FGDS Development Borehole #: AP-16

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 18 " Longitude: -89 ° 36 ' 0 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/20/2025 Date Well Finished: 5/20/2025 Date Form Completed: 6/6/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Hole plug

Installation method: Free drop

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 30+ minutes

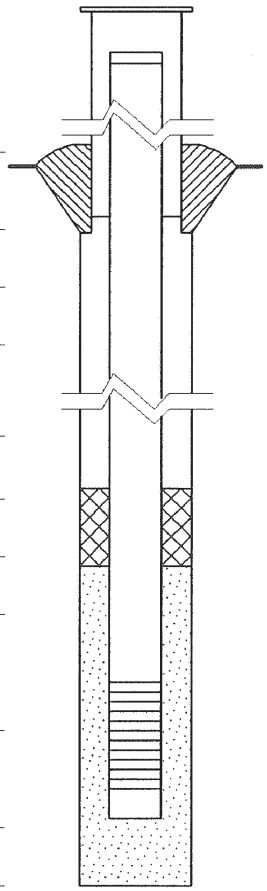
Type of sand pack: quartz sand

Grain size: 20/40 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	539.45	-2.51
Top of Riser Pipe	539.28	-2.34
Ground Surface	536.94	0.0
Top of Annular Sealant	534.94	2.0
Static Water Level Measured on (after completion)		
Top of Seal	525.64	11.3
Top of Sandpack	523.14	13.8
Top of Screen	519.1	17.84
Bottom of Screen	514.42	22.52
Bottom of Well	513.94	23.0
Bottom of Borehole	513.94	23.0

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	20.18
Bottom of Screen to End Cap (ft)	0.48
Screen Length [1st slot to last slot] (ft)	4.68
Total Length of Casing (ft)	25.34
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: P03D

Site Name: FGDS Development Borehole #: P03D

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 14 " Longitude: -89 ° 35 ' 45 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/14/2025 Date Well Finished: 5/14/2025 Date Form Completed: 6/3/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite Grout

Installation method: Tremie

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 24+

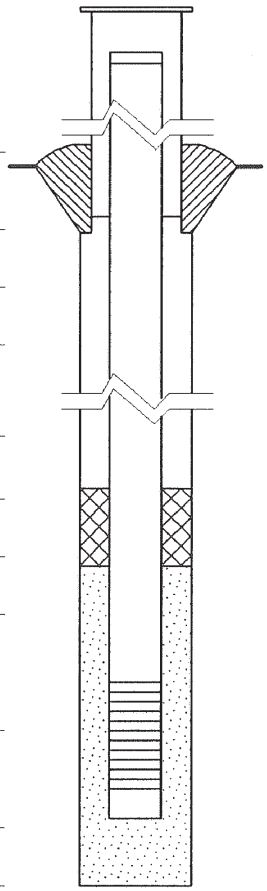
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
533.20	-3.18	Top of Protective Casing
533.04	-3.02	Top of Riser Pipe
530.02	0.0	Ground Surface
528.02	2.0	Top of Annular Sealant
		Static Water Level Measured on (after completion)
504.22	25.8	Top of Seal
502.22	27.8	Top of Sandpack
500.19	29.83	Top of Screen
495.49	34.53	Bottom of Screen
495.02	35.0	Bottom of Well
495.02	35.0	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	32.85
Bottom of Screen to End Cap (ft)	0.47
Screen Length [1st slot to last slot] (ft)	4.7
Total Length of Casing (ft)	38.02
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: P03S

Site Name: FGDS Development Borehole #: P03S

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 14 " Longitude: -89 ° 35 ' 45 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/14/2025 Date Well Finished: 5/14/2025 Date Form Completed: 6/3/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: n/a

Installation method: _____

Setting time: _____

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 24+ hours

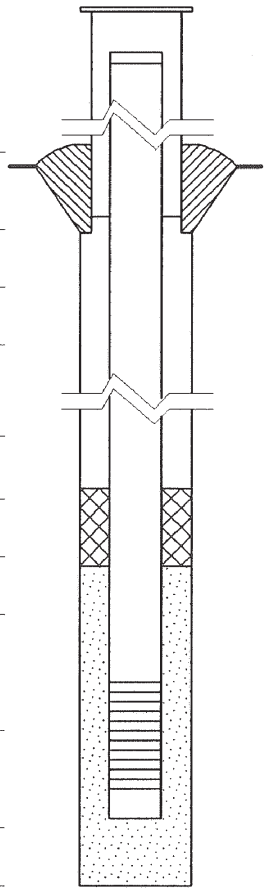
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
533.10	-3.11	Top of Protective Casing
532.75	-2.76	Top of Riser Pipe
529.99	0.0	Ground Surface
_____	_____	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
527.99	2.0	Top of Seal
523.09	6.9	Top of Sandpack
521.01	8.98	Top of Screen
516.34	13.65	Bottom of Screen
515.99	14.0	Bottom of Well
515.99	14.0	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	11.74
Bottom of Screen to End Cap (ft)	0.35
Screen Length [1st slot to last slot] (ft)	4.67
Total Length of Casing (ft)	16.76
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: P104S

Site Name: FGDS Development Borehole #: P104S

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 13 " Longitude: -89 ° 35 ' 49 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/15/2025 Date Well Finished: 5/15/2025 Date Form Completed: 6/6/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Tremie

Setting time: 24+ Hours

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 30+ minutes

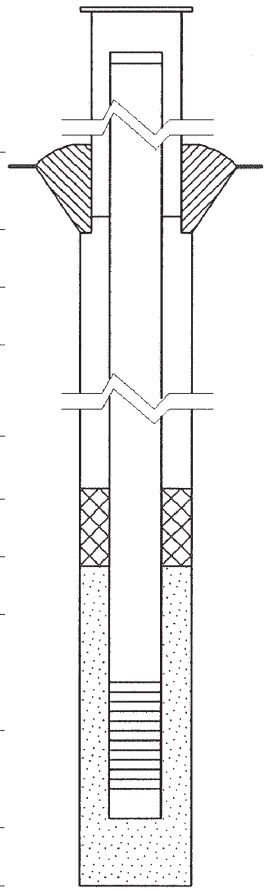
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
532.66	-2.93	Top of Protective Casing
532.27	-2.53	Top of Riser Pipe
529.74	0.0	Ground Surface
527.74	2.0	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
515.04	14.7	Top of Seal
512.84	16.9	Top of Sandpack
510.42	19.32	Top of Screen
505.72	24.02	Bottom of Screen
505.24	24.5	Bottom of Well
504.74	25	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	21.85
Bottom of Screen to End Cap (ft)	0.48
Screen Length [1st slot to last slot] (ft)	4.7
Total Length of Casing (ft)	27.03
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: R103S

Site Name: FGDS Development Borehole #: R103S

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 13 " Longitude: -89 ° 35 ' 42 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/19/2025 Date Well Finished: 5/19/2025 Date Form Completed: 6/3/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: Bentonite grout

Installation method: Tremie

Setting time: 24+ hours

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 30+ minutes

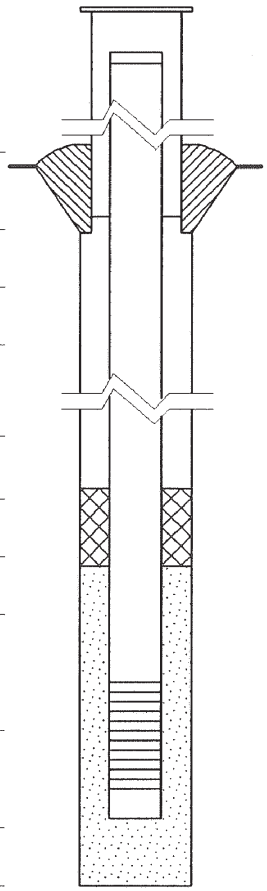
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: bentonite pellets (if applicable)

Installation method: free drop



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	537.78	-2.68
Top of Riser Pipe	537.64	-2.54
Ground Surface	535.10	0.0
Top of Annular Sealant	533.10	2.0
Static Water Level Measured on (after completion)		
Top of Seal	519.60	15.5
Top of Sandpack	517.00	18.1
Top of Screen	514.73	20.37
Bottom of Screen	510.06	25.04
Bottom of Well	509.60	25.5
Bottom of Borehole	505.10	30.0

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	22.91
Bottom of Screen to End Cap (ft)	0.46
Screen Length [1st slot to last slot] (ft)	4.67
Total Length of Casing (ft)	28.04
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: RW-3S

Site Name: FGDS Development Borehole #: RW-3S

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 13 " Longitude: -89 ° 35 ' 56 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/15/2025 Date Well Finished: 5/15/2025 Date Form Completed: 6/3/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: n/a

Installation method: _____

Setting time: _____

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 30+ minutes

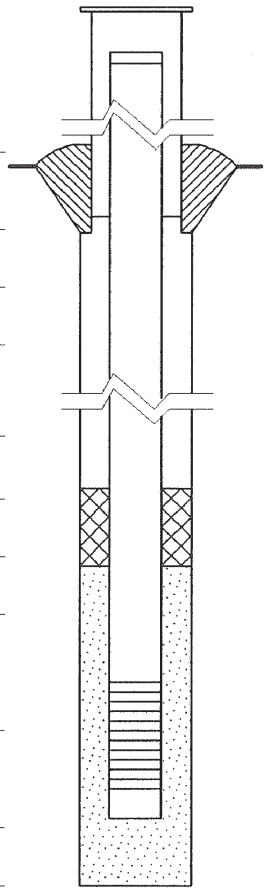
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)	
538.65	-2.78	Top of Protective Casing
538.39	-2.52	Top of Riser Pipe
535.87	0.0	Ground Surface
_____	_____	Top of Annular Sealant
_____	_____	Static Water Level Measured on (after completion)
533.87	2.0	Top of Seal
527.97	7.9	Top of Sandpack
525.94	9.93	Top of Screen
521.24	14.63	Bottom of Screen
520.87	15.0	Bottom of Well
520.87	15.0	Bottom of Borehole

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	12.45
Bottom of Screen to End Cap (ft)	0.37
Screen Length [1st slot to last slot] (ft)	4.7
Total Length of Casing (ft)	17.52
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

Illinois Environmental Protection Agency — Well Completion Report

Site #: 16782500020 County: Sangamon Well #: T4S

Site Name: FGDS Development Borehole #: T4S

Coordinates: X _____ Y _____ (or) Latitude: 39 ° 46 ' 13 " Longitude: -89 ° 36 ' 3 "

Surveyed by: Andrews Engineering IL Registration #: _____

Drilling Contractor: Skinner LTD Consulting Firm: Andrews Engineering

Driller: Todd Skinner Geologist: Nathan Beck

Drilling Method: 4.25 HSA and 5' CB, 2 ' split spoon Logged by: Nathan Beck

Drilling Fluids (type): n/a Report Form Completed by: Nathan Beck

Date Well Started: 5/20/2025 Date Well Finished: 5/20/2025 Date Form Completed: 6/3/2025

ANNULAR SPACE DETAILS

Type of surface seal: Concrete

Type of annular sealant: n/a

Installation method: _____

Setting time: _____

Type of bentonite seal: Bentonite pellets

Installation method: free drop

Setting time: 24+ hours

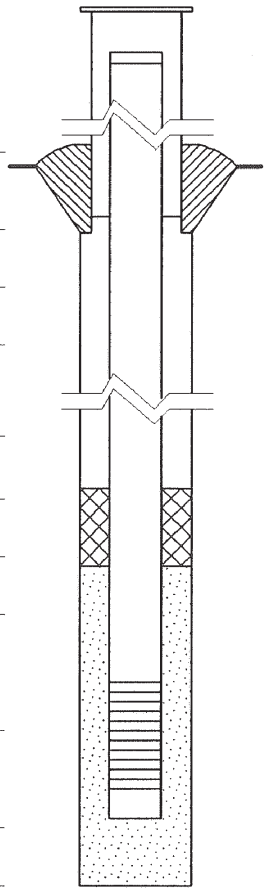
Type of sand pack: quartz sand

Grain size: 10/20 (sieve size)

Installation method: free drop

Type of backfill material: n/a (if applicable)

Installation method: n/a



	ELEVATION (MSL)®	DEPTH (BGS)* (0.01 ft)
Top of Protective Casing	549.25	-2.5
Top of Riser Pipe	549.04	-2.29
Ground Surface	546.75	0.0
Top of Annular Sealant		
Static Water Level Measured on (after completion)		
Top of Seal	544.75	2.0
Top of Sandpack	538.85	7.9
Top of Screen	536.83	9.93
Bottom of Screen	532.15	14.6
Bottom of Well	531.75	15.0
Bottom of Borehole	531.75	15.0

® Referenced to a National Geodetic Vertical Datum
* positive (+) values below GS, negitive (-) values above GS

WELL CONSTRUCTION MATERIALS

Protective Casing	Steel
Riser Pipe Above W.T.	PVC
Riser Pipe Below W.T.	PVC
Screen	Pre-packed screen

CASING MEASUREMENTS

Diameter of Borehole (in)	8.25
ID of Riser Pipe (in)	2.0
Protective Casing Length (ft)	5.0
Riser Pipe Length (ft)	12.21
Bottom of Screen to End Cap (ft)	0.4
Screen Length [1st slot to last slot] (ft)	4.68
Total Length of Casing (ft)	17.29
Screen Slot Size*	#10 (0.01)

*Hand-slotted well screens are unacceptable.

APPENDIX C:
GEOLOGIC CROSS SECTIONS

Tab: BORINGS IN X SECTIONS Last Saved: September 5, 2025, by Ben Karpus Plotted: Friday, September 5, 2025 10:14:40 AM
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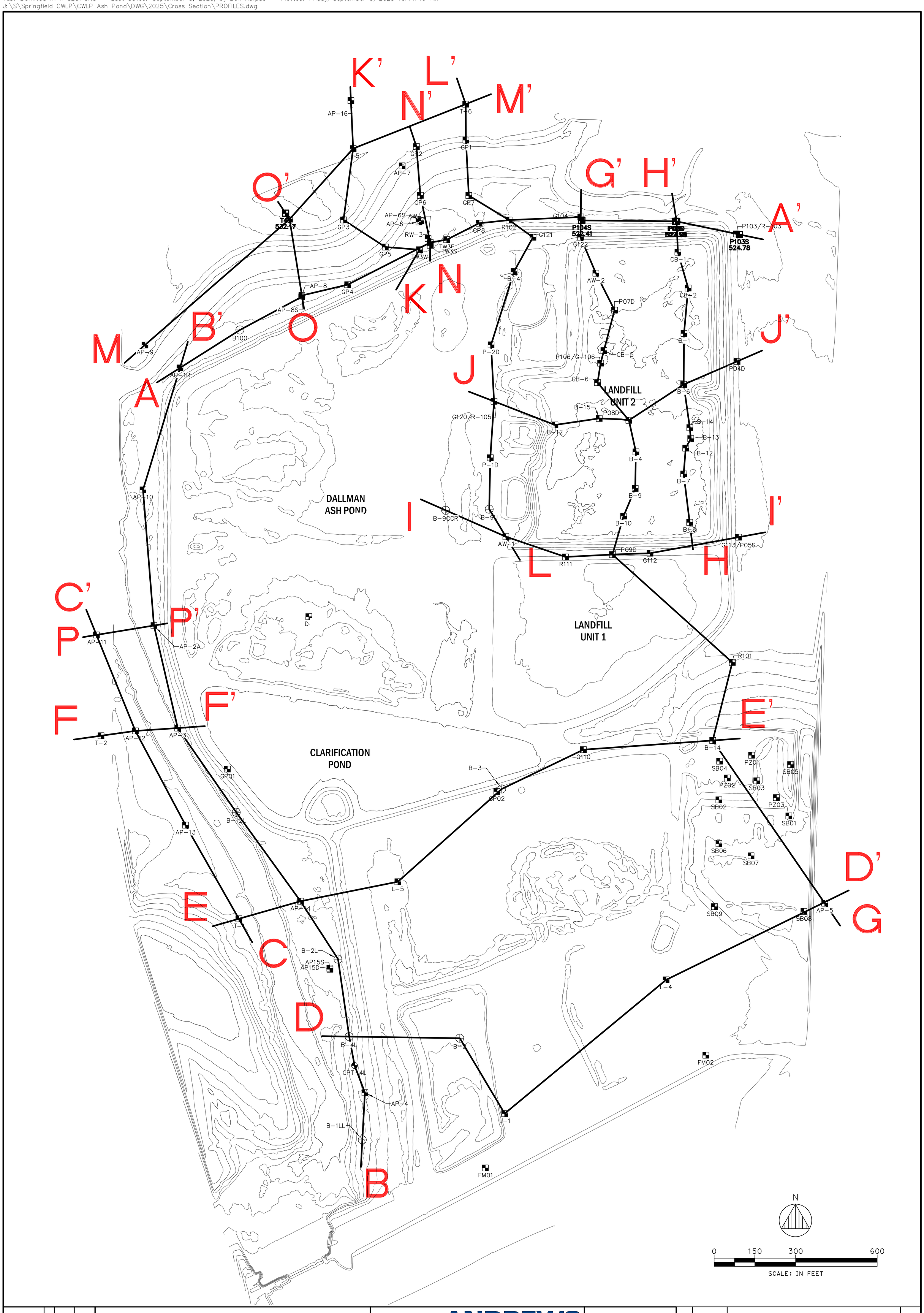

FIG. 1

GEOLOGIC CROSS-SECTION LOCATIONS MAP

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: AUGUST 2024

PROJECT ID: 240227/0010

SHEET NUMBER:

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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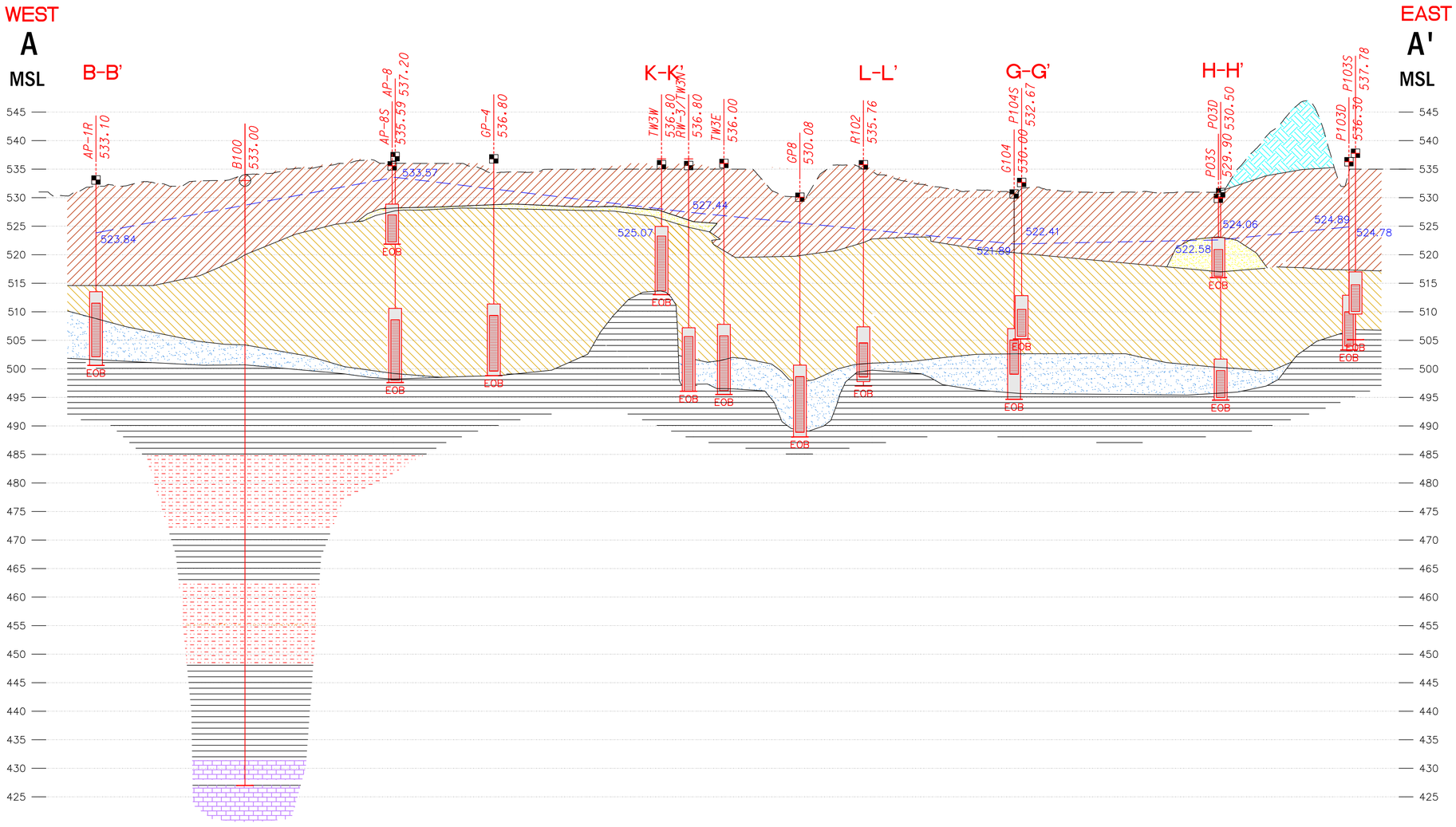
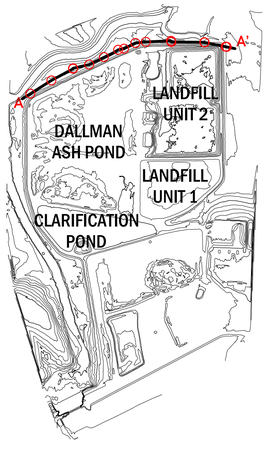


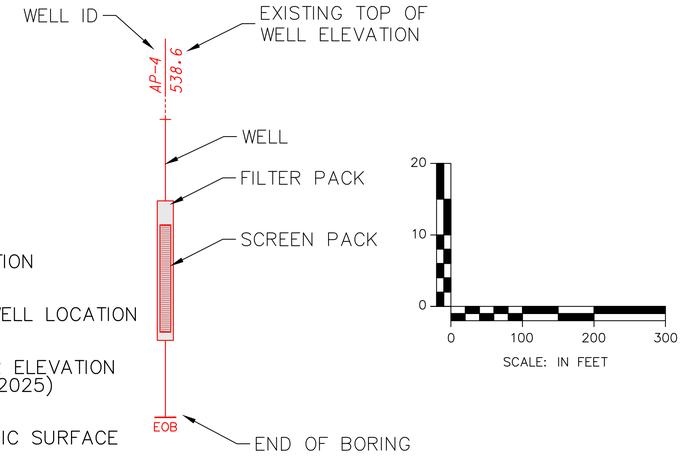


NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
2. SURFACE GENERATED FROM LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: MAY 16, 2023).
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- CLAYSTONE
- SANDSTONE
- LIMESTONE
- BORING LOCATION
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

GEOLOGIC CROSS-SECTION A-A'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

A-A'

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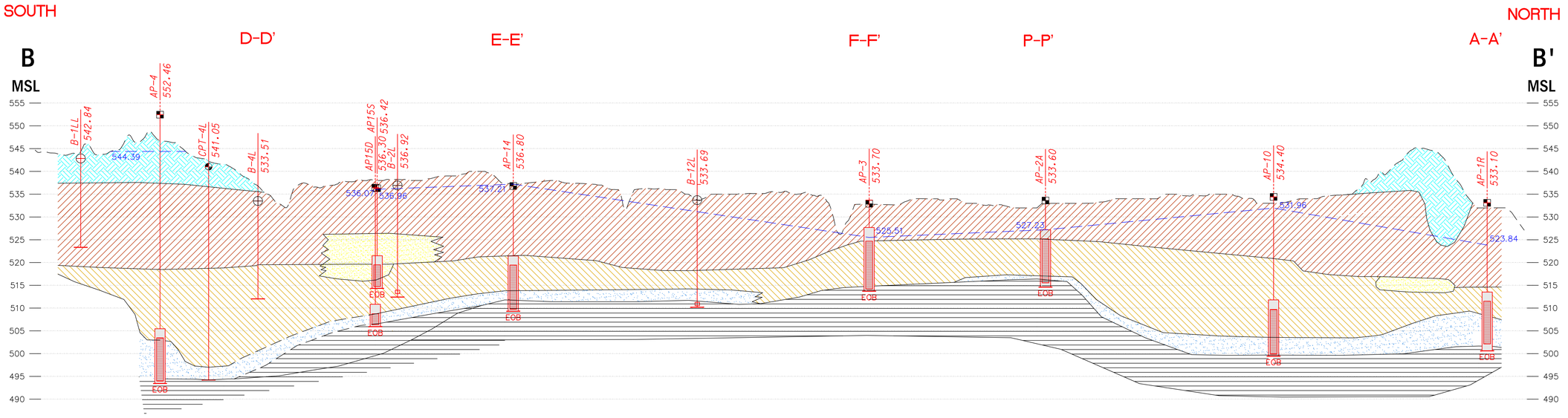
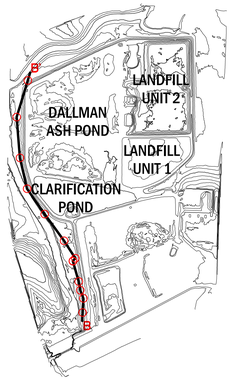


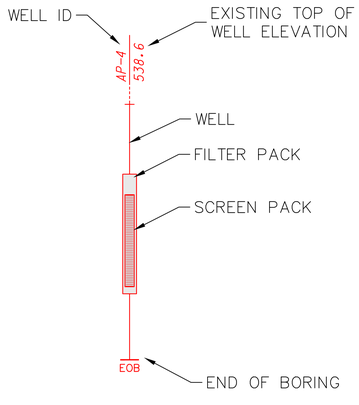


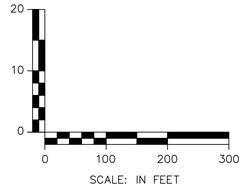
NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
2. SURFACE GENERATED FROM LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: MAY 16, 2023).
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- SHALLOW SAND
- BORING LOCATION
- MONITORING WELL LOCATION
- CPT BORING LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE





NO.	DATE	REVISION DESCRIPTION	BY

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWSENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

GEOLOGIC CROSS-SECTION B-B'

PLANS PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

B-B'

Tab: BB Last Saved: September 23, 2025, by Mike Nguyen Plotted: Tuesday, September 23, 2025 10:34:25 AM
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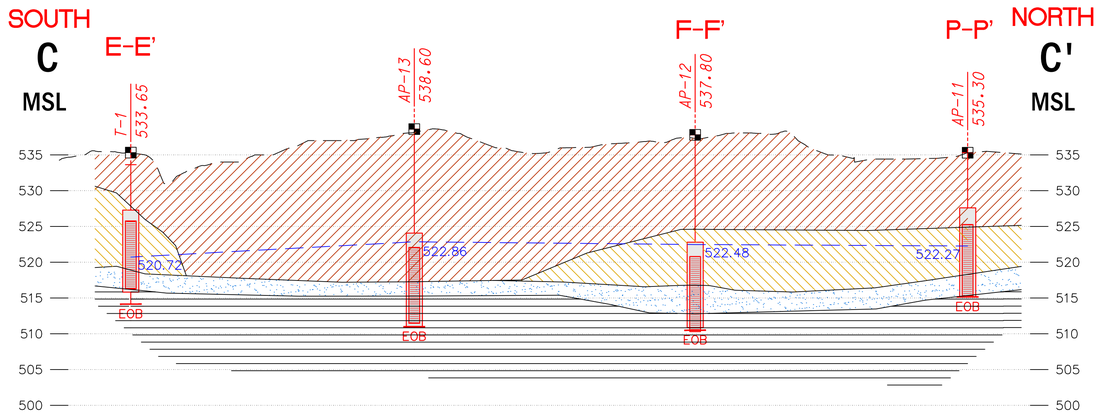
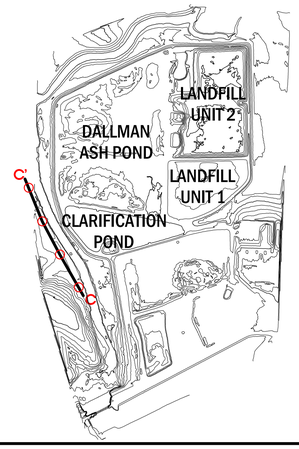


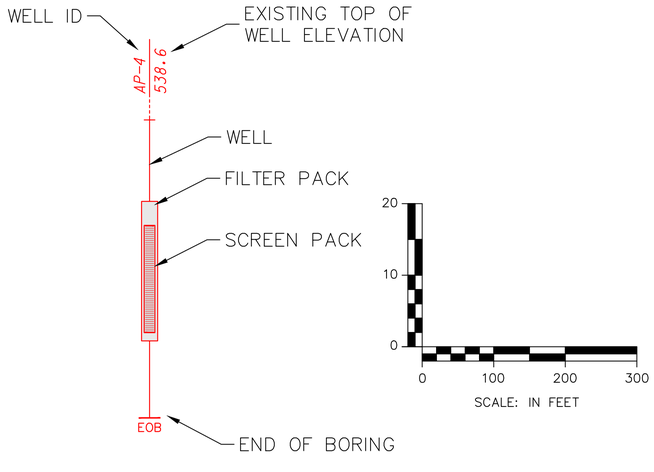


NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
2. SURFACE GENERATED FROM LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: MAY 16, 2023).
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION C-C'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

C-C'

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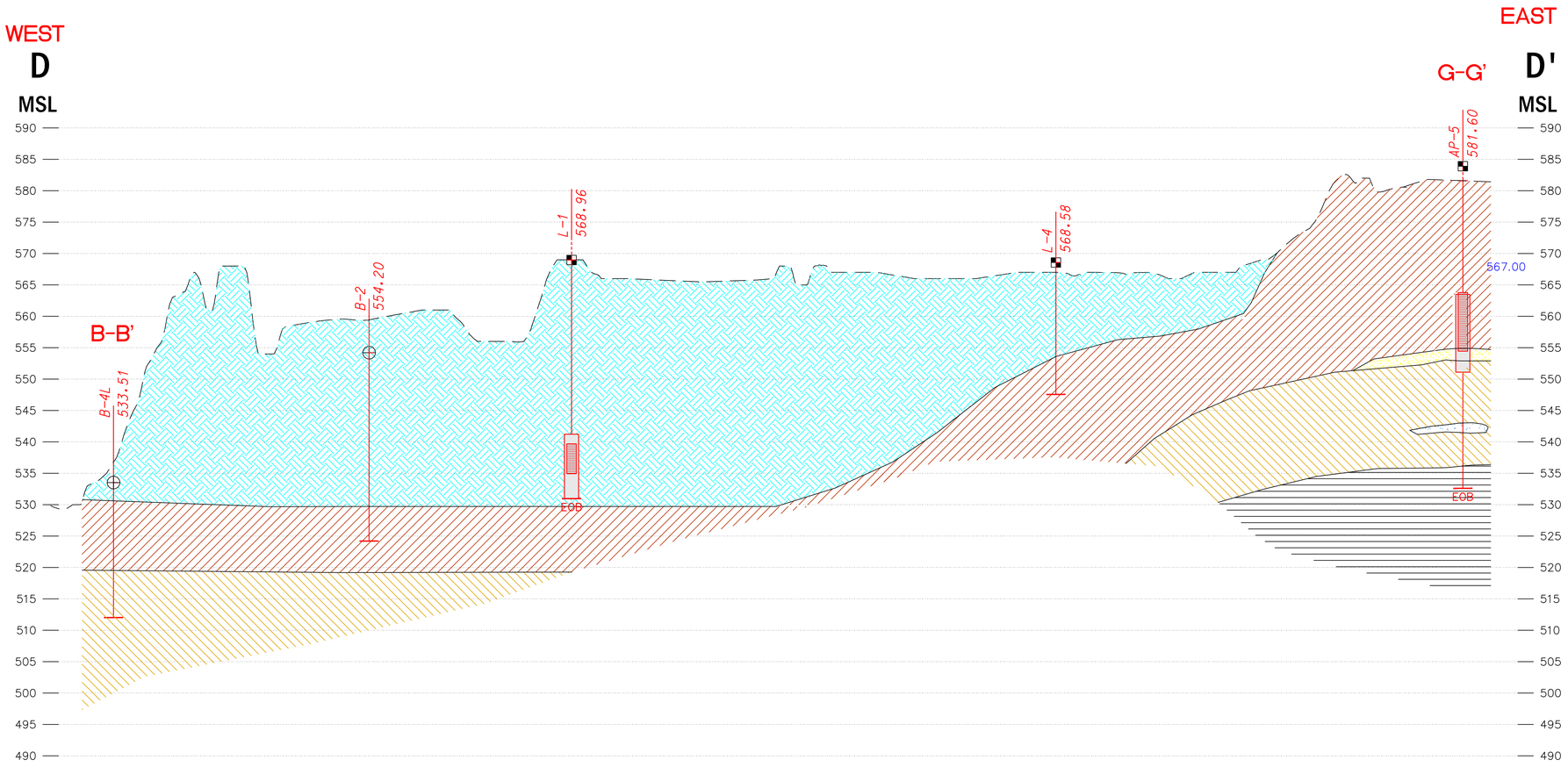
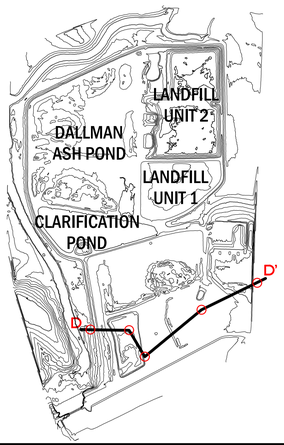


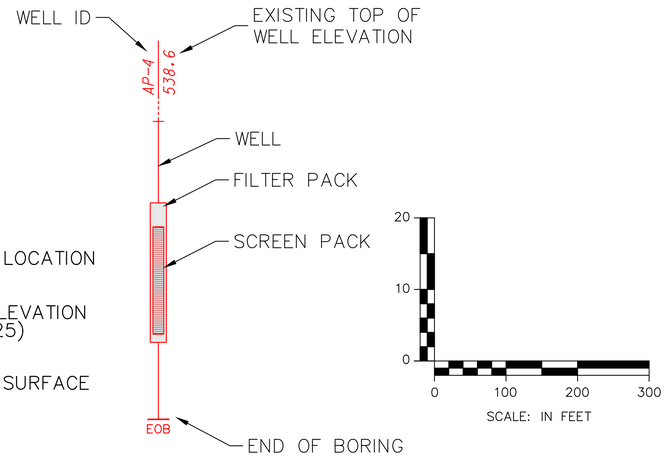


NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
2. SURFACE GENERATED FROM LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: MAY 16, 2023).
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- BORING LOCATION
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION D-D'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

D-D'

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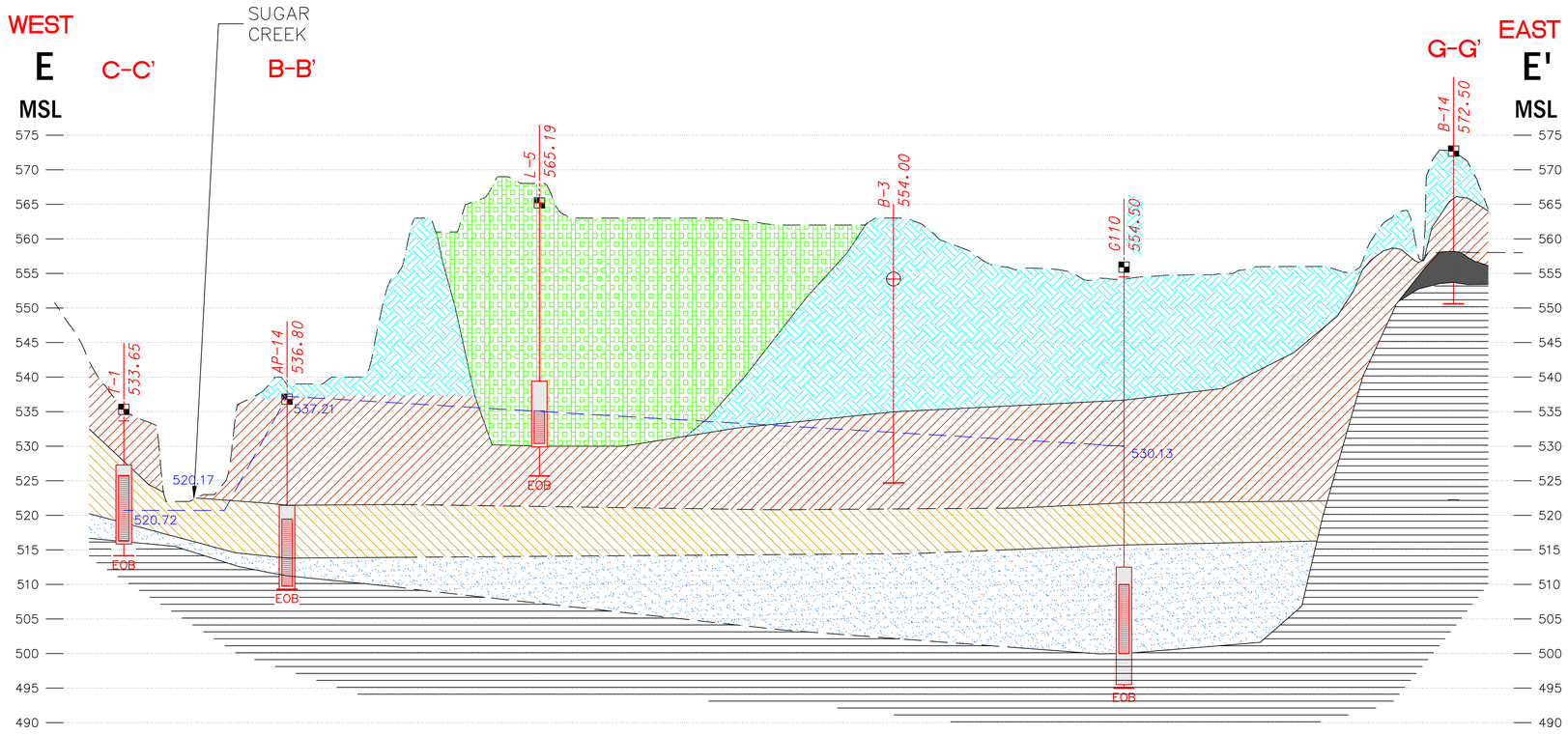

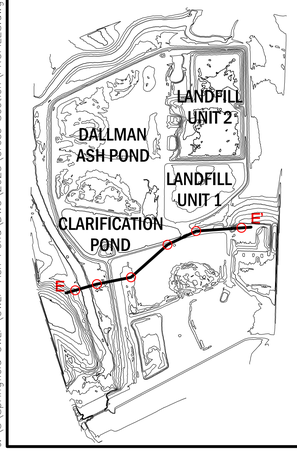

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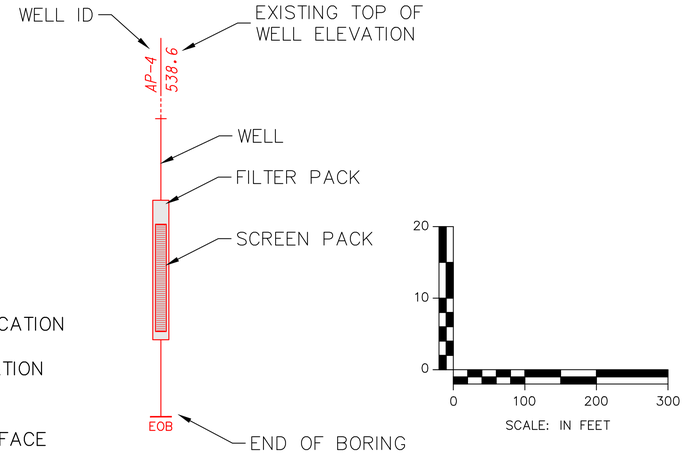
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- CCR ASH
- COAL
- BORING LOCATION
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



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SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION E-E'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

E-E'

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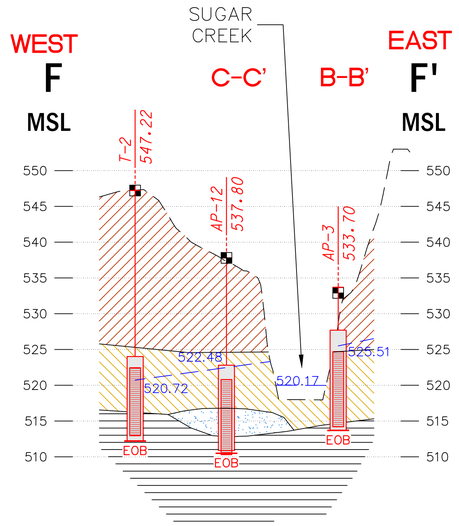

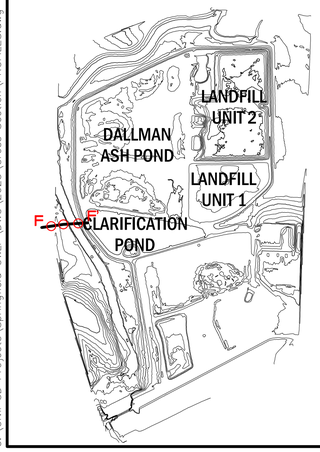

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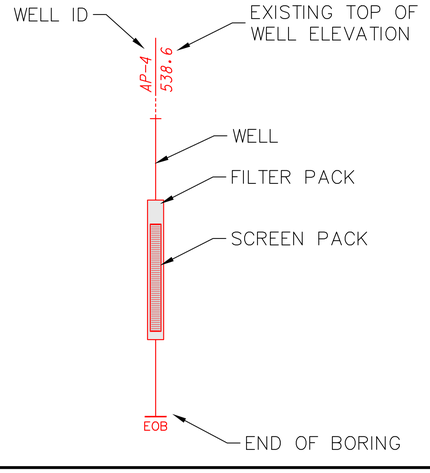
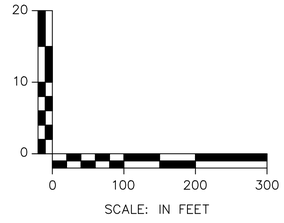
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE





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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION F-F'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

F-F'

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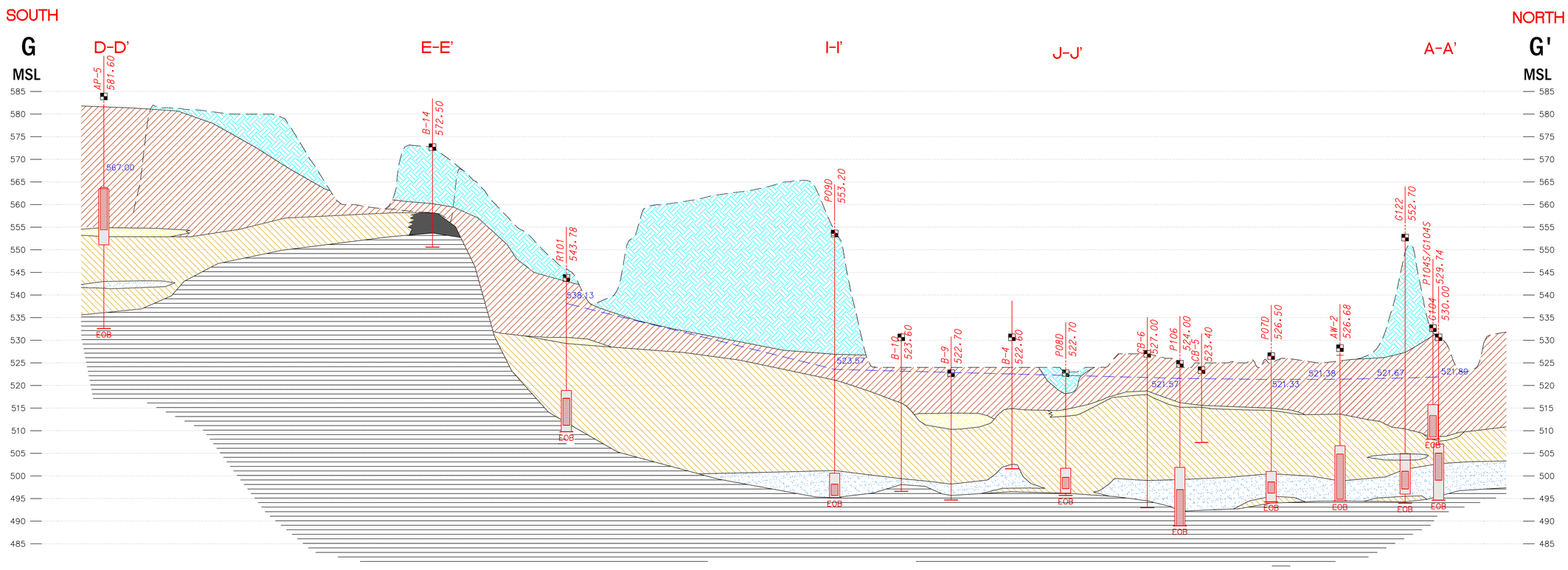

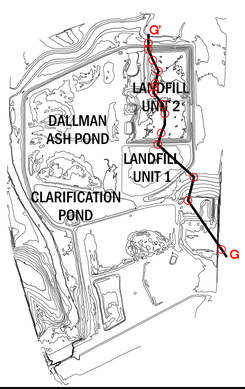

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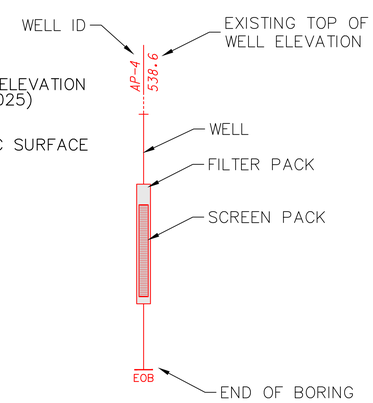
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

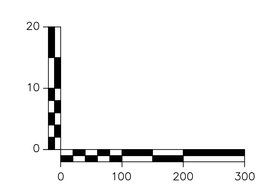
LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- COAL
- MONITORING WELL LOCATION

525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)

BASAL SAND POTENTIOMETRIC SURFACE





NO.	DATE	REVISION DESCRIPTION	BY

NO.	DATE	REVISION DESCRIPTION	BY

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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

GEOLOGIC CROSS-SECTION G-G'

PLANS PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER: G-G'

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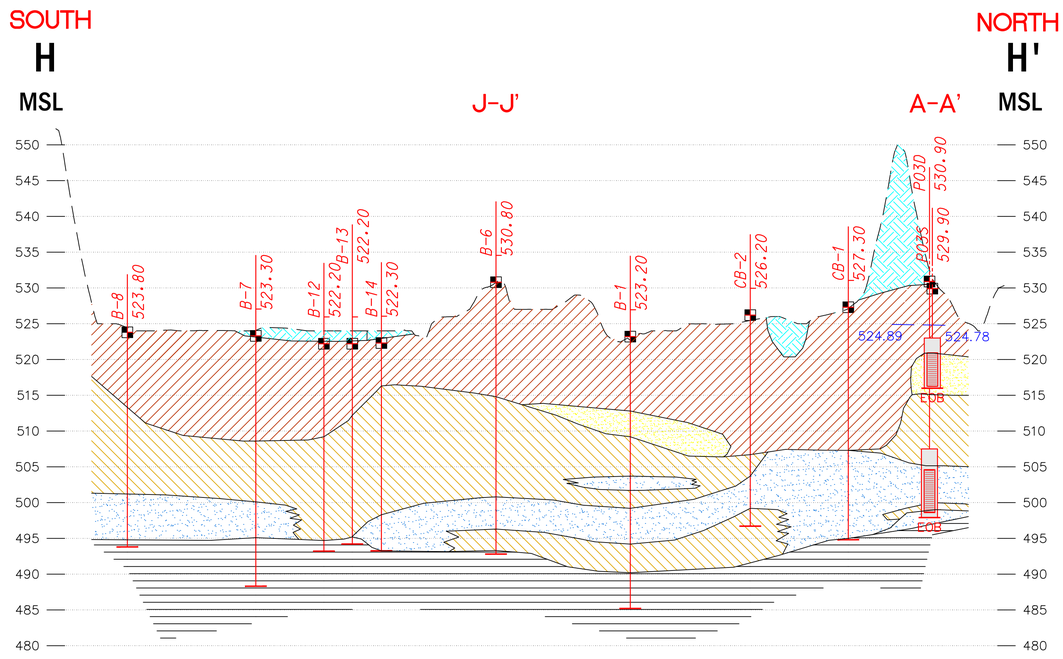

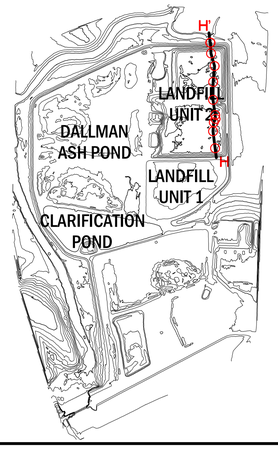

NOTES

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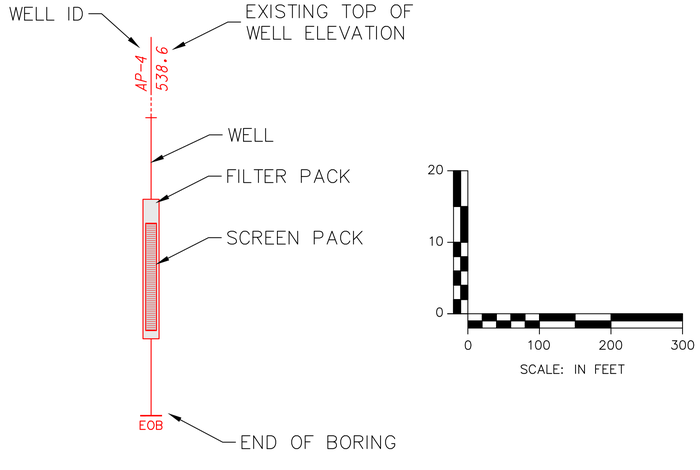
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION H-H'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

H-H'

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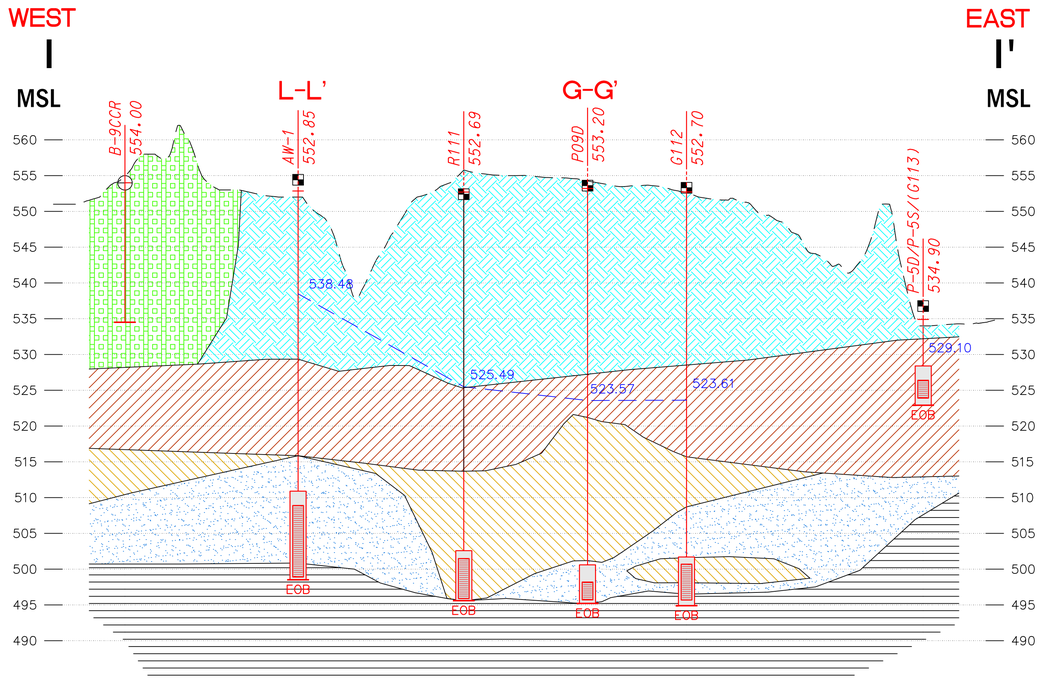

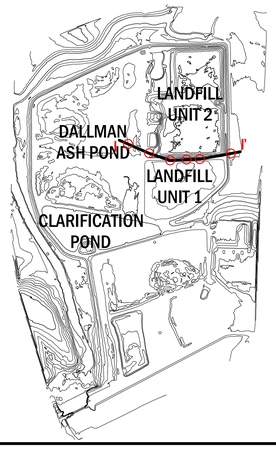

NOTES

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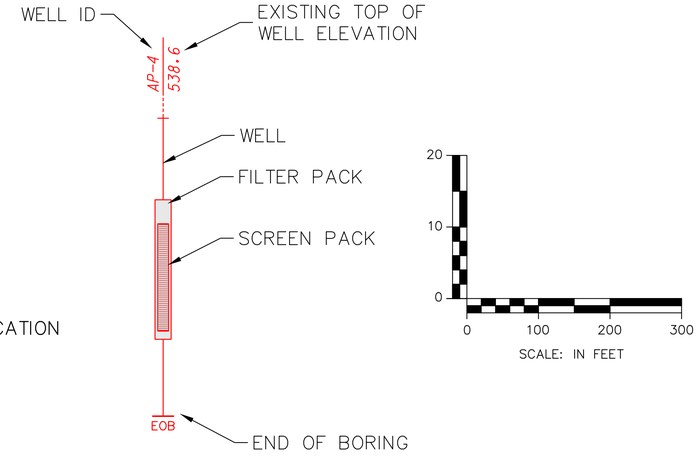
LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- 525.00 — GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE
- BASAL SAND
- SHALE
- CCR ASH
- BORING LOCATION
- MONITORING WELL LOCATION



NO.	DATE	REVISION DESCRIPTION	BY

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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION I-I'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:
I-I'

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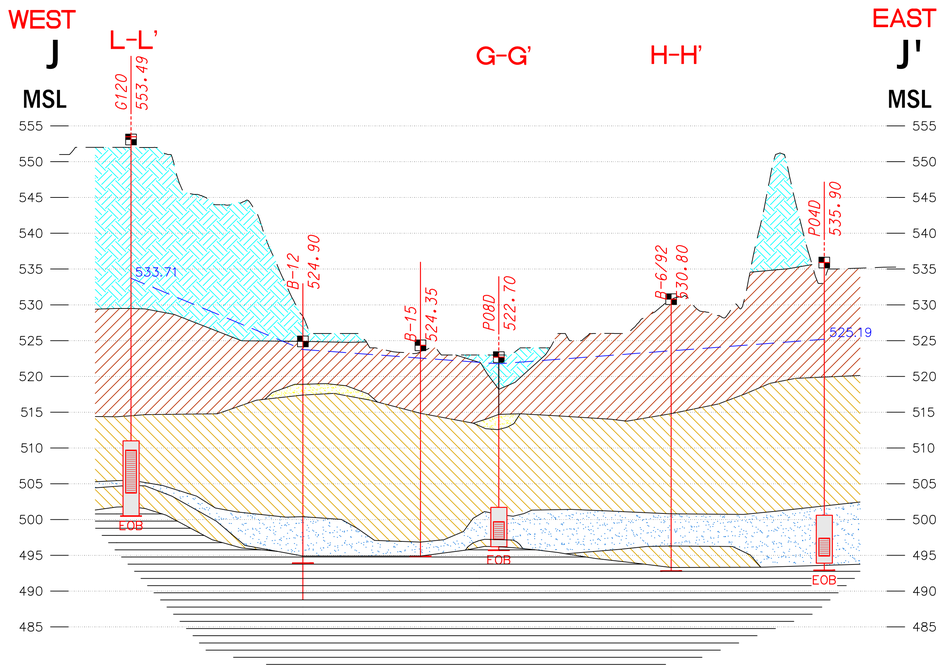

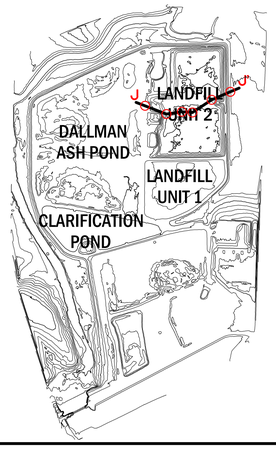

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LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- SHALLOW SAND
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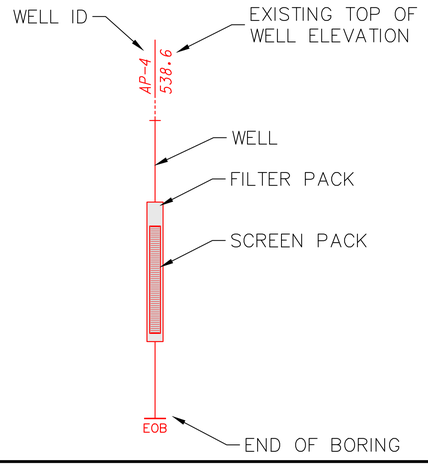
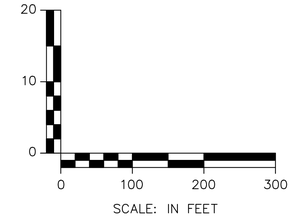
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE





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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

GEOLOGIC CROSS-SECTION J-J'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

J-J'

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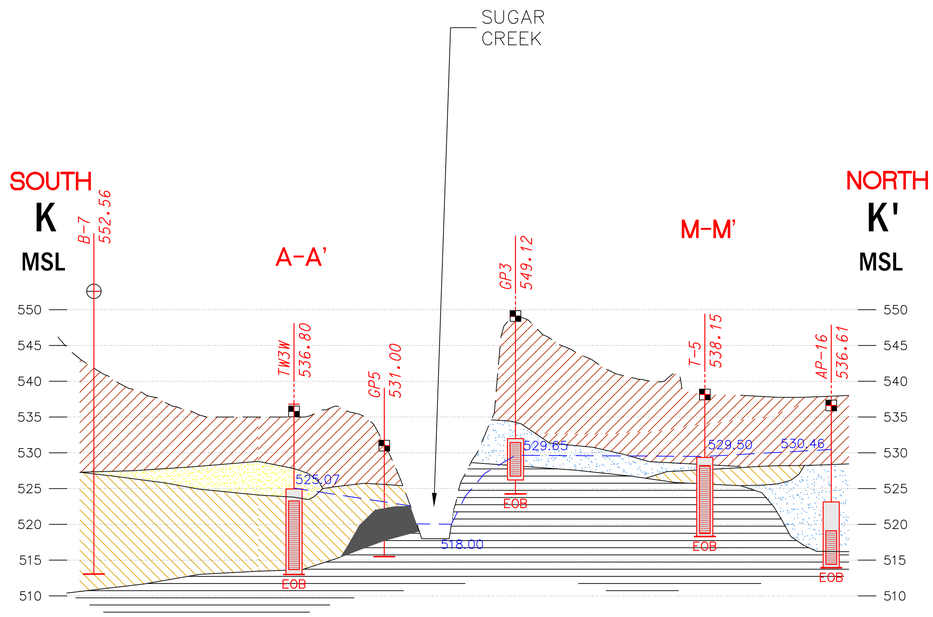

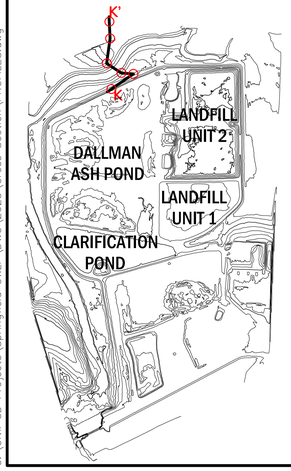

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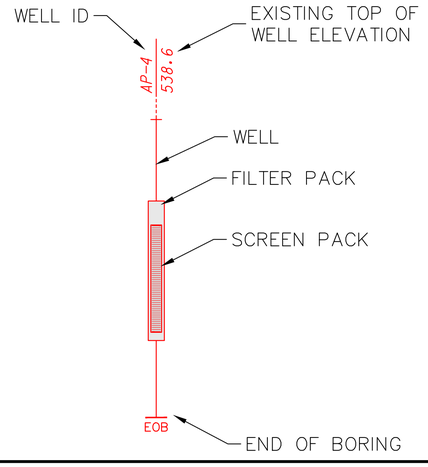
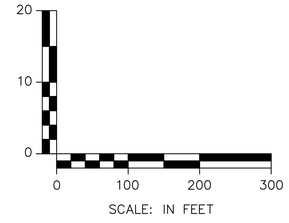
LEGEND

- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- COAL
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE





NO.	DATE	REVISION DESCRIPTION	BY

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3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION K-K'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

K-K'

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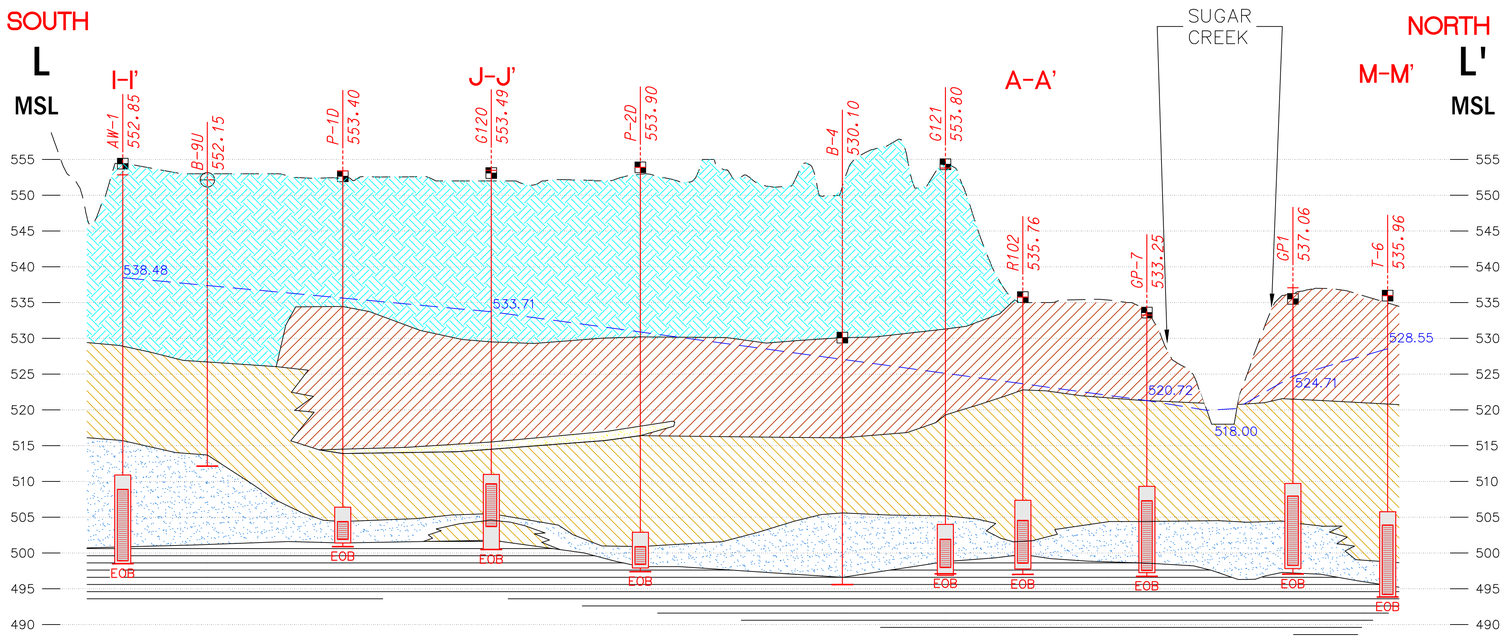
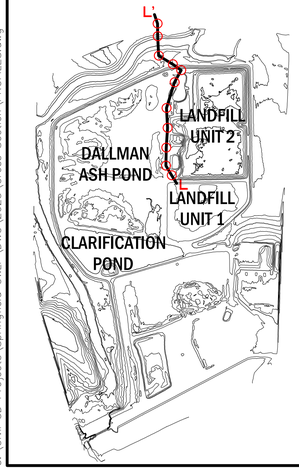
C:\Civil 3D Projects\Springfield CWLP\DWG\2025\Cross Section\PROFILES.dwg



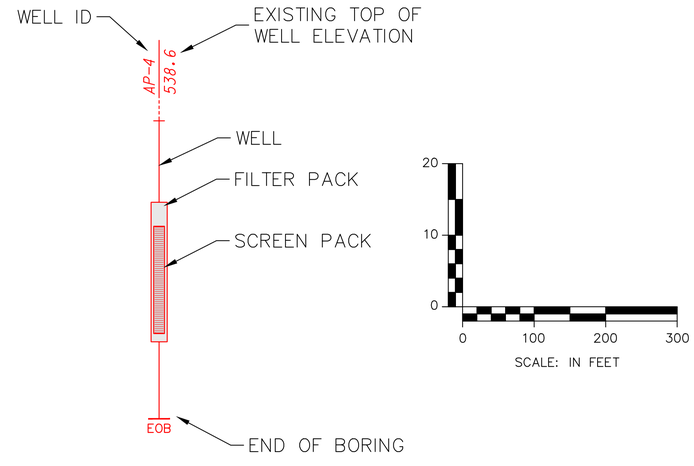


NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
2. SURFACE GENERATED FROM LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: MAY 16, 2023).
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- FILL
- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALLOW SAND
- SHALE
- BORING LOCATION
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION L-L'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:
L-L'

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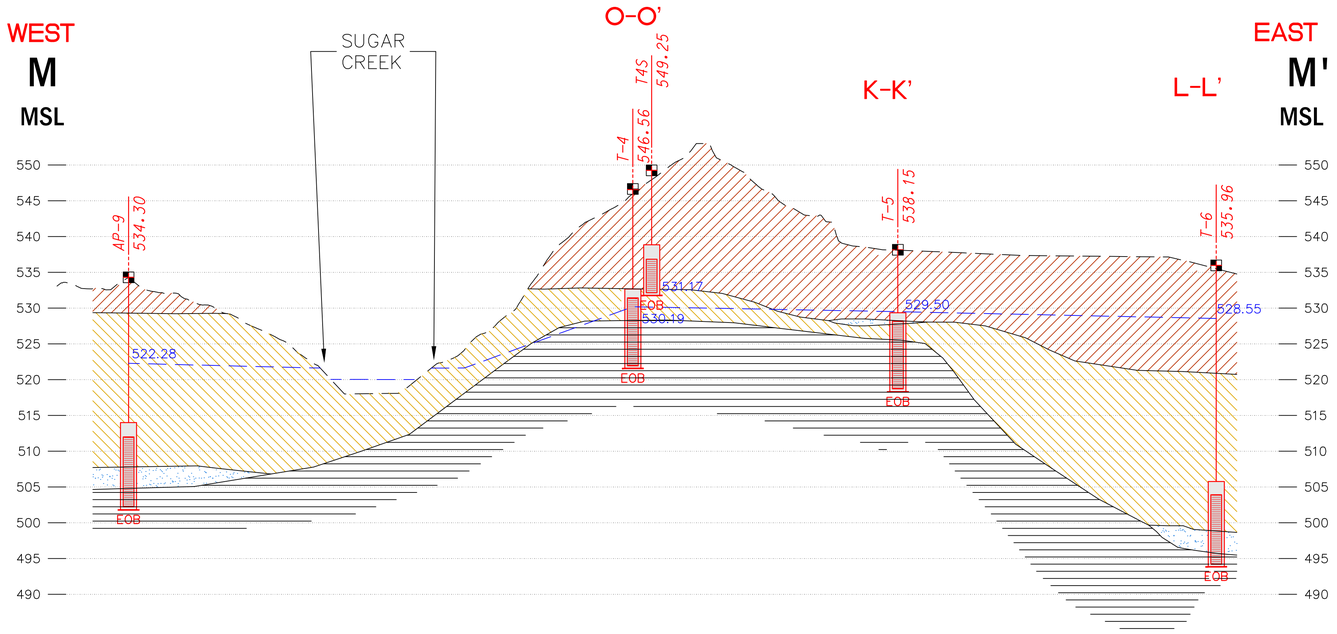

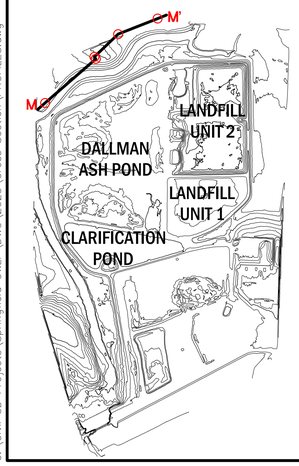

NOTES

1. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING. SEE BORING LOGS FOR DETAILED DESCRIPTION.
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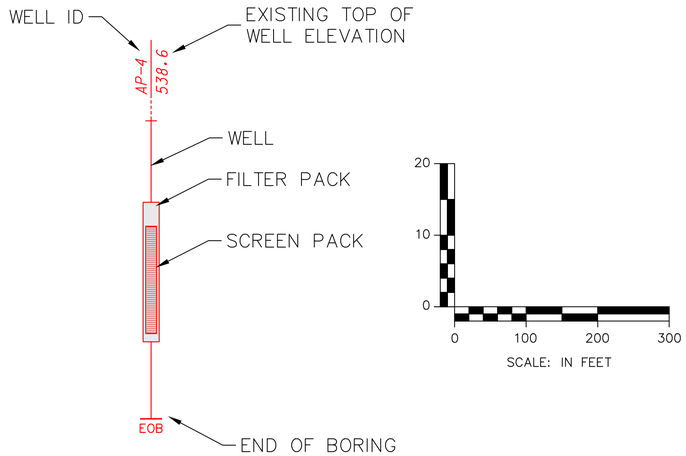
3. WELL/BORING SYMBOL PLACED AT SURFACE ELEVATION AT THE TIME THE BORING WAS COMPLETED.

LEGEND

- UPPER COHESIVE DEPOSIT
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

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PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION M-M'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

M-M'

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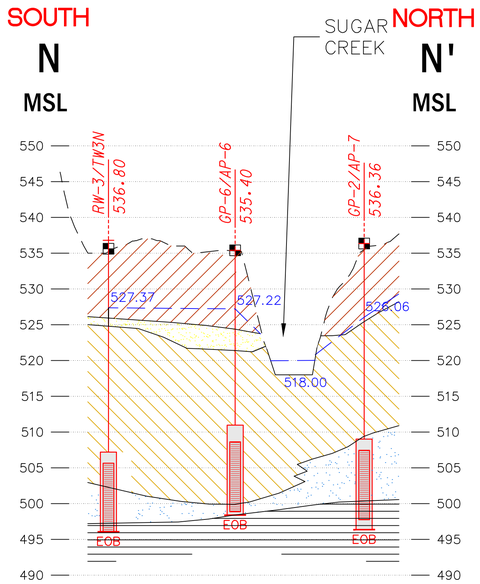

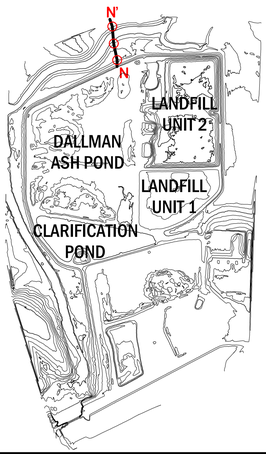

NOTES

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LEGEND

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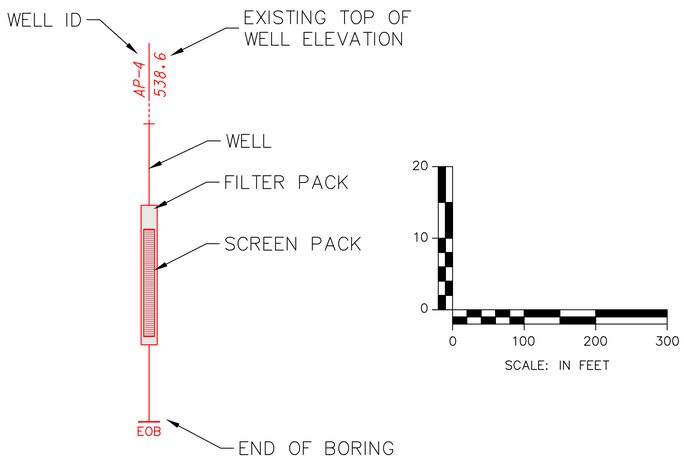
- SHALLOW SAND
- LOWER COHESIVE DEPOSIT
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



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LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO
PONTIAC, IL • DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION N-N'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

N-N'

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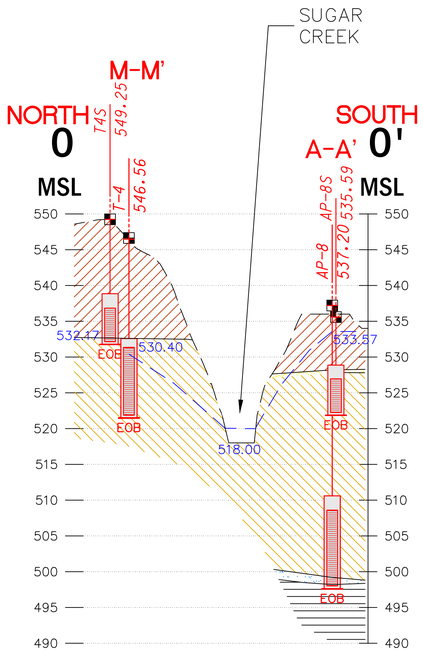

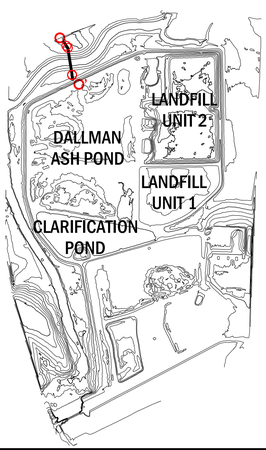

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- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
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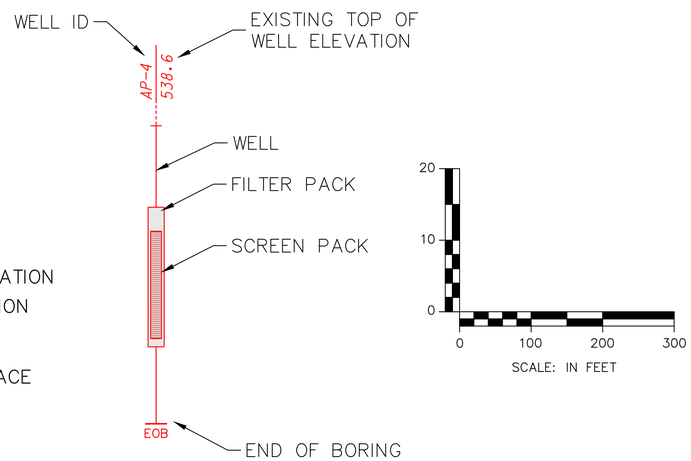

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LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION O-O'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

O-O'

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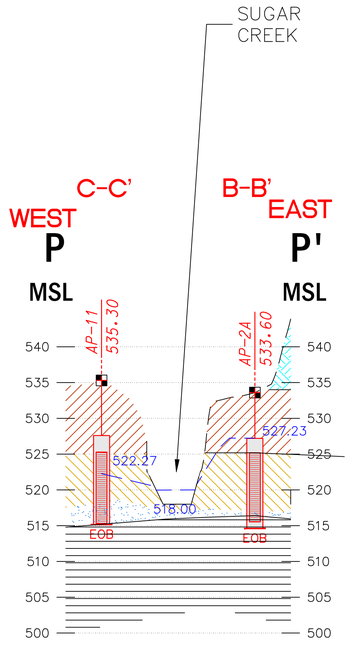

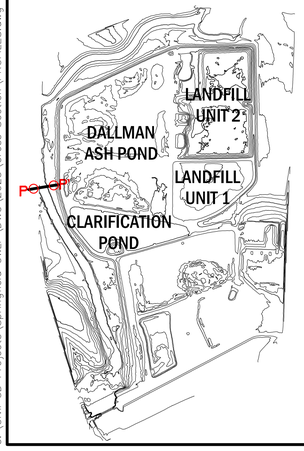

NOTES

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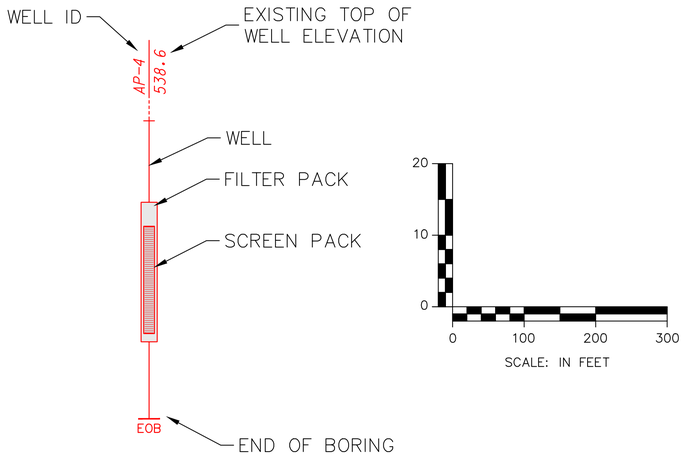
- BASAL SAND
- SHALE
- MONITORING WELL LOCATION
- 525.00 GROUNDWATER ELEVATION (AUGUST 21, 2025)
- BASAL SAND POTENTIOMETRIC SURFACE



NO.	DATE	REVISION DESCRIPTION	BY

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SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: MTH

GEOLOGIC CROSS-SECTION P-P'

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240338/0014

SHEET NUMBER:

P-P'

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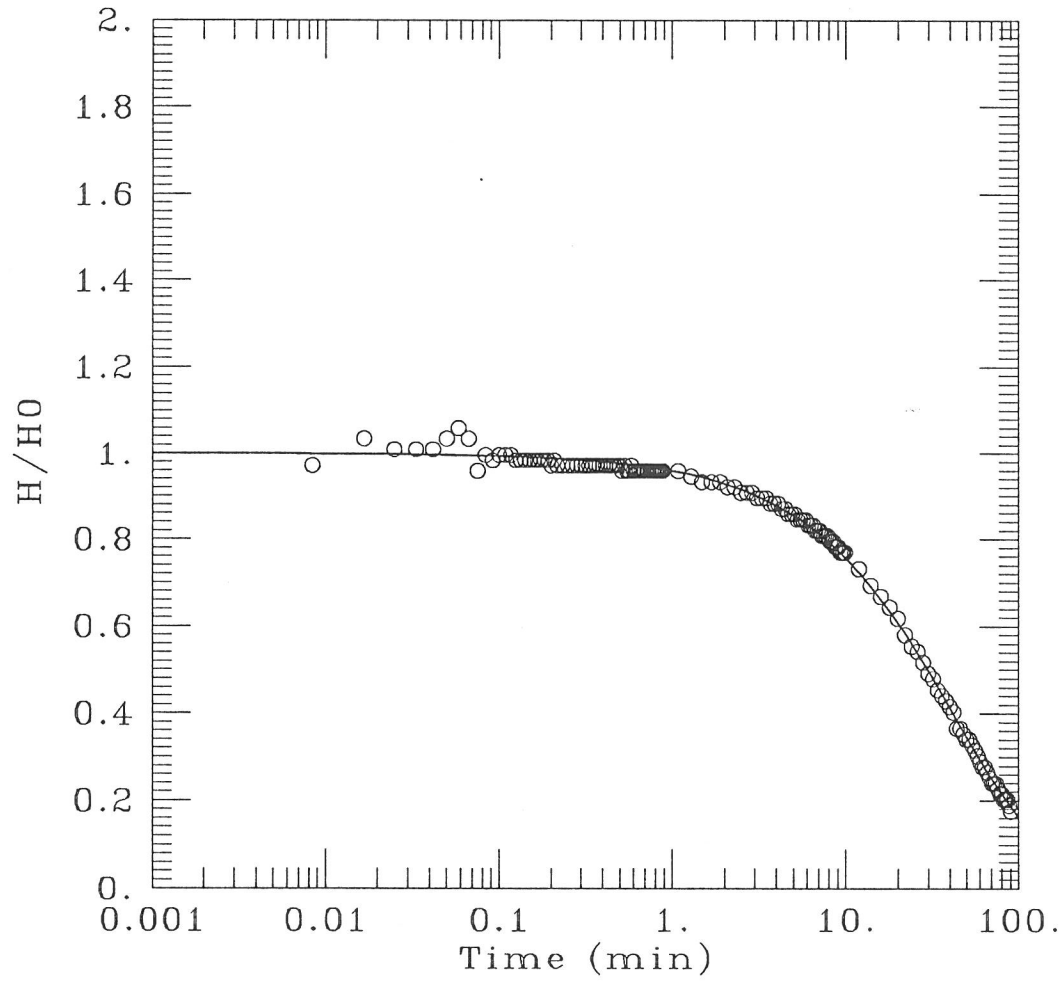
APPENDIX D:
SLUG TEST/PACKER TEST DATA

SLUG TEST DATA

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-1S RECOVERY



DATA SET:
p-1s-r.aqt
03/13/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
8/27/92

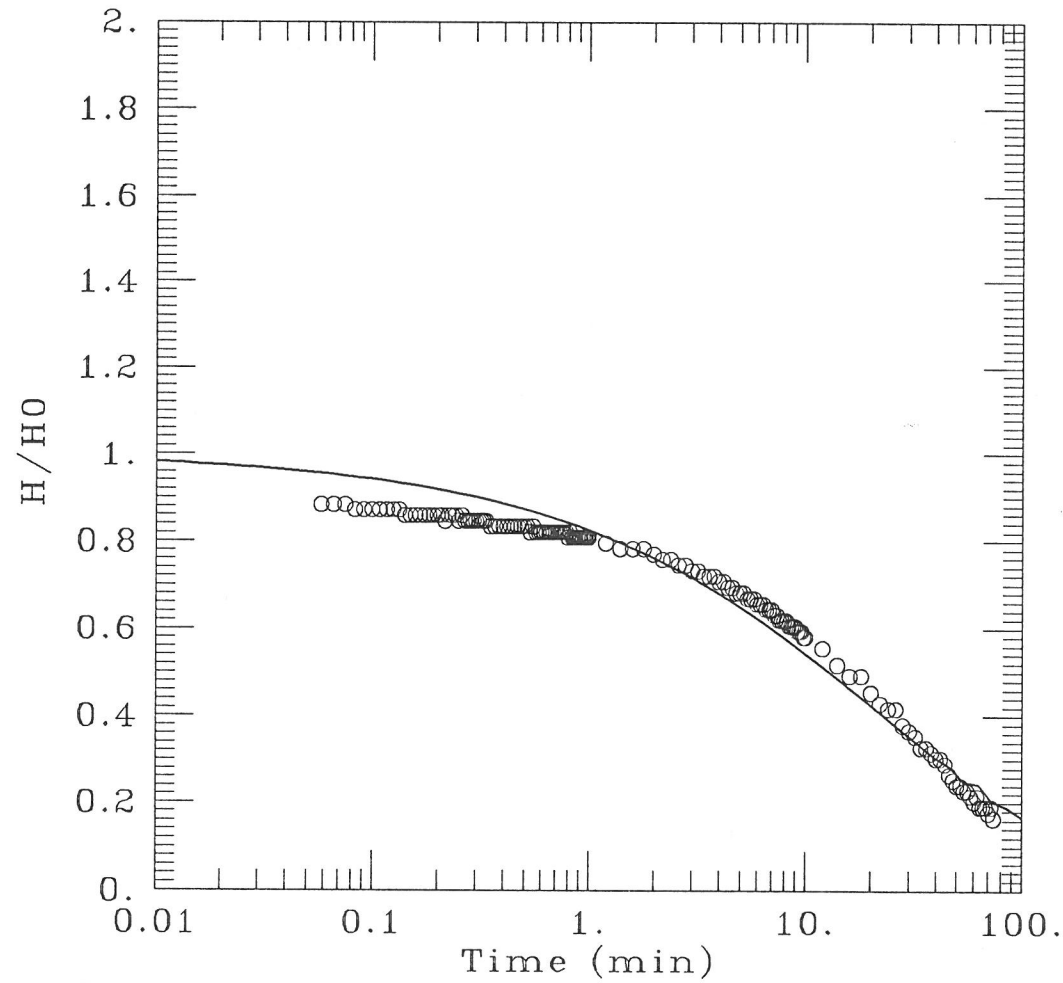
ESTIMATED PARAMETERS:
T = 0.0003291 ft^2/min
S = 3.3269E-05

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2352

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-1S DRAWDOWN



DATA SET:
p-1s-d.aqt
03/13/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
8/27/92

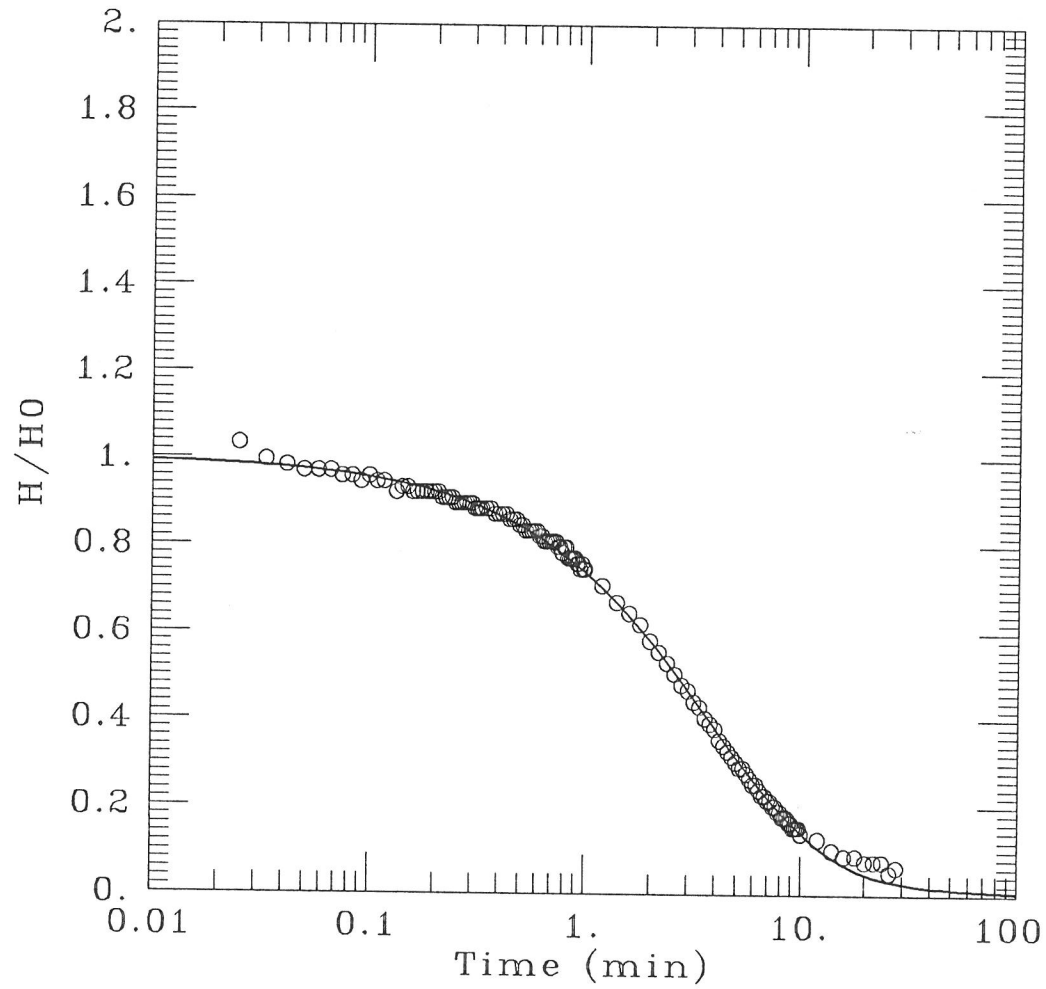
ESTIMATED PARAMETERS:
T = 8.6963E-05 ft^2/min
S = 0.03305

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2353

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-1D RECOVERY



DATA SET:
P-1D-R.AQT
03/13/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
8/27/92

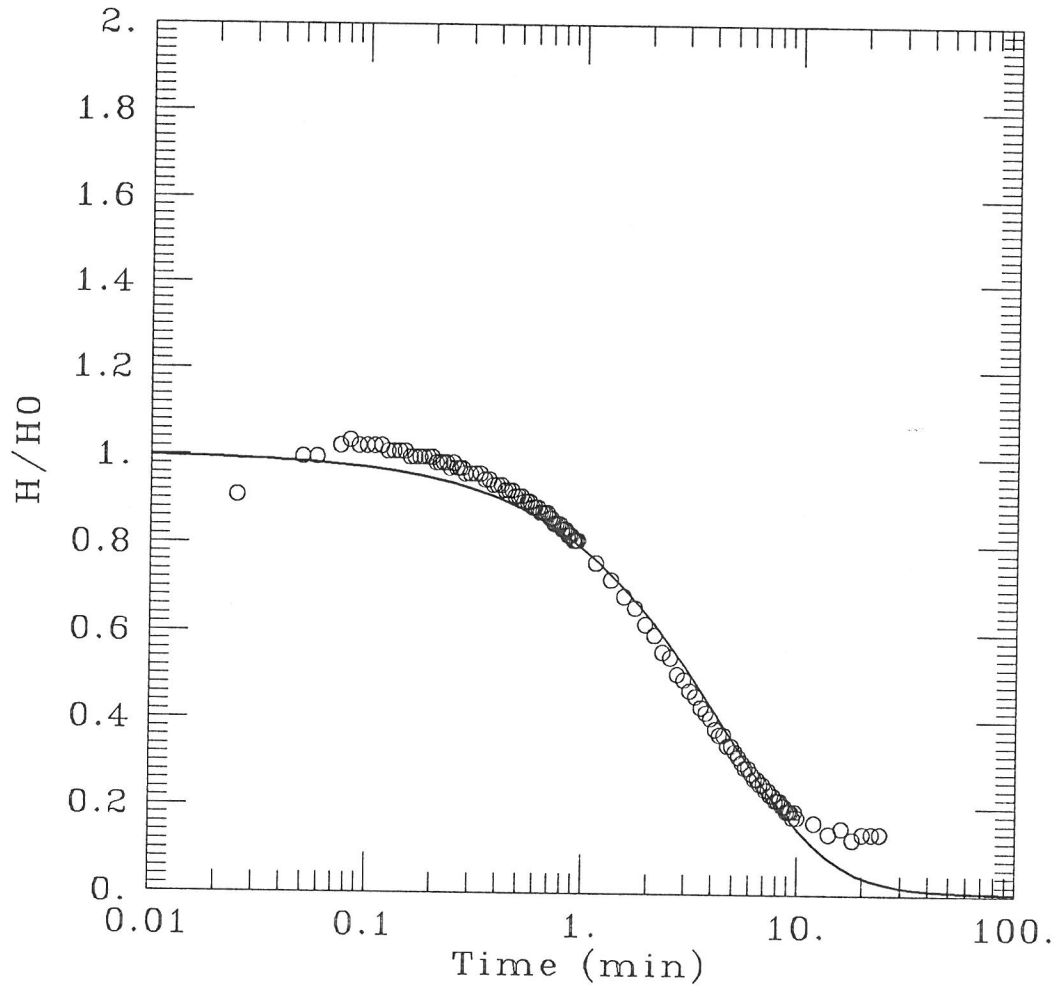
ESTIMATED PARAMETERS:
T = 0.003692 ft^2/min
S = 3.0237E-05

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2354

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-1D DRAWDOWN



DATA SET:
p-1d-d.aqt
03/13/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
8/27/92

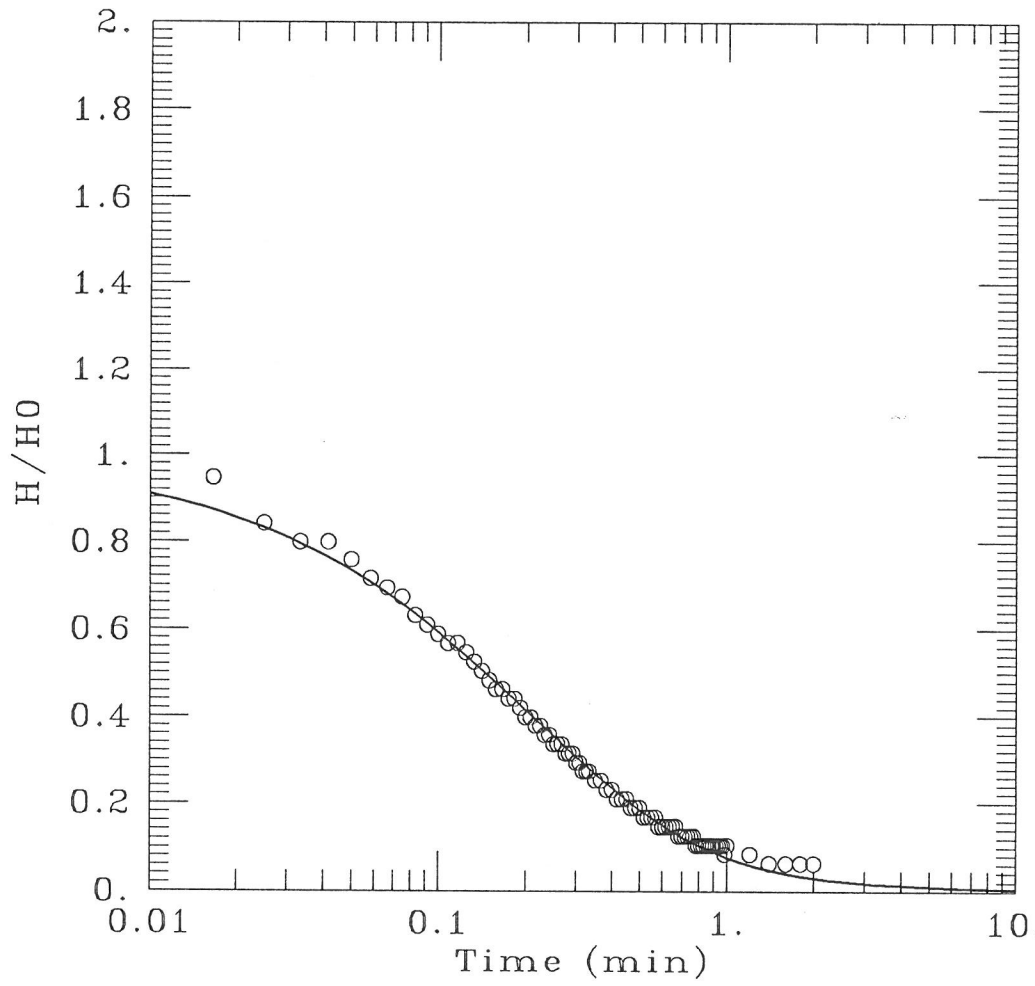
ESTIMATED PARAMETERS:
T = 0.006303 ft^2/min
S = 1.E-08

TEST DATA:
HO = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2355

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-3S RECOVERY



DATA SET:
p-3s-r.aqt
03/13/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
9/1/92

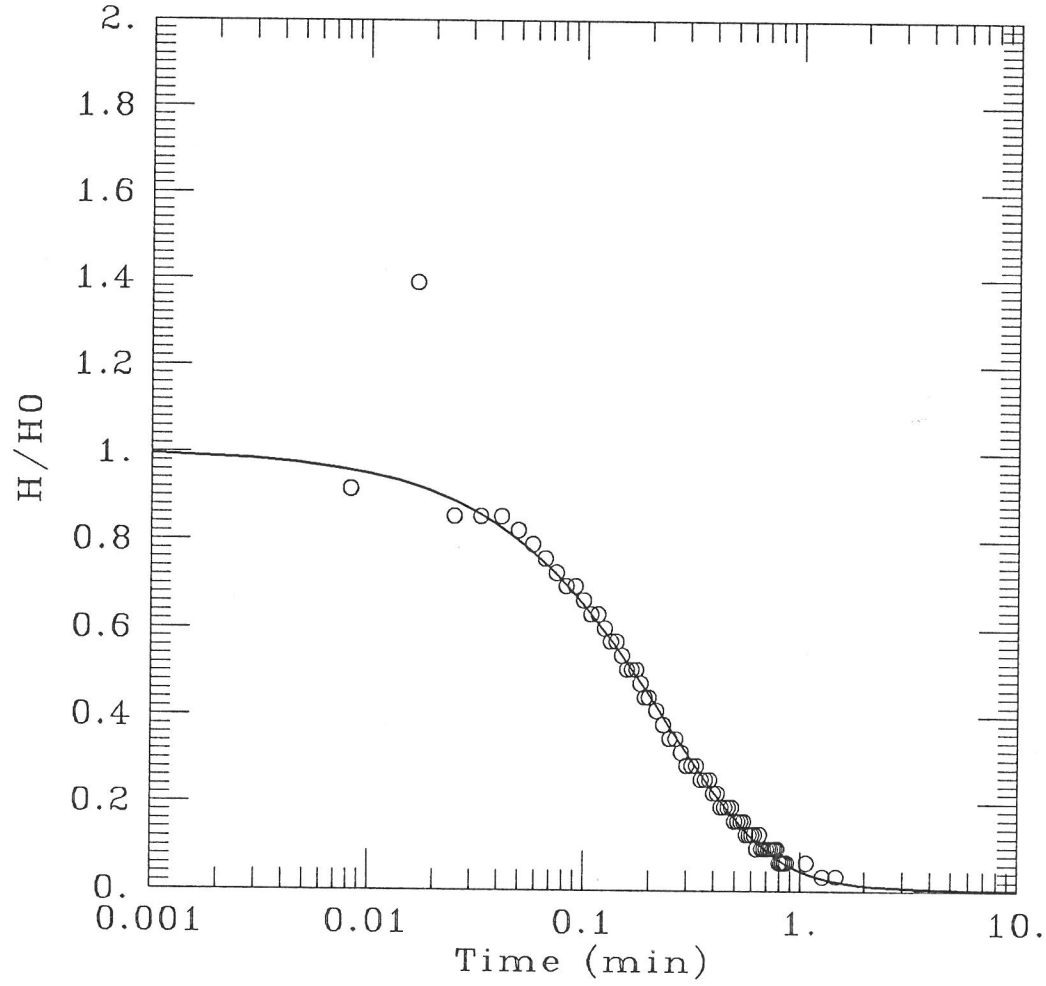
ESTIMATED PARAMETERS:
T = 0.04309 ft^2/min
S = 0.0004477

TEST DATA:
H0 = 0.75 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2356

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-3S DRAWDOWN



DATA SET:
p-3s-d.aqt
03/13/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
9/1/92

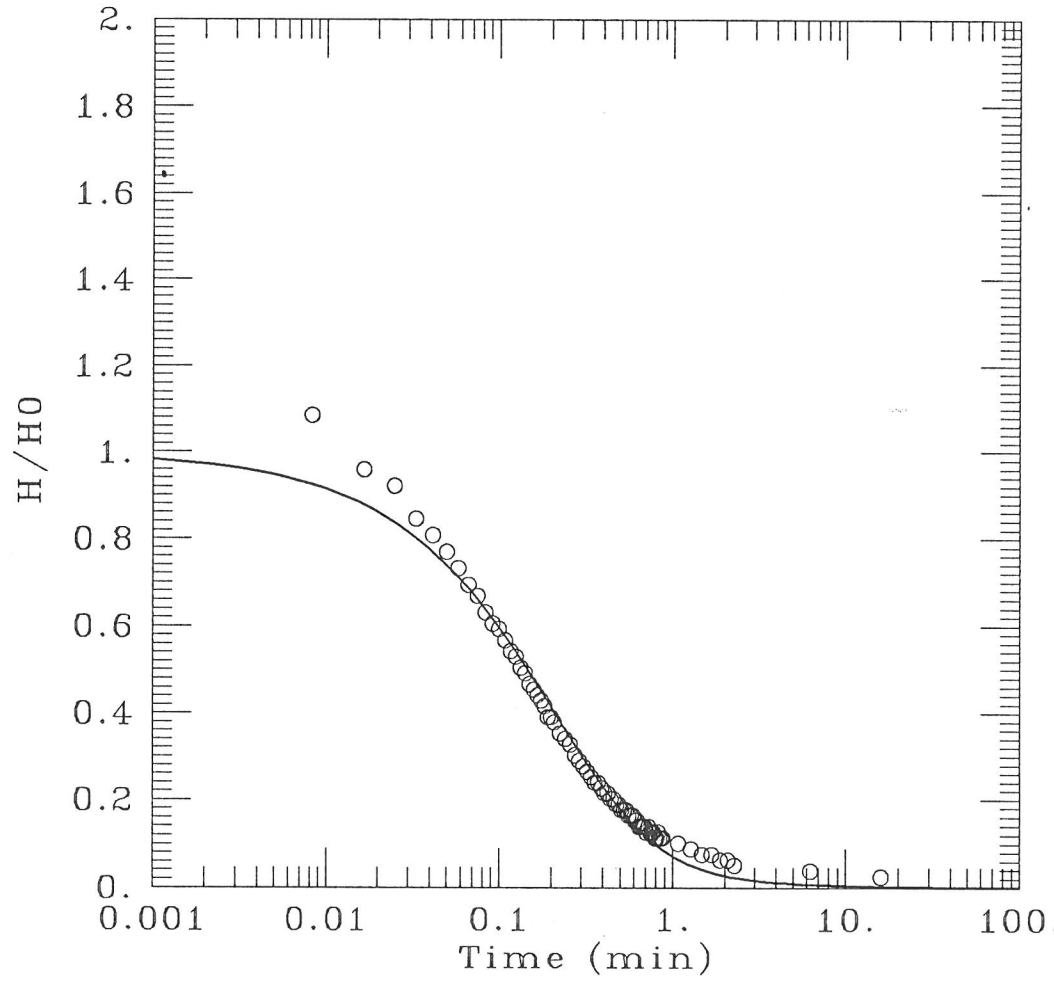
ESTIMATED PARAMETERS:
T = 0.119 ft^2/min
S = 1.E-08

TEST DATA:
H0 = 0.5 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2357

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-3D RECOVERY



DATA SET:
P-3D-R.AQT
03/13/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
9/1/92

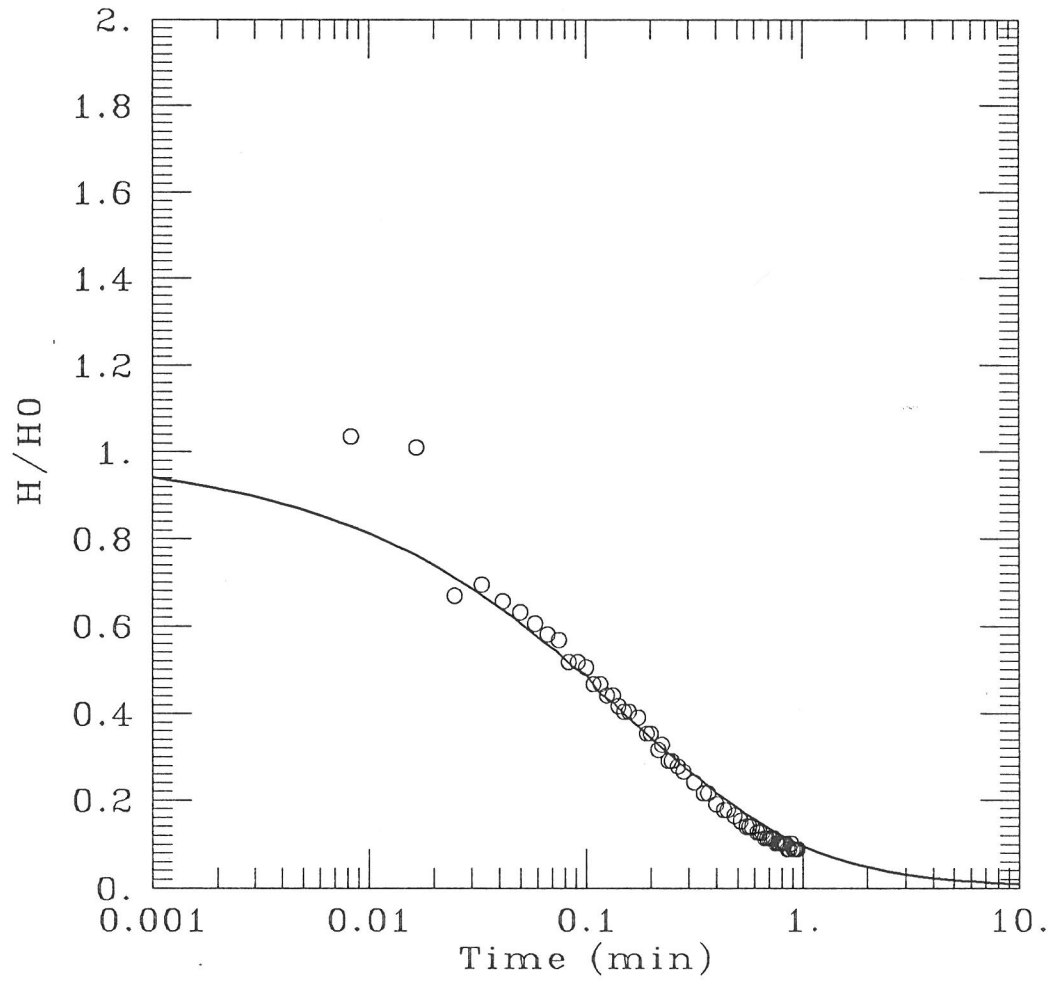
ESTIMATED PARAMETERS:
T = 0.04784 ft^2/min
S = 0.0002658

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2358

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-3D DRAWDOWN



DATA SET:
P-3D-D.AQT
03/13/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
9/1/92

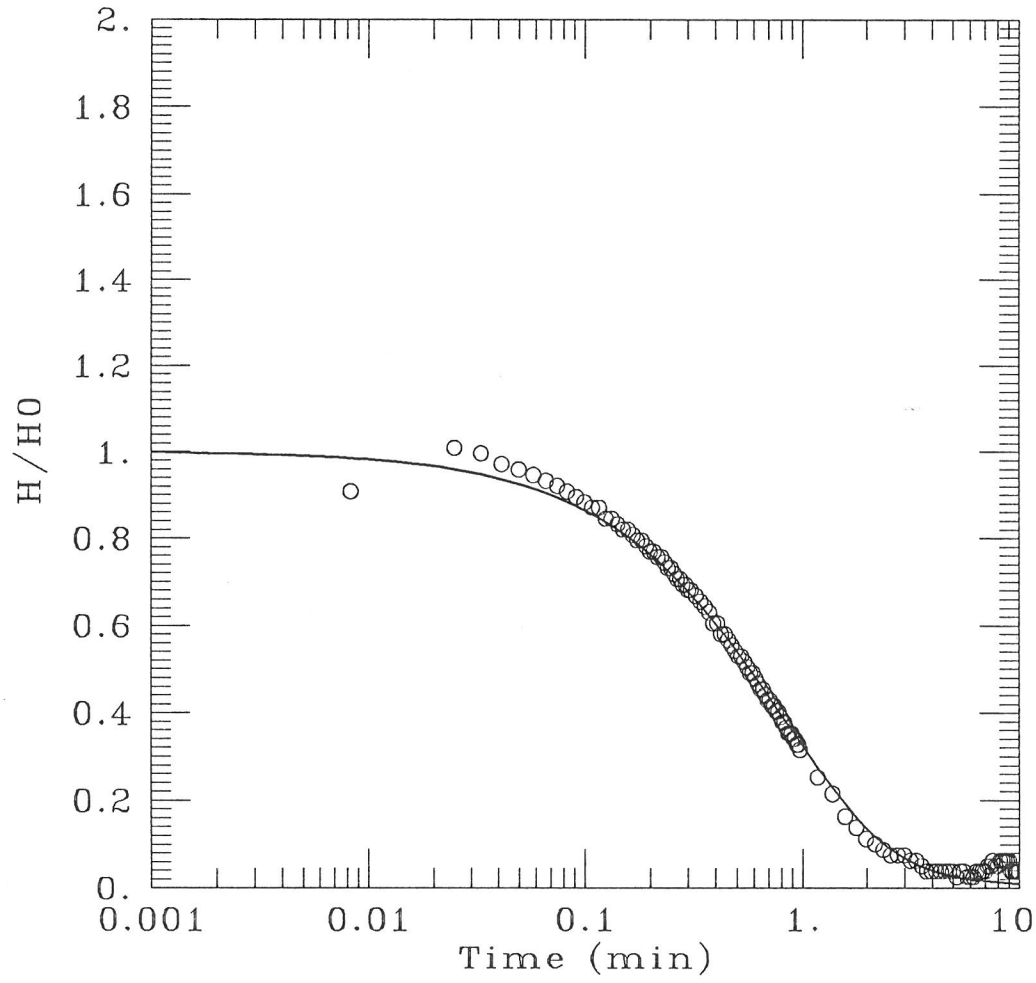
ESTIMATED PARAMETERS:
T = 0.02173 ft^2/min
S = 0.01321

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2359

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-4 RECOVERY



DATA SET:
P-4-R.AQT
03/13/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
9/1/92

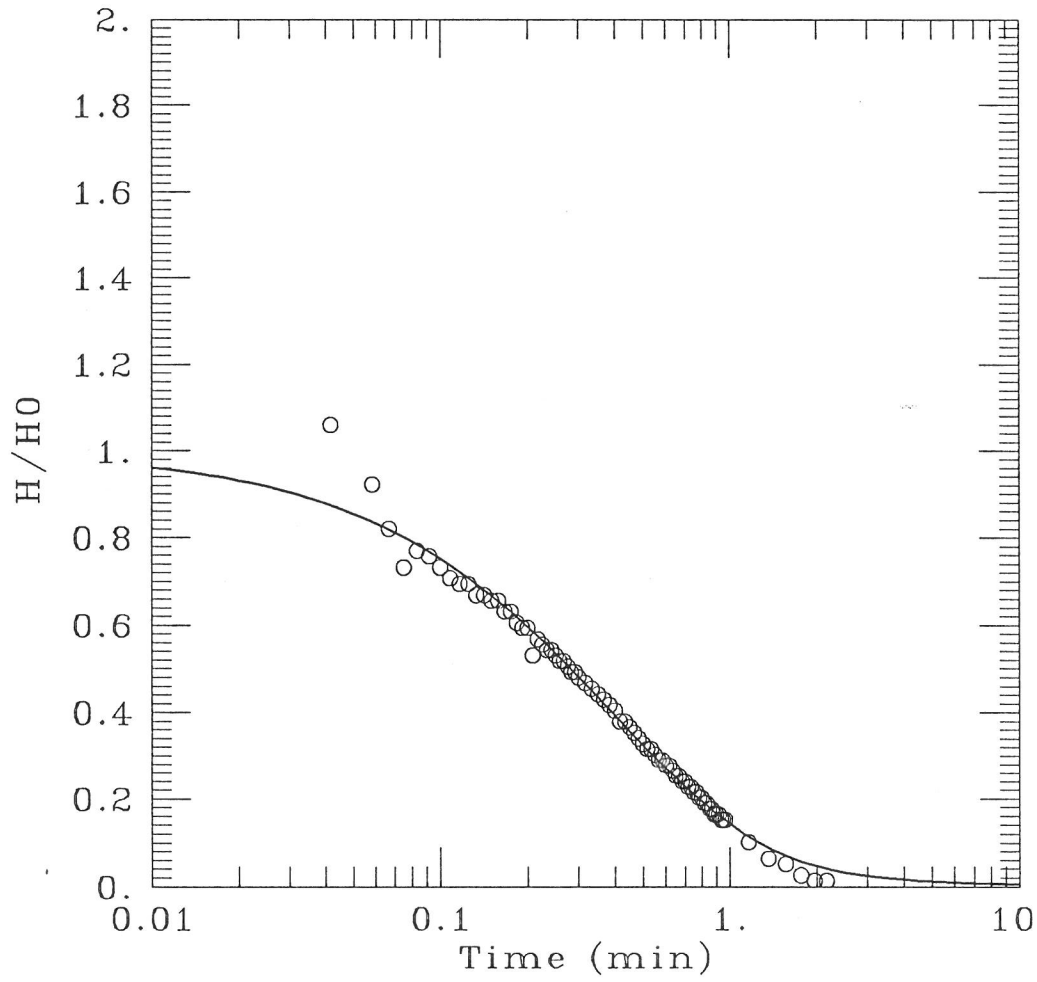
ESTIMATED PARAMETERS:
T = 0.02555 ft^2/min
S = 7.9368E-07

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2360

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-4 DRAWDOWN



DATA SET:
P-4-D.AQT
03/13/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
9/1/92

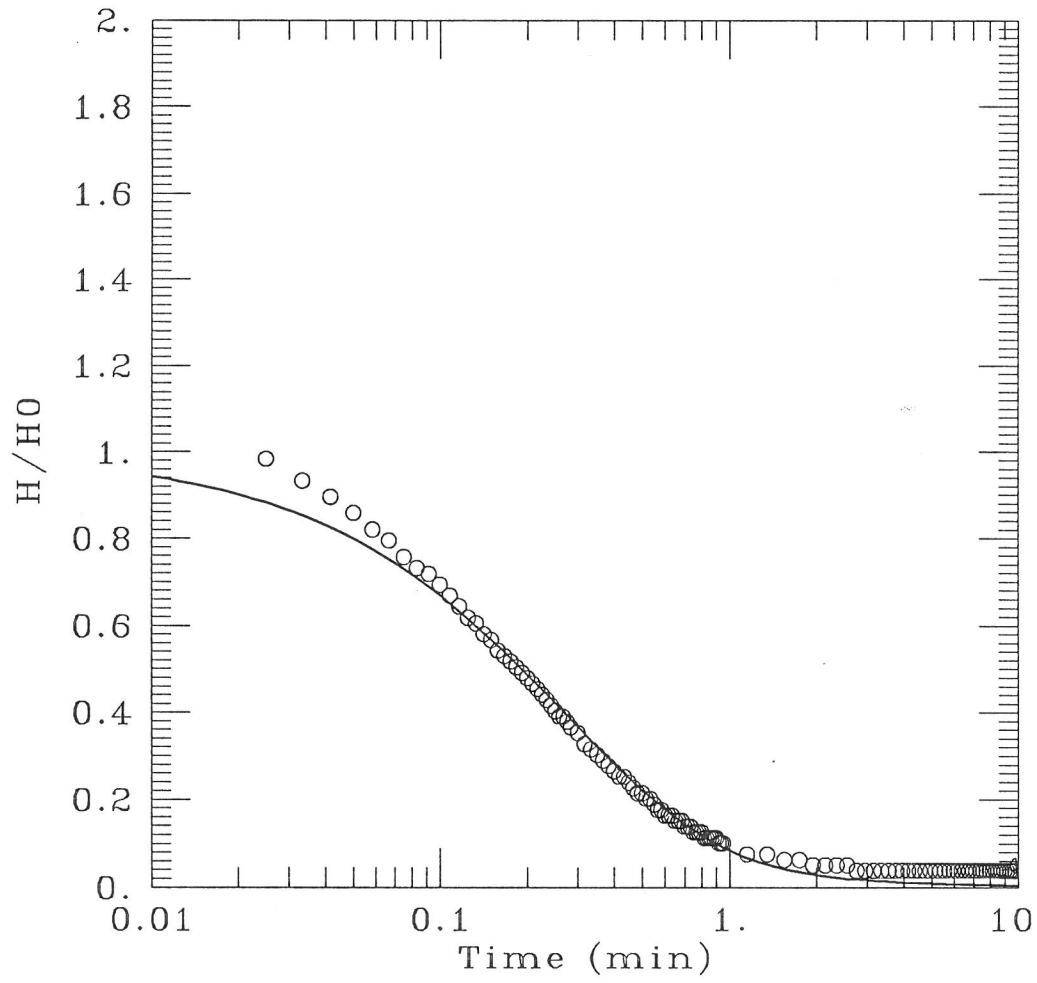
ESTIMATED PARAMETERS:
T = 0.03979 ft^2/min
S = 1.1213E-05

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2361

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-5D RECOVERY



DATA SET:
P-5D-R.AQT
03/14/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
9/1/92

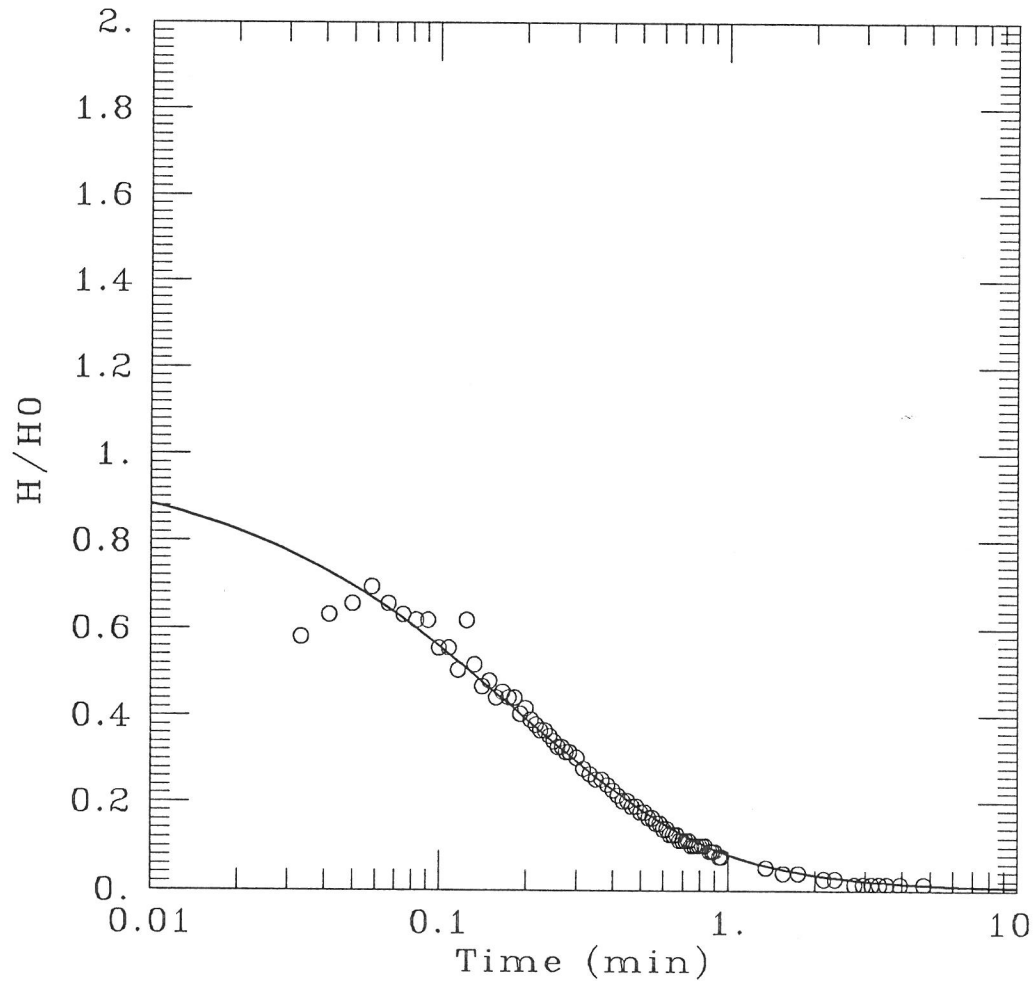
ESTIMATED PARAMETERS:
T = 0.05179 ft^2/min
S = 2.962E-05

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2362

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-5D DRAWDOWN



DATA SET:
P-5D-D.AQT
03/14/93

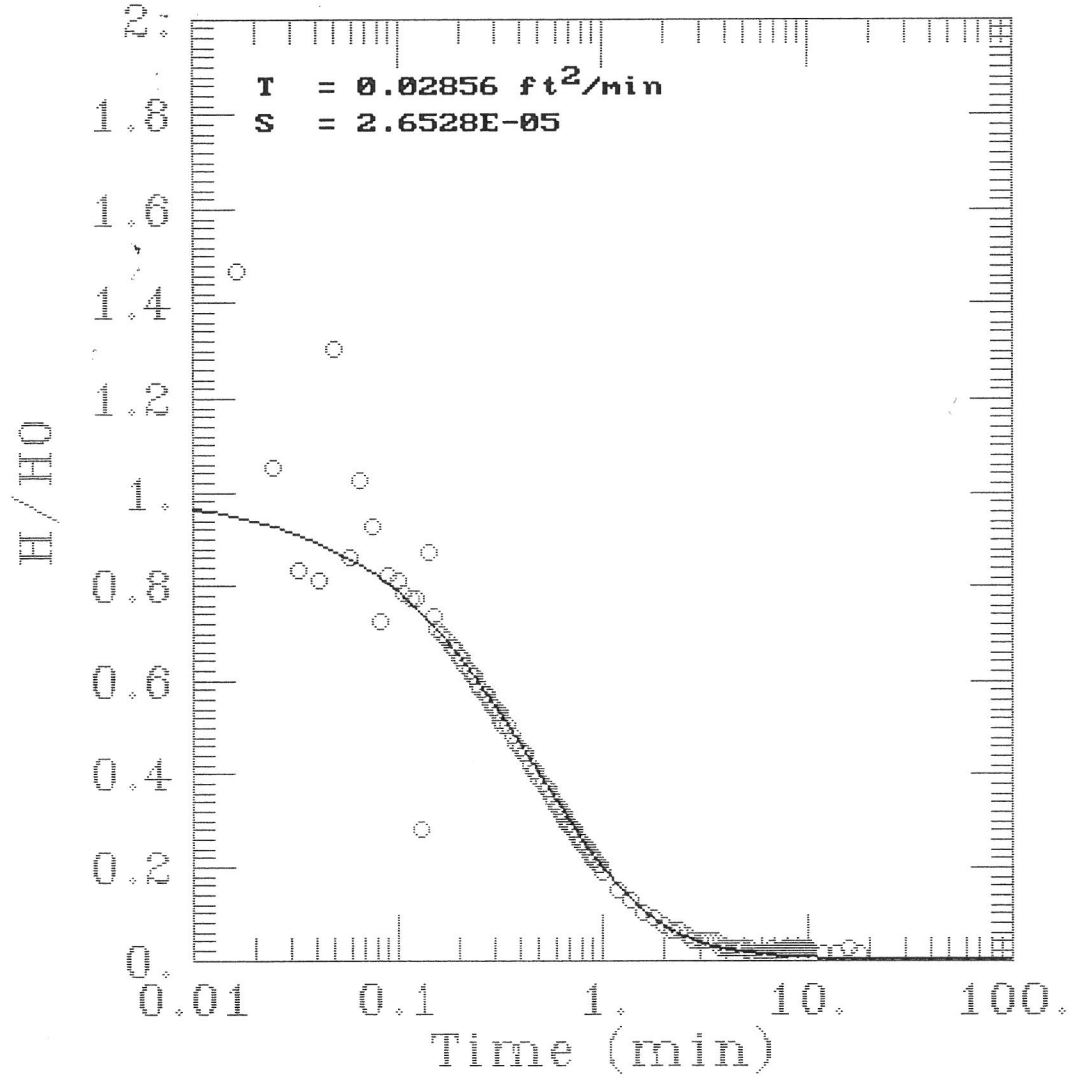
AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
9/1/92

ESTIMATED PARAMETERS:
T = 0.03556 ft^2/min
S = 0.001533

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

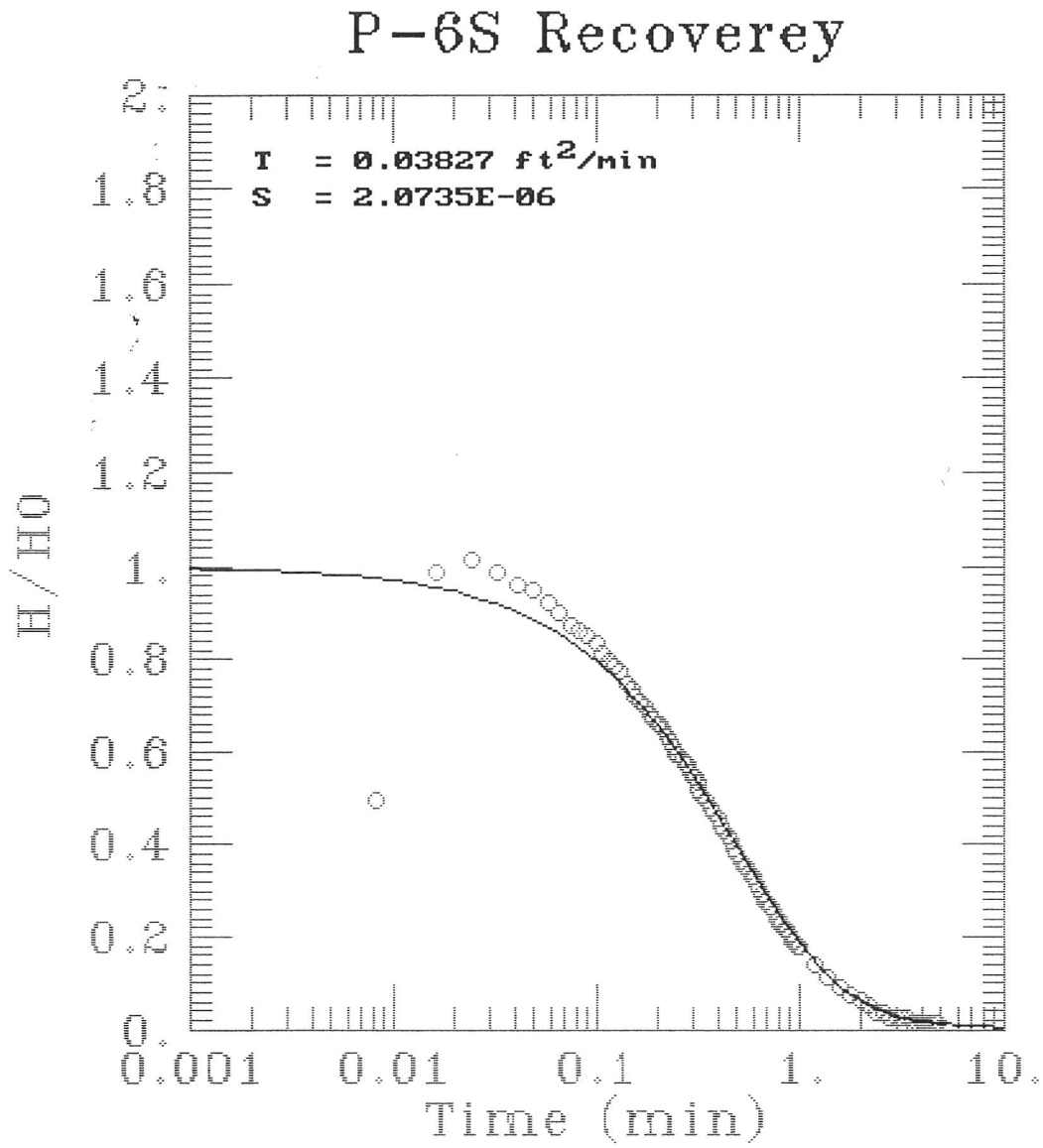
PDF_2363

P-6S Drawdown



DRAFT

PDF_2364

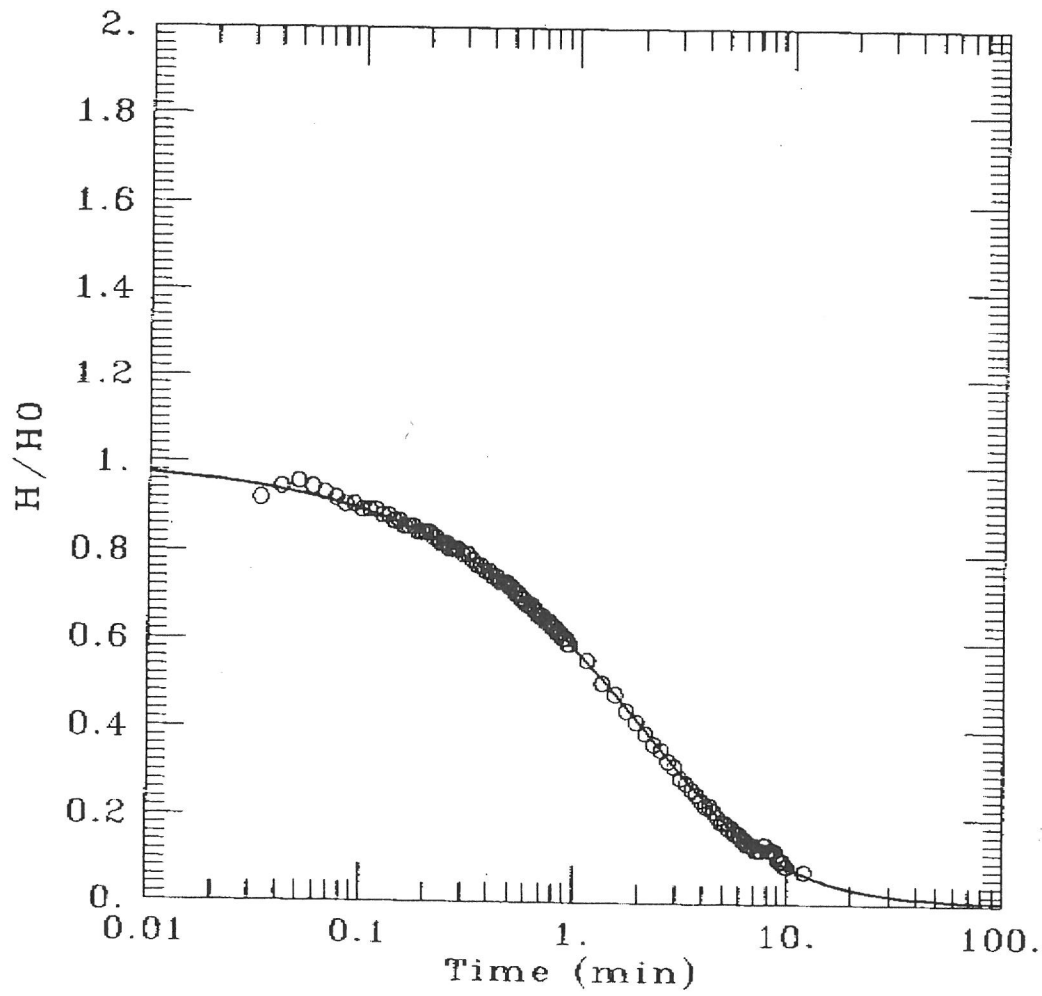


DRAFT

PDF_2365

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-7S RECOVERY



DATA SET:
P-7S-R.AQT
03/14/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
10/5/92

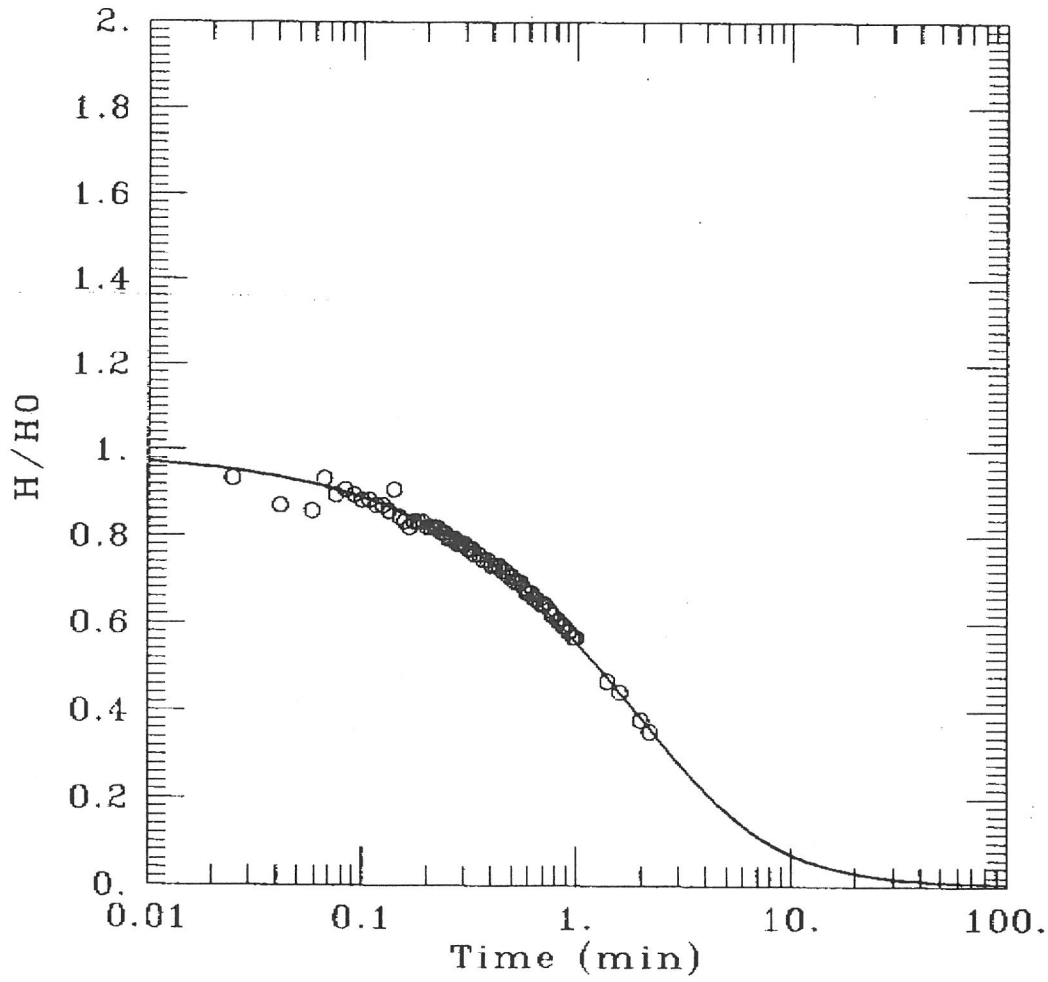
ESTIMATED PARAMETERS:
T = 0.003566 ft^2/min
S = 0.001063

TEST DATA:
HO = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2366

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-7S DRAWDOWN



DATA SET:
P-7S-D.AQT
03/14/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
10/5/92

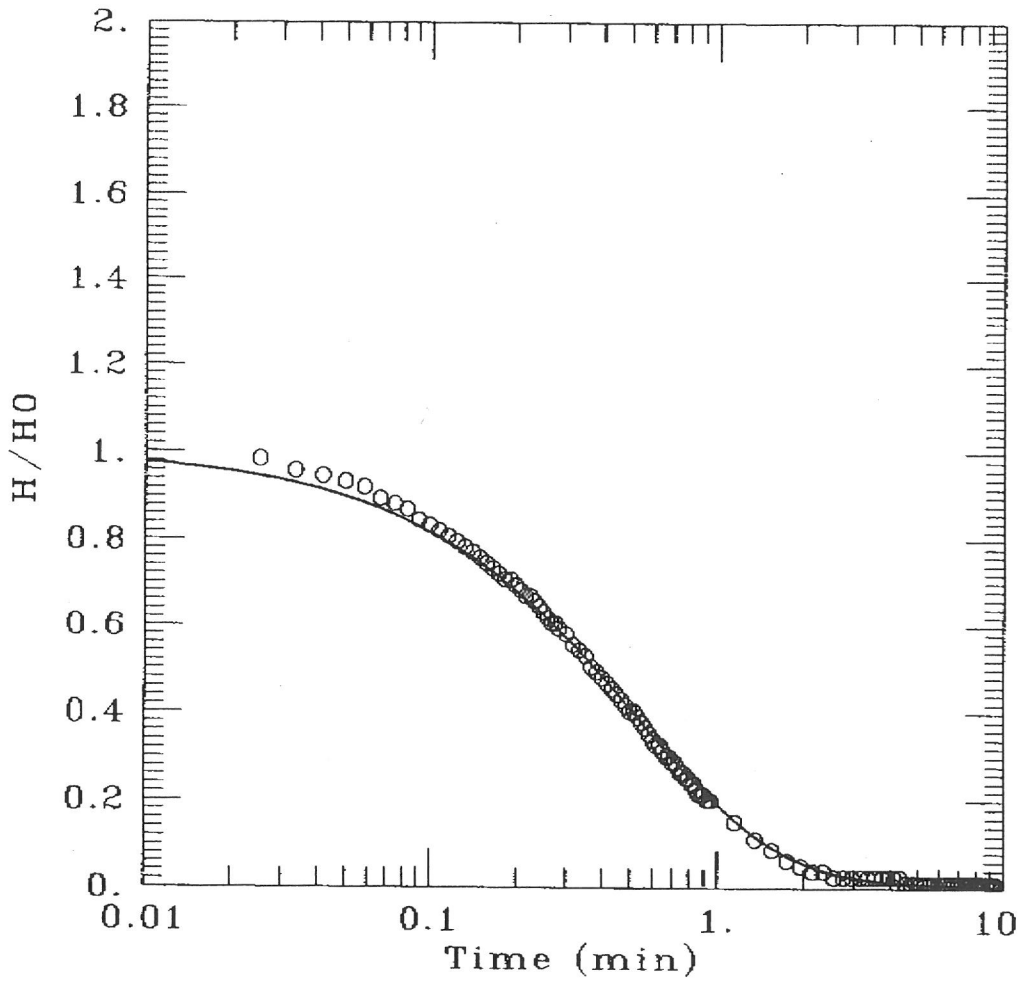
ESTIMATED PARAMETERS:
T = 0.004152 ft^2/min
S = 0.0009301

TEST DATA:
HO = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2367

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-7D RECOVERY



DATA SET:
P-7D-R.AQT
03/14/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
10/5/92

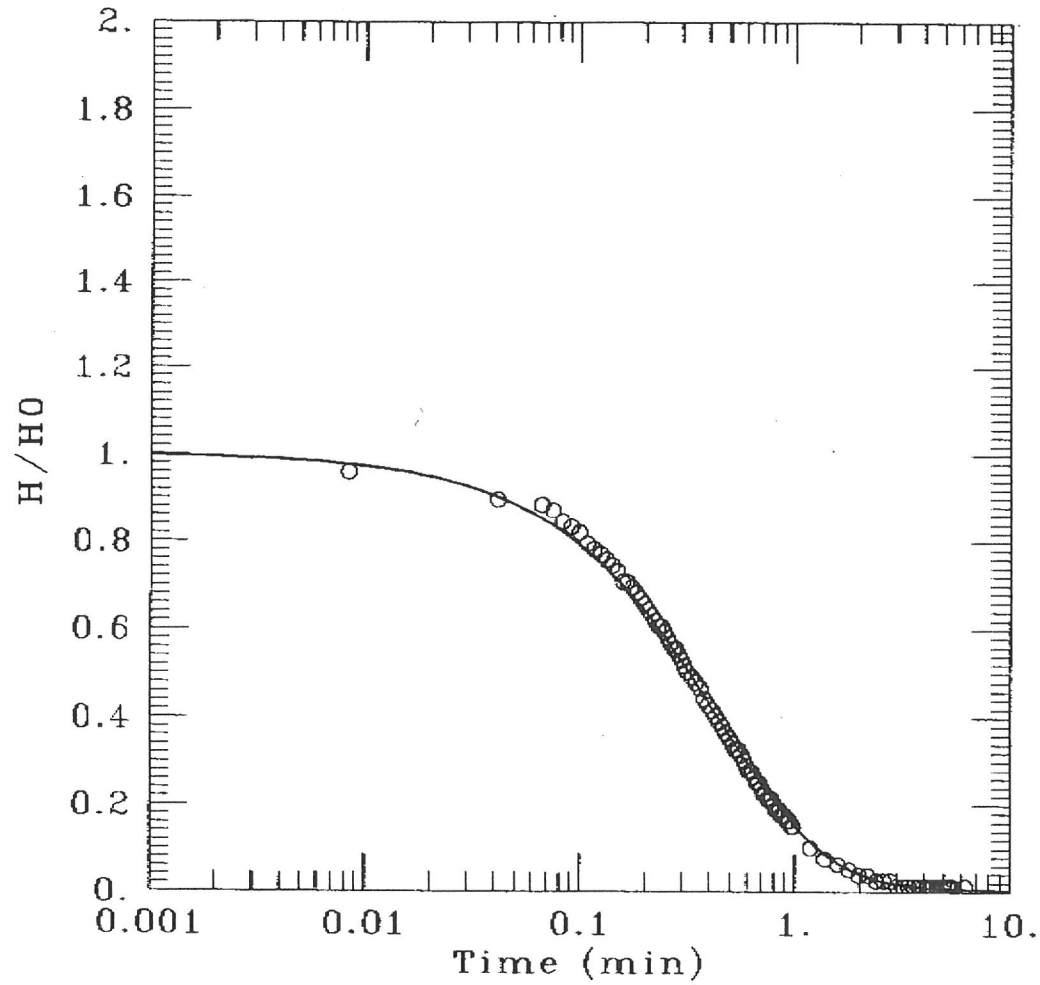
ESTIMATED PARAMETERS:
T = 0.05323 ft^2/min
S = 1.E-08

TEST DATA:
H0 = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2368

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-7D DRAWDOWN



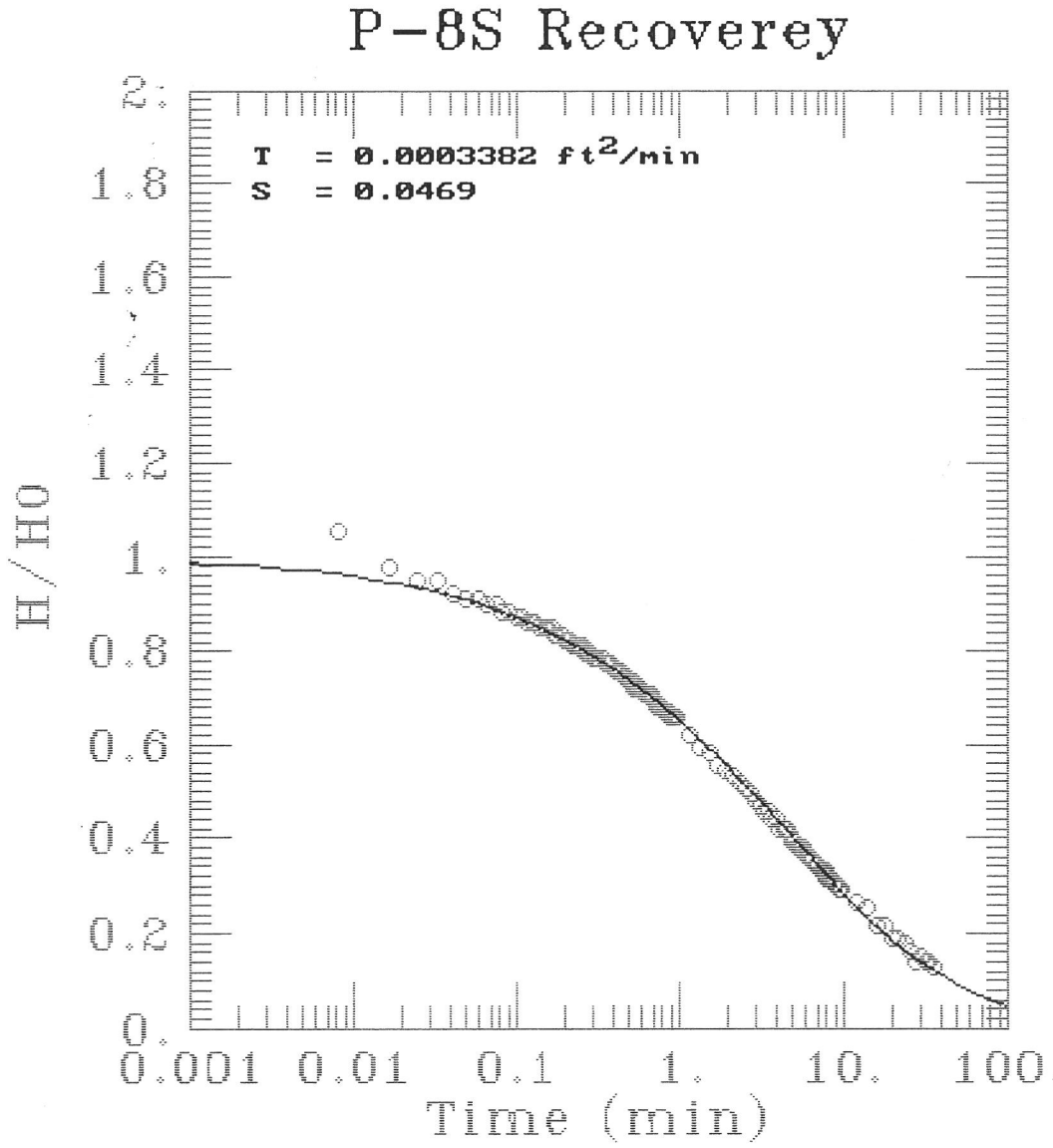
DATA SET:
P-7D-D.AQT
03/14/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
10/5/92

ESTIMATED PARAMETERS:
T = 0.06182 ft^2/min
S = 1.E-08

TEST DATA:
HO = 1.25 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2369

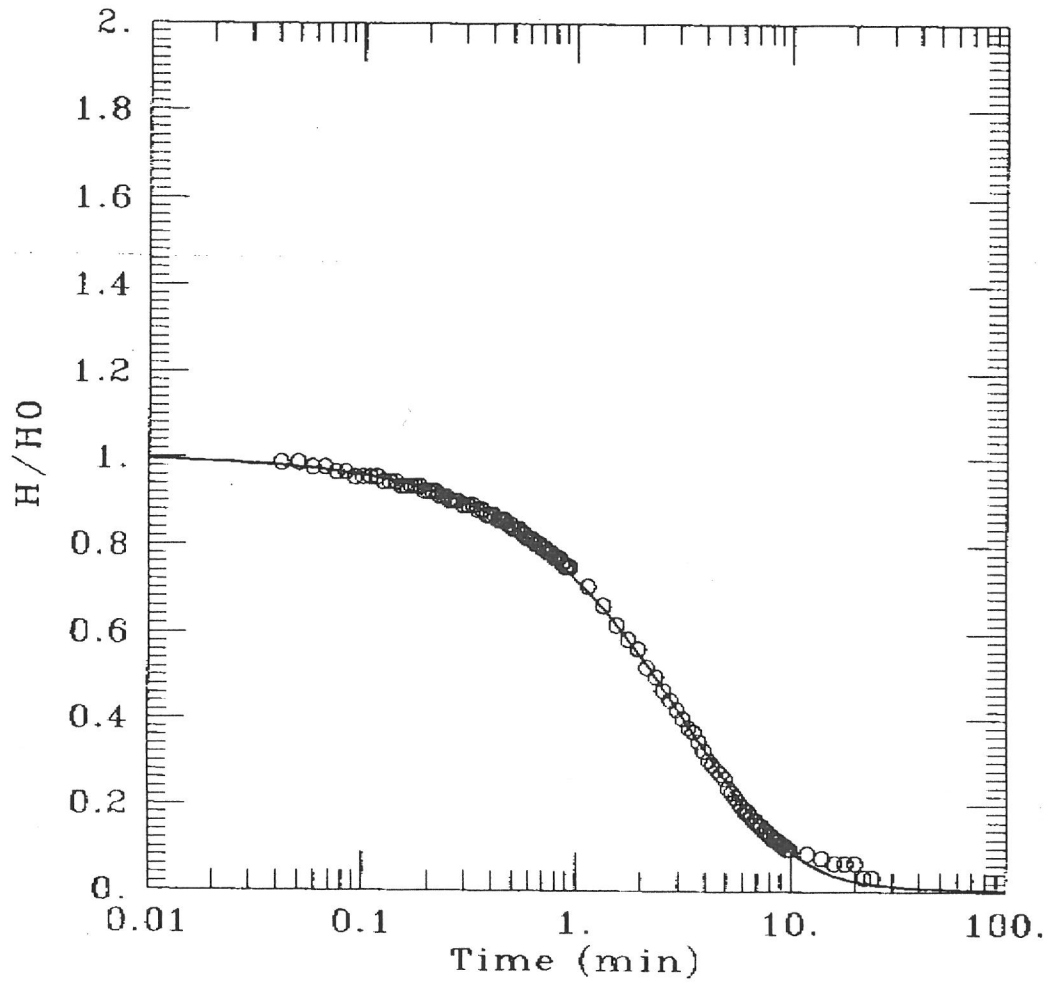


DRAFT

PDF_2370

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-9D RECOVERY



DATA SET:
P-9D-R.AQT
03/14/93

AQUIFER TYPE:
Confined

SOLUTION METHOD:
Cooper et al.

TEST DATE:
8/31/92

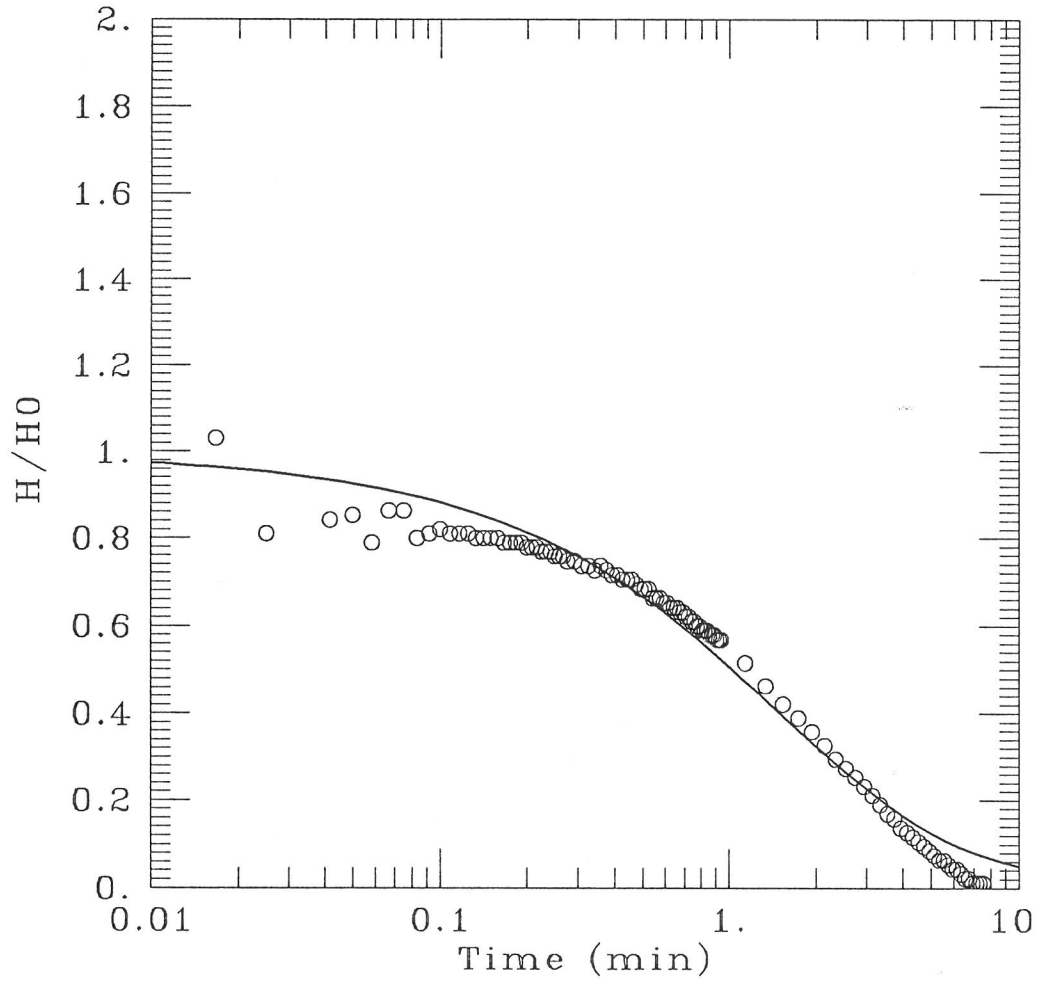
ESTIMATED PARAMETERS:
T = 0.007133 ft^2/min
S = 1.6923E-07

TEST DATA:
H0 = 1.45 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2371

PATRICK ENGINEERING INC.	Client: CITY WATER, LIGHT & POWER
Project No.: 496B	Location: SPRINGFIELD, ILLINOIS

P-9D DRAWDOWN



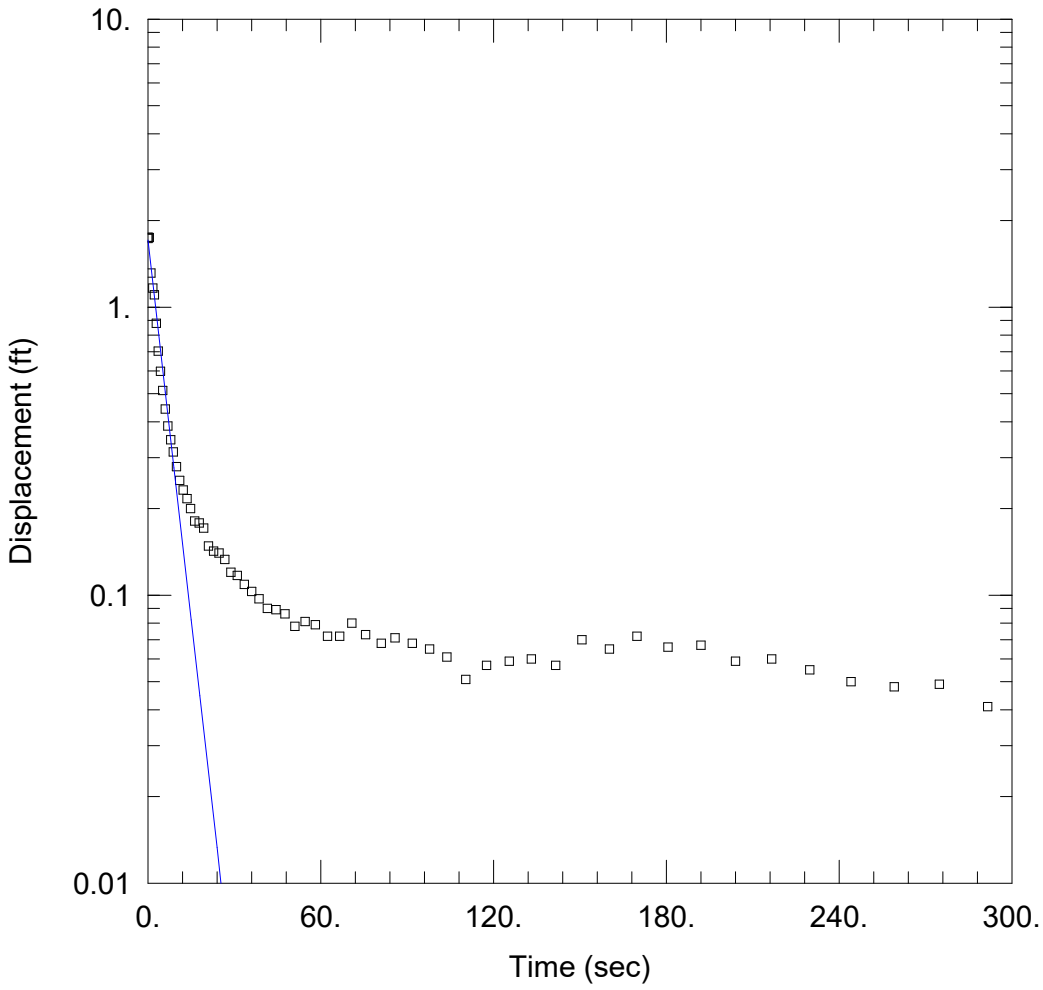
DATA SET:
P-9D-D.AQT
03/14/93

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Cooper et al.
TEST DATE:
8/31/92

ESTIMATED PARAMETERS:
T = 0.005745 ft^2/min
S = 0.0005814

TEST DATA:
H0 = 1.5 ft
rc = 0.083 ft
rw = 0.344 ft

PDF_2372



P03S DRAWDOWN

Data Set: J:\...\P03S Drawdown.aqt
Date: 09/02/25 Time: 10:09:16

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: P03S
Test Date: 8-29-25

AQUIFER DATA

Saturated Thickness: 5.64 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (P03S)

Initial Displacement: 1.75 ft
Total Well Penetration Depth: 5.26 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 5.62 ft
Screen Length: 4.67 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.008191 cm/sec y0 = 1.709 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\P03S\P03S Drawdown.
Title: P03S Drawdown
Date: 09/02/25
Time: 10:09:28

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-29-25
Test Well: P03S

AQUIFER DATA

Saturated Thickness: 5.64 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: P03S

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.75 ft
Static Water Column Height: 5.62 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.67 ft
Total Well Penetration Depth: 5.26 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.06471 ft
Gravel Pack Porosity: 0.

No. of Observations: 62

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	1.73	44.46	0.089
0.48	1.744	47.64	0.086
1.08	1.312	51.	0.078
1.68	1.164	54.6	0.081
2.28	1.103	58.2	0.079
2.94	0.879	62.4	0.072
3.66	0.703	66.6	0.072
4.44	0.599	70.8	0.08
5.22	0.513	75.6	0.073
6.06	0.443	81.	0.068
6.96	0.387	85.8	0.071
7.92	0.346	91.8	0.068
8.88	0.314	97.8	0.065
9.96	0.279	103.8	0.061

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
11.1	0.25	110.4	0.051
12.3	0.232	117.6	0.057
13.56	0.216	125.4	0.059
14.88	0.2	133.2	0.06
16.32	0.181	141.6	0.057
17.82	0.178	150.7	0.07
19.38	0.171	160.3	0.065
21.06	0.148	169.9	0.072
22.86	0.142	180.7	0.066
24.72	0.14	192.	0.067
26.76	0.133	204.	0.059
28.86	0.12	216.6	0.06
31.08	0.117	229.8	0.055
33.48	0.109	244.2	0.05
36.	0.103	259.2	0.048
38.64	0.097	274.8	0.049
41.46	0.09	291.6	0.041

SOLUTION

Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 2.962

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.008191	cm/sec
y0	1.709	ft

T = K*b = 1.408 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.008191	0.0004615	+/- 0.0009229	17.75	cm/sec
y0	1.709	0.0534	+/- 0.1068	32.01	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 1.408 cm²/sec

Parameter Correlations

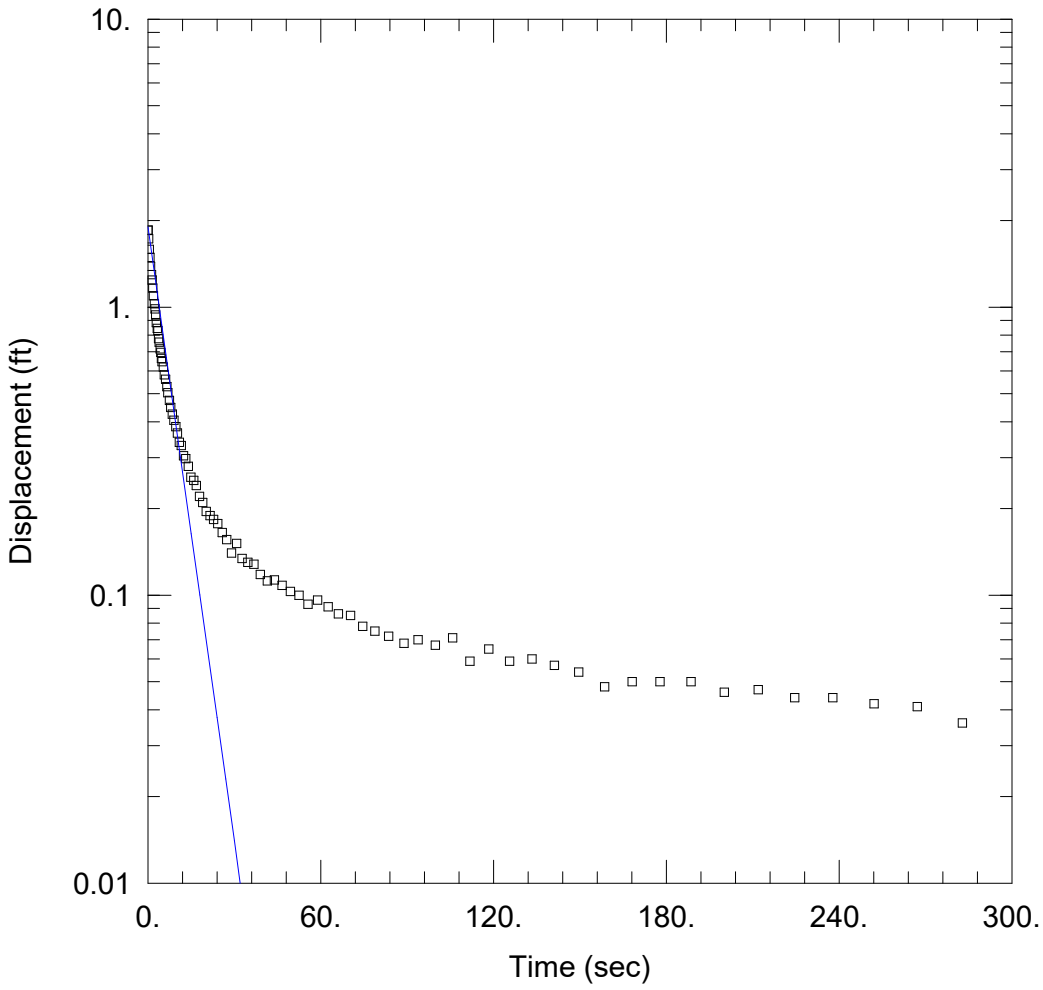
	K	y0
K	1.00	0.65

y0 0.65 1.00

Residual Statistics

for weighted residuals

Sum of Squares. . . 0.4385 ft^2
Variance . . . . . 0.007309 ft^2
Std. Deviation . . . . . 0.08549 ft
Mean . . . . . 0.05952 ft
No. of Residuals . . 62
No. of Estimates . . 2



P03S RECOVERY

Data Set: J:\...\P03S Recovery.aqt
Date: 09/02/25 Time: 10:08:57

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: P03S
Test Date: 8-15-25

AQUIFER DATA

Saturated Thickness: 6.91 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (P03S)

Initial Displacement: 1.849 ft
Total Well Penetration Depth: 6.47 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 6.91 ft
Screen Length: 4.67 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.006843 cm/sec
y0 = 1.896 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\P03S\P03S Recovery.a
Title: P03S Recovery
Date: 09/02/25
Time: 10:09:04

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-15-25
Test Well: P03S

AQUIFER DATA

Saturated Thickness: 6.91 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: P03S

X Location: 1130755.048 ft
Y Location: 2457062.359 ft

Initial Displacement: 1.849 ft
Static Water Column Height: 6.91 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.67 ft
Total Well Penetration Depth: 6.47 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.06471 ft
Gravel Pack Porosity: 0.

No. of Observations: 88

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	1.849	22.88	0.183
0.247	1.726	24.32	0.177
0.497	1.588	25.82	0.165
0.747	1.489	27.38	0.156
0.997	1.386	29.06	0.14
1.247	1.296	30.86	0.151
1.497	1.24	32.72	0.134
1.747	1.165	34.76	0.13
1.997	1.095	36.86	0.128
2.247	1.028	39.08	0.118
2.497	0.987	41.48	0.112
2.747	0.94	44.	0.113
2.997	0.884	46.64	0.108
3.247	0.843	49.46	0.103

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
3.497	0.829	52.46	0.1
3.747	0.778	55.64	0.093
3.997	0.755	59.	0.096
4.247	0.717	62.6	0.091
4.497	0.697	66.2	0.086
4.747	0.664	70.4	0.085
4.997	0.646	74.6	0.078
5.357	0.619	78.8	0.075
5.717	0.582	83.6	0.072
6.137	0.561	89.	0.068
6.557	0.529	93.8	0.07
6.977	0.505	99.8	0.067
7.457	0.474	105.8	0.071
7.997	0.448	111.8	0.059
8.477	0.425	118.4	0.065
9.077	0.405	125.6	0.059
9.677	0.385	133.4	0.06
10.28	0.365	141.2	0.057
10.94	0.339	149.6	0.054
11.66	0.331	158.6	0.048
12.44	0.305	168.2	0.05
13.22	0.298	177.8	0.05
14.06	0.28	188.6	0.05
14.96	0.257	200.1	0.046
15.92	0.25	212.	0.047
16.88	0.24	224.6	0.044
17.96	0.22	237.8	0.044
19.1	0.21	252.2	0.042
20.3	0.195	267.2	0.041
21.56	0.189	282.8	0.036

SOLUTION

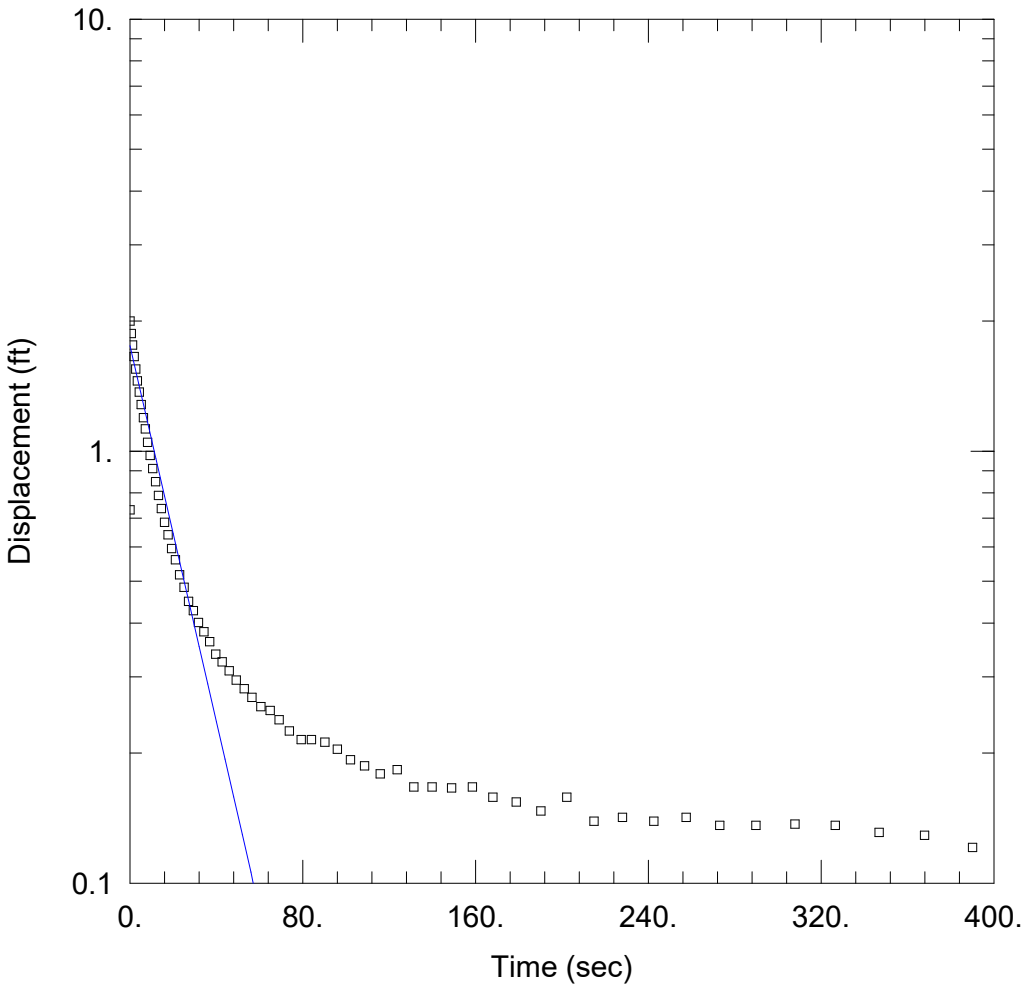
Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.064

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.006843	cm/sec
y0	1.896	ft

T = K*b = 1.441 cm²/sec



P03D DRAWDOWN

Data Set: J:\...\P03D Drawdown.aqt
Date: 09/02/25 Time: 10:06:41

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: P03D
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 5. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (P03D)

Initial Displacement: 0.731 ft
Total Well Penetration Depth: 29.02 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 23.25 ft
Screen Length: 4.7 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Confined Solution Method: Bouwer-Rice
K = 0.00405 cm/sec y0 = 1.754 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\P03D\P03D Drawdown.
Title: P03D Drawdown
Date: 09/02/25
Time: 10:06:51

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: P03D

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: P03D

X Location: 1130755.616 ft
Y Location: 2457066.455 ft

Initial Displacement: 0.731 ft
Static Water Column Height: 23.25 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.7 ft
Total Well Penetration Depth: 29.02 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.07715 ft
Gravel Pack Porosity: 0.

No. of Observations: 64

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.001	56.52	0.269
0.6	1.873	60.72	0.256
1.26	1.76	64.92	0.251
1.98	1.656	69.12	0.239
2.76	1.548	73.92	0.225
3.54	1.455	79.32	0.215
4.38	1.369	84.12	0.215
5.28	1.281	90.24	0.212
6.24	1.196	96.12	0.204
7.2	1.126	102.1	0.193
8.28	1.048	108.7	0.187
9.42	0.978	115.9	0.179
10.62	0.911	123.7	0.183
11.88	0.85	131.5	0.167

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
13.2	0.789	139.9	0.167
14.64	0.736	148.9	0.166
16.14	0.684	158.5	0.167
17.7	0.64	168.1	0.158
19.38	0.595	178.9	0.154
21.18	0.56	190.3	0.147
23.04	0.517	202.3	0.158
25.08	0.484	214.9	0.139
27.18	0.449	228.1	0.142
29.4	0.427	242.5	0.139
31.8	0.401	257.5	0.142
34.32	0.382	273.1	0.136
36.96	0.362	289.9	0.136
39.78	0.339	307.9	0.137
42.78	0.325	326.5	0.136
45.96	0.31	346.9	0.131
49.32	0.295	367.9	0.129
52.92	0.282	390.1	0.121

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice
ln(Re/rw): 4.189

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.00405	cm/sec
y0	1.754	ft

T = K*b = 0.6172 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.00405	0.0002678	+/- 0.0005353	15.12	cm/sec
y0	1.754	0.05678	+/- 0.1135	30.89	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.6172 cm²/sec

Parameter Correlations

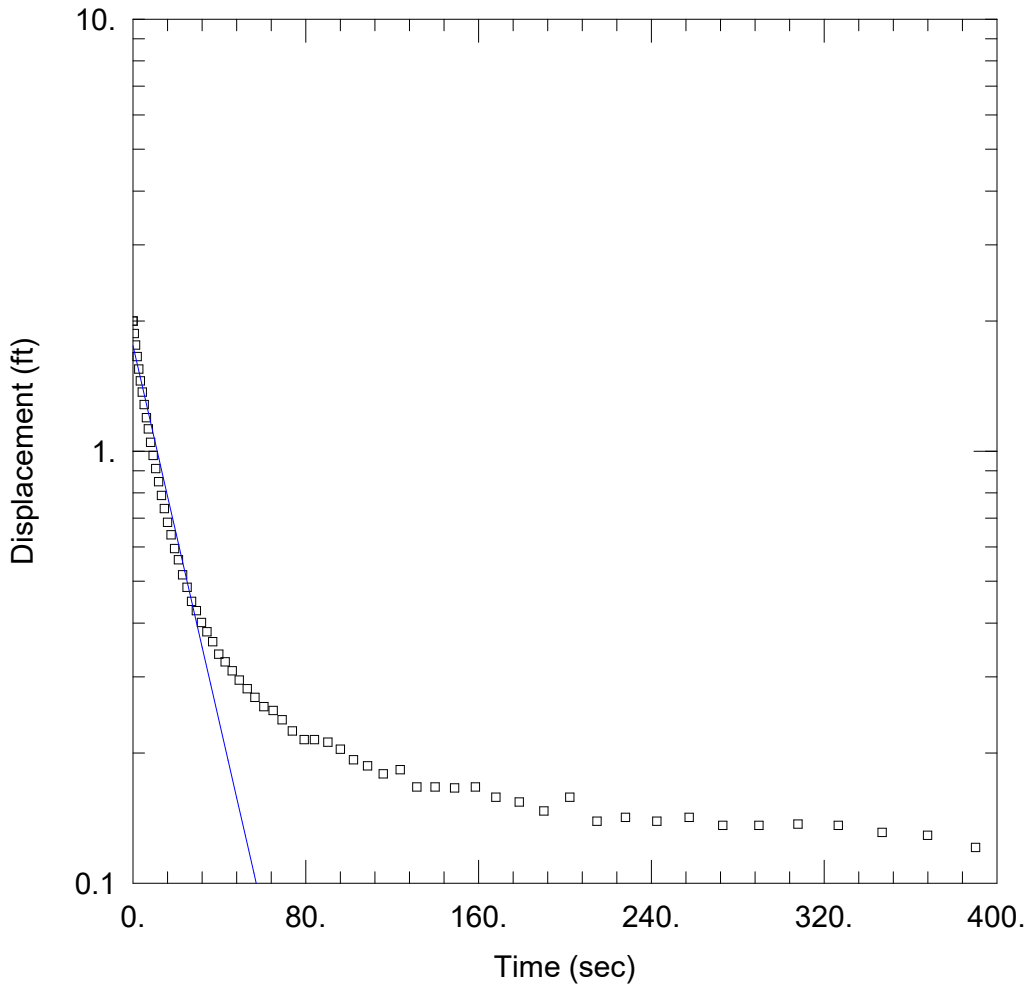
	K	y0

K	1.00	0.66
y0	0.66	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 1.172 ft^2
Variance ..... 0.0189 ft^2
Std. Deviation..... 0.1375 ft
Mean..... 0.08258 ft
No. of Residuals .. 64
No. of Estimates .. 2



P03D RECOVERY

Data Set: J:\...\P03D Recovery.aqt
Date: 09/02/25 Time: 10:06:23

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: P03D
Test Date: 8-15-25

AQUIFER DATA

Saturated Thickness: 5. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (P03D)

Initial Displacement: 2.001 ft
Total Well Penetration Depth: 29.02 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 23.25 ft
Screen Length: 4.7 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Confined Solution Method: Bouwer-Rice
K = 0.004059 cm/sec y0 = 1.755 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\P03D\P03D Recovery.a
Title: P03D Recovery
Date: 09/02/25
Time: 10:06:33

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-15-25
Test Well: P03D

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: P03D

X Location: 1130755.347 ft
Y Location: 2457066.36 ft

Initial Displacement: 2.001 ft
Static Water Column Height: 23.25 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.7 ft
Total Well Penetration Depth: 29.02 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.07715 ft
Gravel Pack Porosity: 0.

No. of Observations: 64

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.001	56.52	0.269
0.6	1.873	60.72	0.256
1.26	1.76	64.92	0.251
1.98	1.656	69.12	0.239
2.76	1.548	73.92	0.225
3.54	1.455	79.32	0.215
4.38	1.369	84.12	0.215
5.28	1.281	90.24	0.212
6.24	1.196	96.12	0.204
7.2	1.126	102.1	0.193
8.28	1.048	108.7	0.187
9.42	0.978	115.9	0.179
10.62	0.911	123.7	0.183
11.88	0.85	131.5	0.167

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
13.2	0.789	139.9	0.167
14.64	0.736	148.9	0.166
16.14	0.684	158.5	0.167
17.7	0.64	168.1	0.158
19.38	0.595	178.9	0.154
21.18	0.56	190.3	0.147
23.04	0.517	202.3	0.158
25.08	0.484	214.9	0.139
27.18	0.449	228.1	0.142
29.4	0.427	242.5	0.139
31.8	0.401	257.5	0.142
34.32	0.382	273.1	0.136
36.96	0.362	289.9	0.136
39.78	0.339	307.9	0.137
42.78	0.325	326.5	0.136
45.96	0.31	346.9	0.131
49.32	0.295	367.9	0.129
52.92	0.282	390.1	0.121

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice
ln(Re/rw): 4.189

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.004059	cm/sec
y0	1.755	ft

T = K*b = 0.6186 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.004059	0.0002683	+/- 0.0005364	15.13	cm/sec
y0	1.755	0.05682	+/- 0.1136	30.89	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.6186 cm²/sec

Parameter Correlations

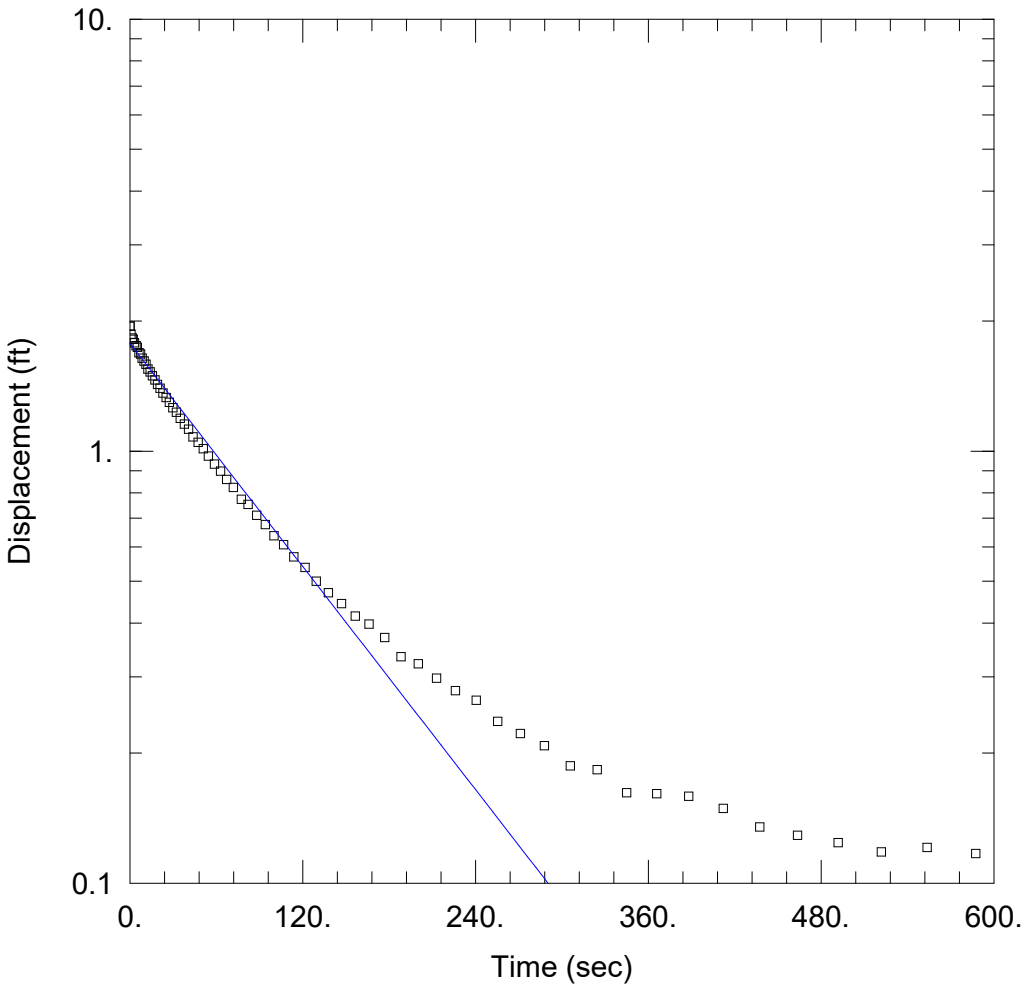
	K	y0

K	1.00	0.66
y0	0.66	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 1.172 ft^2
Variance ..... 0.0189 ft^2
Std. Deviation..... 0.1375 ft
Mean..... 0.08283 ft
No. of Residuals .. 64
No. of Estimates .. 2



R103S DRAWDOWN

Data Set: J:\...\R103S Drawdown.aqt
Date: 09/02/25 Time: 10:09:55

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: R103S
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 5. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (R103S)

Initial Displacement: 1.946 ft
Total Well Penetration Depth: 14.88 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 9.81 ft
Screen Length: 4.67 ft
Well Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0005147 cm/sec
y0 = 1.774 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\R103S\R103S Drawdow
Title: R103S Drawdown
Date: 09/02/25
Time: 10:10:04

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: R103S

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: R103S

X Location: 1130717.534 ft
Y Location: 2457299.138 ft

Initial Displacement: 1.946 ft
Static Water Column Height: 9.81 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.67 ft
Total Well Penetration Depth: 14.88 ft

No. of Observations: 68

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	1.946	77.34	0.773
0.78	1.866	82.14	0.753
1.56	1.827	88.14	0.71
2.4	1.816	94.14	0.676
3.3	1.782	100.1	0.637
4.26	1.755	106.7	0.607
5.22	1.738	113.9	0.569
6.3	1.691	121.7	0.538
7.44	1.677	129.5	0.5
8.64	1.64	137.9	0.47
9.9	1.615	146.9	0.444
11.22	1.588	156.5	0.415
12.66	1.55	166.1	0.398
14.16	1.524	176.9	0.37
15.72	1.494	188.3	0.334
17.4	1.462	200.3	0.322

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
19.2	1.426	212.9	0.298
21.06	1.398	226.1	0.279
23.1	1.363	240.5	0.265
25.2	1.33	255.5	0.237
27.42	1.296	271.1	0.222
29.82	1.259	287.9	0.208
32.34	1.23	305.9	0.187
34.98	1.192	324.5	0.183
37.8	1.156	344.9	0.162
40.8	1.123	365.9	0.161
43.98	1.079	388.1	0.159
47.34	1.048	412.1	0.149
50.94	1.013	437.3	0.135
54.54	0.974	463.7	0.129
58.74	0.933	491.9	0.124
62.94	0.899	521.9	0.118
67.14	0.86	553.7	0.121
71.94	0.824	587.3	0.117

SOLUTION

Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.802

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0005147	cm/sec
y0	1.774	ft

T = K*b = 0.07844 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.0005147	1.44E-5	+/- 2.875E-5	35.75	cm/sec
y0	1.774	0.01927	+/- 0.03848	92.05	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.07844 cm²/sec

Parameter Correlations

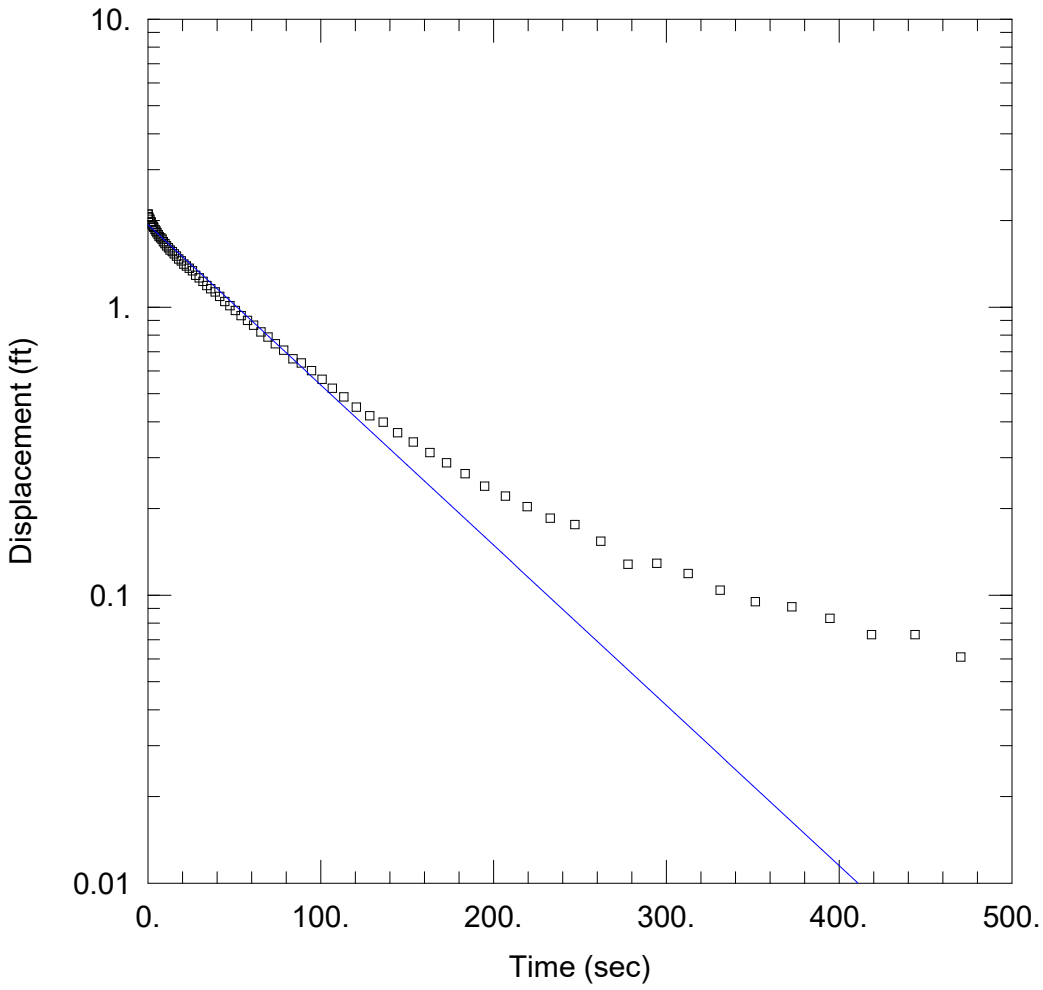
	K	y0

K	1.00	0.62
y0	0.62	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 0.3552 ft^2
Variance ..... 0.005381 ft^2
Std. Deviation..... 0.07336 ft
Mean..... 0.02506 ft
No. of Residuals .. 68
No. of Estimates .. 2



R103S RECOVERY

Data Set: J:\...\R103S Recovery.aqt
Date: 09/02/25 Time: 10:10:17

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: R103S
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 5. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (R103S)

Initial Displacement: 2.101 ft
Total Well Penetration Depth: 14.88 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 9.81 ft
Screen Length: 4.67 ft
Well Radius: 0.08333 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0006657 cm/sec
y0 = 1.934 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\R103S\R103S Recover
Title: R103S Recovery
Date: 09/02/25
Time: 10:10:28

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: R103S

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: R103S

X Location: 1130717.534 ft
Y Location: 2457299.138 ft

Initial Displacement: 2.101 ft
Static Water Column Height: 9.81 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.67 ft
Total Well Penetration Depth: 14.88 ft

No. of Observations: 77

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.101	50.64	0.974
0.359	2.061	54.	0.934
0.72	2.049	57.6	0.899
1.14	2.016	61.2	0.865
1.559	1.985	65.4	0.821
1.979	1.971	69.6	0.787
2.46	1.934	73.8	0.746
2.999	1.908	78.6	0.708
3.479	1.892	84.	0.662
4.079	1.861	88.8	0.64
4.68	1.835	94.8	0.602
5.279	1.815	100.8	0.561
5.94	1.784	106.8	0.523
6.66	1.76	113.4	0.488
7.44	1.739	120.6	0.45
8.22	1.721	128.4	0.42

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
9.06	1.687	136.2	0.399
9.96	1.66	144.6	0.366
10.92	1.633	153.6	0.34
11.88	1.607	163.2	0.313
12.96	1.579	172.8	0.288
14.1	1.559	183.6	0.264
15.3	1.531	195.	0.239
16.56	1.503	207.	0.221
17.88	1.471	219.6	0.203
19.32	1.447	232.8	0.185
20.82	1.409	247.2	0.176
22.38	1.388	262.2	0.154
24.06	1.363	277.8	0.128
25.86	1.336	294.6	0.129
27.72	1.289	312.6	0.119
29.76	1.263	331.2	0.104
31.86	1.23	351.6	0.095
34.08	1.19	372.6	0.091
36.48	1.158	394.8	0.083
39.	1.129	418.8	0.073
41.64	1.089	444.	0.073
44.46	1.046	470.4	0.061
47.46	1.012		

SOLUTION

Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.802

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0006657	cm/sec
y0	1.934	ft

T = K*b = 0.1015 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.0006657	1.427E-5	+/- 2.843E-5	46.64	cm/sec
y0	1.934	0.01484	+/- 0.02955	130.3	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.1015 cm²/sec

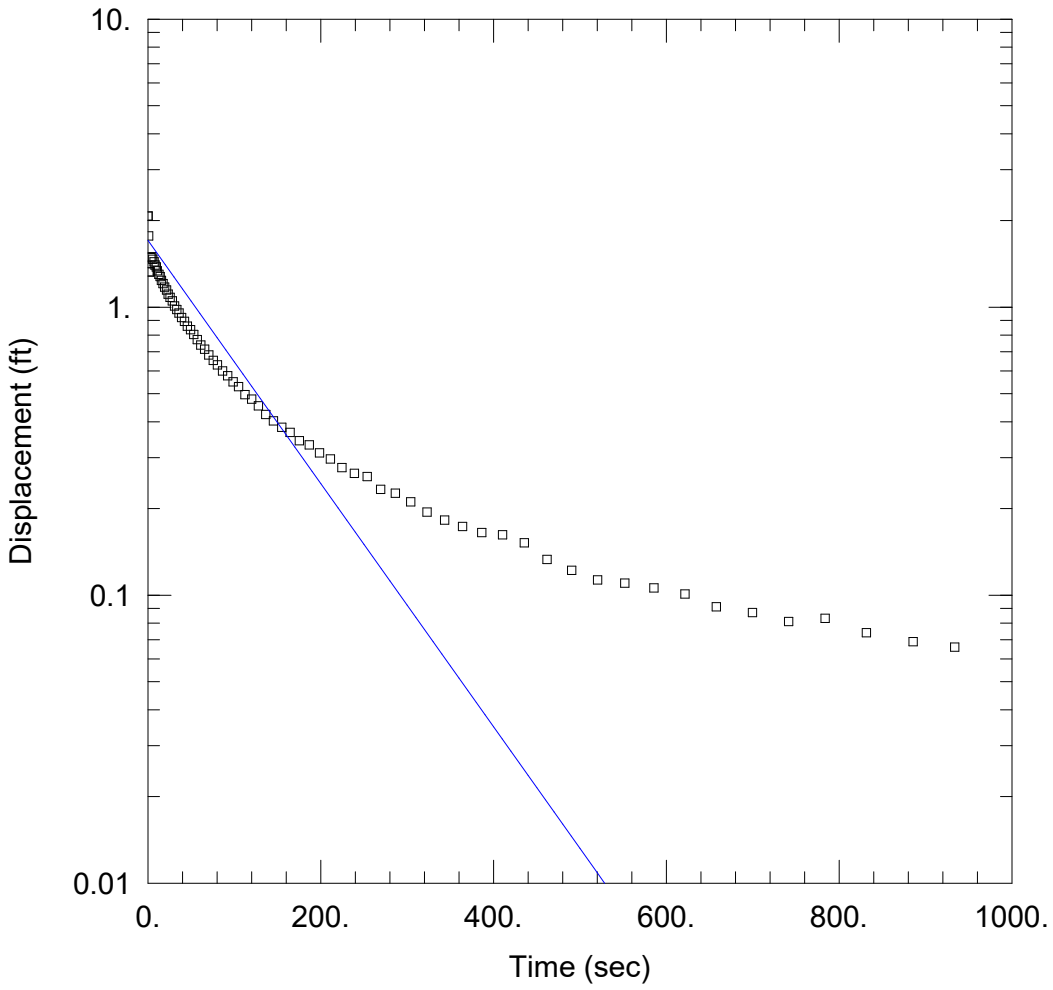
Parameter Correlations

	K	y0
K	1.00	0.60
y0	0.60	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 0.3124 ft^2
Variance ..... 0.004165 ft^2
Std. Deviation..... 0.06454 ft
Mean..... 0.01767 ft
No. of Residuals .. 77
No. of Estimates .. 2



G104S

Data Set: J:\...\G104S Drawdown.aqt
Date: 09/02/25 Time: 10:05:35

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: G104S
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 10.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (G104S)

Initial Displacement: 2.072 ft
Total Well Penetration Depth: 16.27 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 10.7 ft
Screen Length: 4.7 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 0.0005092 cm/sec
y0 = 1.707 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\G104S\G104S Drawdow
Title: G104S
Date: 09/02/25
Time: 10:05:43

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: G104S

AQUIFER DATA

Saturated Thickness: 10.7 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: G104S

X Location: 1130745.859 ft
Y Location: 2456717.96 ft

Initial Displacement: 2.072 ft
Static Water Column Height: 10.7 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.7 ft
Total Well Penetration Depth: 16.27 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.06471 ft
Gravel Pack Porosity: 0.

No. of Observations: 74

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.072	105.2	0.53
0.84	1.768	112.4	0.497
1.74	1.325	120.2	0.479
2.7	1.326	128.	0.454
3.66	1.486	136.4	0.424
4.74	1.498	145.4	0.403
5.88	1.465	155.	0.383
7.08	1.435	164.6	0.367
8.34	1.401	175.4	0.344
9.676	1.378	186.8	0.332
11.1	1.338	198.8	0.312
12.6	1.3	211.4	0.297
14.16	1.276	224.6	0.277
15.84	1.237	239.	0.265

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
17.64	1.207	254.	0.258
19.5	1.173	269.6	0.233
21.54	1.146	286.4	0.226
23.64	1.109	304.4	0.211
25.86	1.08	323.	0.194
28.26	1.05	343.4	0.182
30.78	1.01	364.4	0.173
33.42	0.982	386.6	0.165
36.24	0.954	410.6	0.162
39.24	0.921	435.8	0.152
42.42	0.892	462.2	0.133
45.78	0.859	490.4	0.122
49.38	0.834	520.4	0.113
52.98	0.803	552.2	0.11
57.18	0.772	585.8	0.106
61.38	0.739	621.8	0.101
65.58	0.714	657.8	0.091
70.38	0.683	699.8	0.087
75.78	0.653	741.8	0.081
80.58	0.63	783.8	0.083
86.58	0.601	831.8	0.074
92.58	0.577	885.8	0.069
98.58	0.55	933.8	0.066

SOLUTION

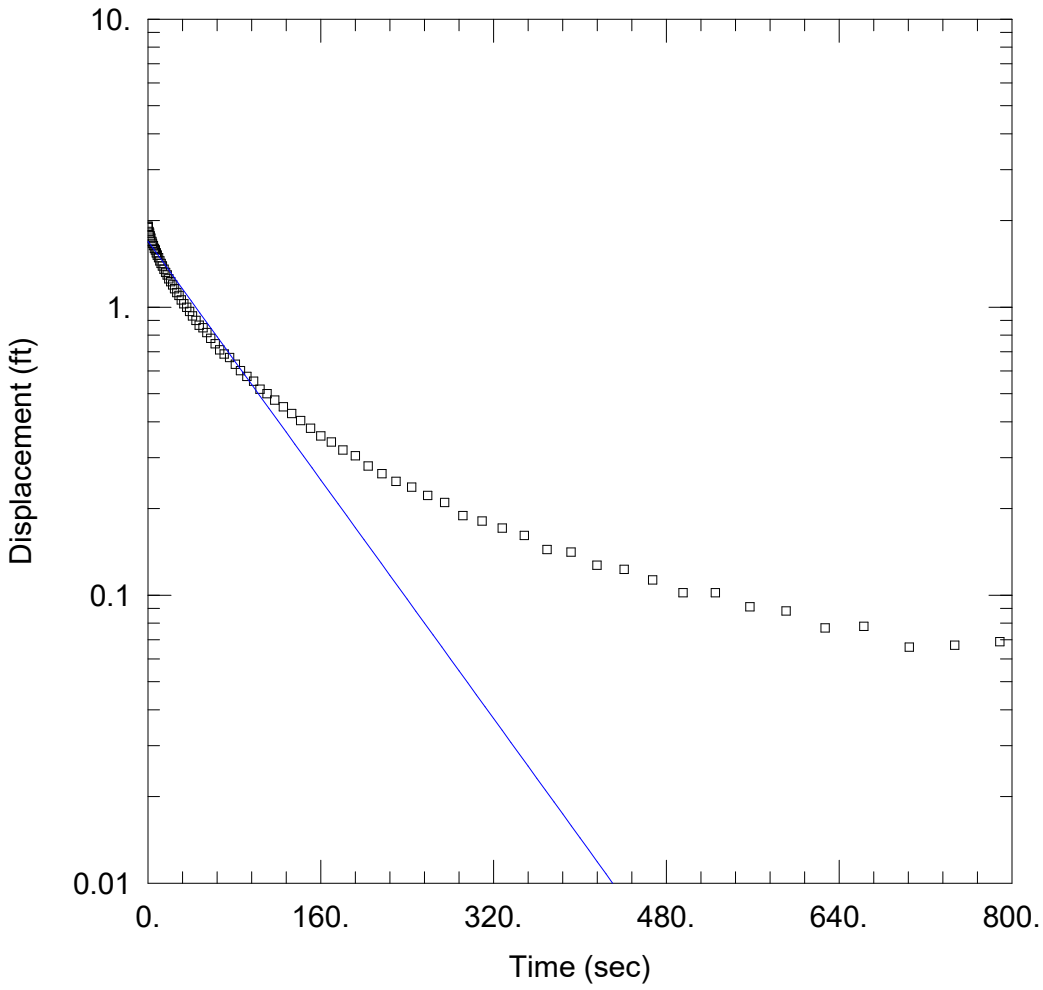
Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.856

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0005092	cm/sec
y0	1.707	ft

T = K*b = 0.1661 cm²/sec



G104S RECOVERY

Data Set: J:\...\G104S Recovery.aqt
Date: 09/02/25 Time: 10:05:51

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: G104S
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 5. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (G104S)

Initial Displacement: 1.906 ft
Total Well Penetration Depth: 16.27 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 10.7 ft
Screen Length: 4.7 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Confined Solution Method: Bouwer-Rice
K = 0.0006243 cm/sec y0 = 1.692 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\G104S\G104S Recover
Title: G104S Recovery
Date: 09/02/25
Time: 10:05:59

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: G104S

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: G104S

X Location: 1130745.859 ft
Y Location: 2456717.96 ft

Initial Displacement: 1.906 ft
Static Water Column Height: 10.7 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.7 ft
Total Well Penetration Depth: 16.27 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.06471 ft
Gravel Pack Porosity: 0.

No. of Observations: 79

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	1.906	81.	0.634
0.48	1.89	85.8	0.602
1.08	1.833	91.8	0.574
1.68	1.81	97.8	0.553
2.28	1.766	103.8	0.519
2.94	1.734	110.4	0.5
3.66	1.693	117.6	0.475
4.44	1.667	125.4	0.451
5.22	1.635	133.2	0.427
6.06	1.6	141.6	0.404
6.96	1.578	150.6	0.38
7.92	1.542	160.2	0.357
8.88	1.516	169.8	0.34
9.96	1.484	180.6	0.319

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
11.1	1.448	192.	0.305
12.3	1.417	204.	0.281
13.56	1.388	216.6	0.264
14.88	1.354	229.8	0.248
16.32	1.319	244.2	0.237
17.82	1.292	259.2	0.222
19.38	1.253	274.8	0.21
21.06	1.225	291.6	0.189
22.86	1.196	309.6	0.181
24.72	1.158	328.2	0.171
26.76	1.123	348.6	0.161
28.86	1.098	369.6	0.144
31.08	1.058	391.8	0.141
33.48	1.028	415.8	0.127
36.	0.998	441.	0.123
38.64	0.967	467.4	0.113
41.46	0.932	495.6	0.102
44.46	0.899	525.6	0.102
47.64	0.865	557.4	0.091
51.	0.847	591.	0.088
54.6	0.815	627.	0.077
58.2	0.779	663.	0.078
62.4	0.747	705.	0.066
66.6	0.71	747.	0.067
70.8	0.687	789.	0.069
75.6	0.668		

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.856

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0006243	cm/sec
y0	1.692	ft

T = K*b = 0.09514 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.0006243	2.442E-5	+/- 4.862E-5	25.56	cm/sec
y0	1.692	0.02502	+/- 0.04981	67.65	ft

C.I. is approximate 95% confidence interval for parameter

t-ratio = estimate/std. error
No estimation window

T = K*b = 0.09514 cm²/sec

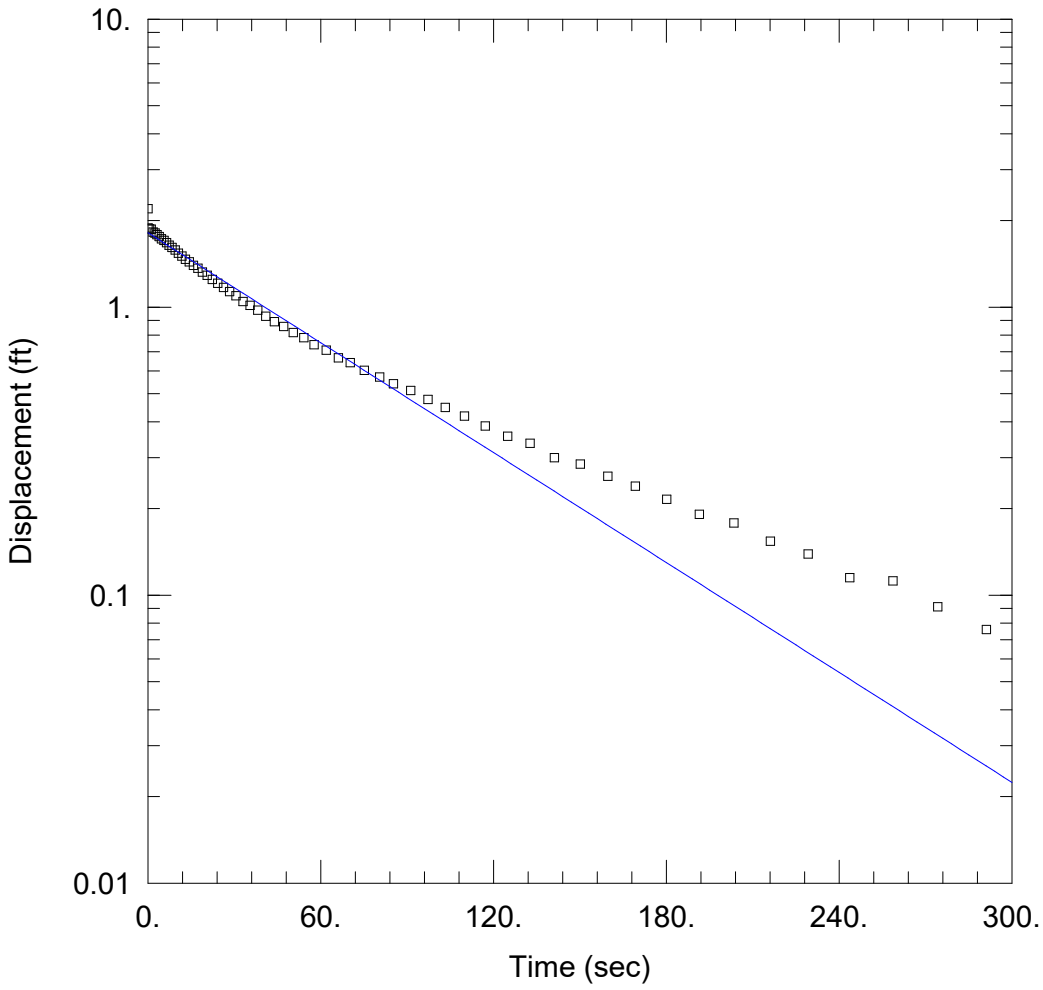
Parameter Correlations

	K	y0
K	1.00	0.62
y0	0.62	1.00

Residual Statistics

for weighted residuals

Sum of Squares. . . 0.7656 ft^2
Variance . . . . . 0.009943 ft^2
Std. Deviation . . . . . 0.09971 ft
Mean . . . . . 0.03548 ft
No. of Residuals . . 79
No. of Estimates . . 2



RW3S DRAWDOWN

Data Set: J:\...\RW3S Drawdown.aqt
Date: 09/02/25 Time: 10:11:43

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: RW3S
Test Date: 8-19-25

AQUIFER DATA

Saturated Thickness: 5. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RW3S)

Initial Displacement: 2.197 ft
Total Well Penetration Depth: 6.29 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 6.65 ft
Screen Length: 4.7 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.0006517 cm/sec y0 = 1.811 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\RW3S\RW3S Drawdow
Title: RW3S Drawdown
Date: 09/02/25
Time: 10:11:57

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-19-25
Test Well: RW3S

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: RW3S

X Location: 1130653.064 ft
Y Location: 2456148.635 ft

Initial Displacement: 2.197 ft
Static Water Column Height: 6.65 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.7 ft
Total Well Penetration Depth: 6.29 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.06471 ft
Gravel Pack Porosity: 0.

No. of Observations: 61

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	1.884	47.16	0.856
0.6	1.87	50.52	0.817
1.2	1.865	54.12	0.784
1.8	1.823	57.72	0.74
2.46	1.809	61.92	0.709
3.18	1.784	66.12	0.666
3.96	1.756	70.32	0.641
4.74	1.728	75.12	0.604
5.58	1.706	80.52	0.572
6.48	1.673	85.32	0.542
7.44	1.64	91.32	0.514
8.4	1.611	97.32	0.478
9.48	1.577	103.3	0.448
10.62	1.537	109.9	0.419

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
11.82	1.503	117.1	0.387
13.1	1.467	124.9	0.356
14.4	1.437	132.7	0.337
15.84	1.396	141.1	0.3
17.34	1.364	150.1	0.285
18.9	1.324	159.7	0.259
20.58	1.289	169.3	0.239
22.38	1.247	180.1	0.215
24.24	1.21	191.5	0.191
26.28	1.17	203.5	0.178
28.38	1.131	216.1	0.154
30.6	1.095	229.3	0.139
33.	1.045	243.7	0.115
35.52	1.015	258.7	0.112
38.16	0.975	274.3	0.091
40.98	0.93	291.1	0.076
43.98	0.89		

SOLUTION

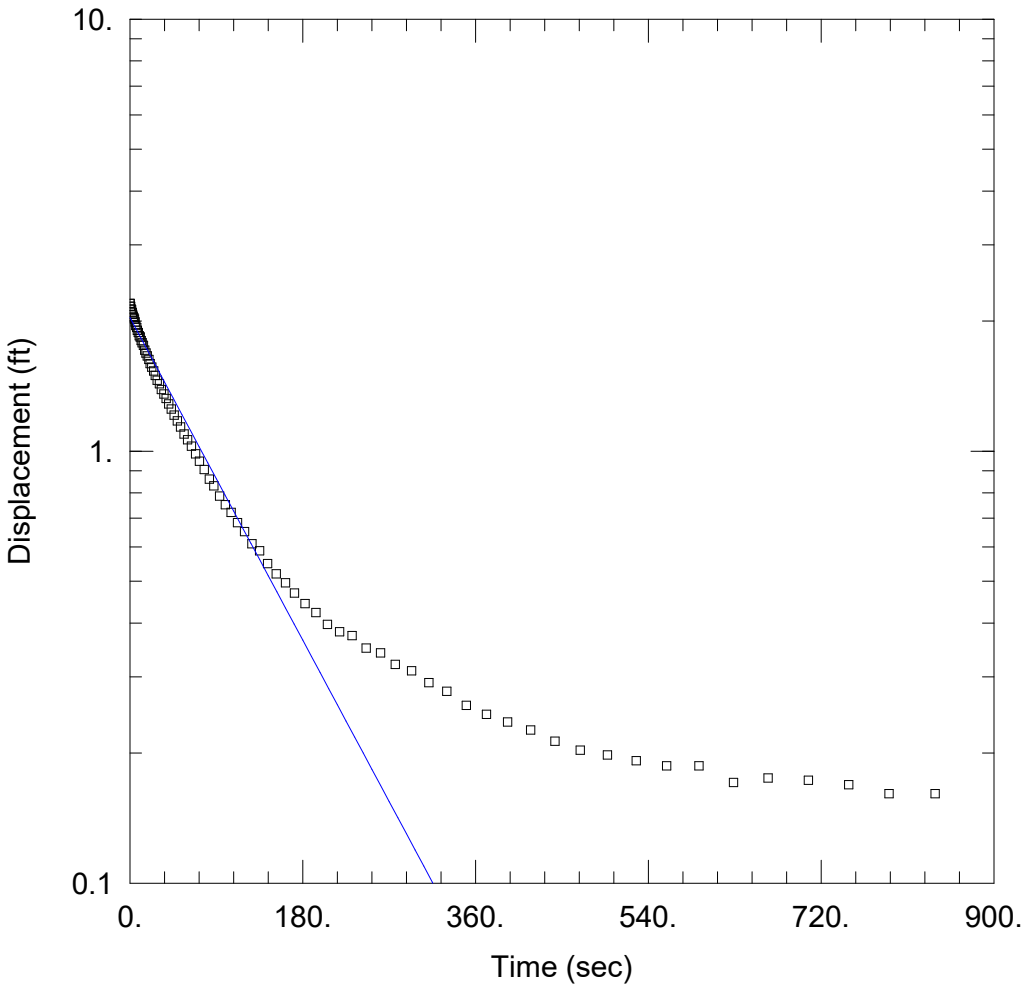
Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.277

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0006517	cm/sec
y0	1.811	ft

T = K*b = 0.09932 cm²/sec



RW3S RECOVERY

Data Set: J:\...\RW3S Recovery.aqt
Date: 09/02/25 Time: 10:12:10

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: RW3S
Test Date: 8-19-25

AQUIFER DATA

Saturated Thickness: 5. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (RW3S)

Initial Displacement: 2.197 ft
Total Well Penetration Depth: 6.66 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 6.65 ft
Screen Length: 4.7 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.0004298 cm/sec y0 = 2.038 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\RW3S\RW3S Recovery
Title: RW3S Recovery
Date: 09/02/25
Time: 10:12:18

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-19-25
Test Well: RW3S

AQUIFER DATA

Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: RW3S

X Location: 1130652.179 ft
Y Location: 2456148.818 ft

Initial Displacement: 2.197 ft
Static Water Column Height: 6.65 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.7 ft
Total Well Penetration Depth: 6.66 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.06471 ft
Gravel Pack Porosity: 0.

No. of Observations: 84

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.197	72.66	0.947
0.42	2.164	77.46	0.907
0.84	2.162	82.86	0.861
1.32	2.135	87.66	0.831
1.86	2.122	93.66	0.787
2.34	2.096	99.66	0.751
2.94	2.074	105.7	0.721
3.54	2.051	112.3	0.683
4.14	2.034	119.5	0.651
4.8	2.022	127.3	0.61
5.52	1.991	135.1	0.588
6.3	1.954	143.5	0.549
7.08	1.932	152.5	0.52
7.92	1.904	162.1	0.496

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
8.82	1.882	171.7	0.469
9.78	1.85	182.5	0.444
10.74	1.838	193.9	0.423
11.82	1.804	205.9	0.397
12.96	1.78	218.5	0.382
14.16	1.757	231.7	0.374
15.42	1.713	246.1	0.35
16.74	1.686	261.1	0.341
18.18	1.661	276.7	0.321
19.68	1.63	293.5	0.31
21.24	1.595	311.5	0.291
22.92	1.566	330.1	0.278
24.72	1.532	350.5	0.258
26.58	1.497	371.5	0.246
28.62	1.46	393.7	0.236
30.72	1.431	417.7	0.226
32.94	1.389	442.9	0.213
35.34	1.357	469.3	0.203
37.86	1.325	497.5	0.198
40.5	1.287	527.5	0.192
43.32	1.252	559.3	0.187
46.32	1.211	592.9	0.187
49.5	1.175	628.9	0.171
52.86	1.138	664.9	0.175
56.46	1.096	706.9	0.173
60.06	1.062	748.9	0.169
64.26	1.027	790.9	0.161
68.46	0.986	838.9	0.161

SOLUTION

Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.313

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0004298	cm/sec
y0	2.038	ft

T = K*b = 0.0655 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.0004298	1.54E-5	+/- 3.062E-5	27.92	cm/sec
y0	2.038	0.0256	+/- 0.05092	79.59	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.0655 cm²/sec

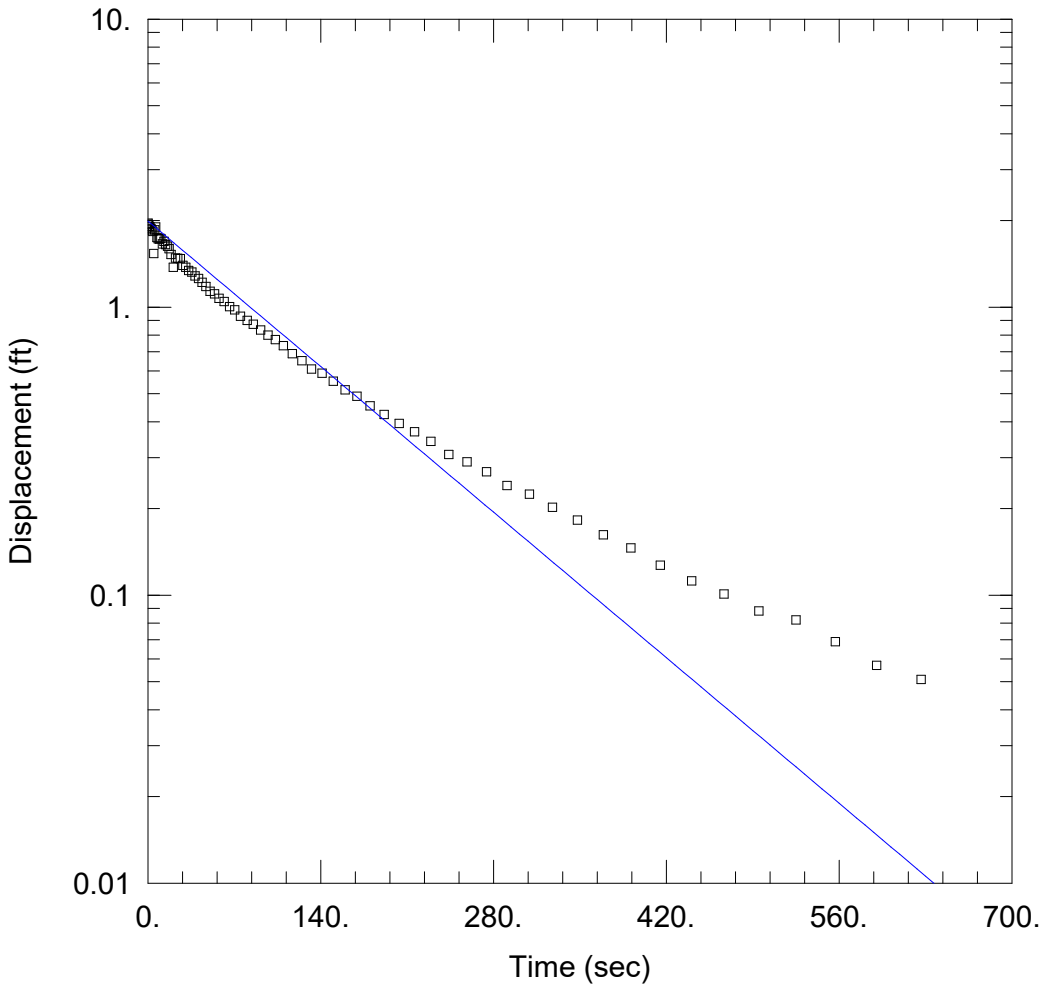
Parameter Correlations

	K	y0
K	1.00	0.60
y0	0.60	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 1.082 ft^2
Variance ..... 0.0132 ft^2
Std. Deviation ..... 0.1149 ft
Mean ..... 0.04488 ft
No. of Residuals .. 84
No. of Estimates .. 2



AP-6S DRAWDOWN

Data Set: J:\...\AP-6S Drawdown.aqt
Date: 09/02/25 Time: 09:54:02

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: AP-6S
Test Date: 8-19-25

AQUIFER DATA

Saturated Thickness: 6.36 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AP-6S)

Initial Displacement: 1.94 ft
Total Well Penetration Depth: 5.96 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 5.933 ft
Screen Length: 4.7 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.0004859 cm/sec y0 = 1.99 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\AP-6S\AP-6S Drawdow
Title: AP-6S Drawdown
Date: 09/02/25
Time: 09:54:11

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-19-25
Test Well: AP-6S

AQUIFER DATA

Saturated Thickness: 6.36 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: AP-6S

X Location: 1130735.938 ft
Y Location: 2456104.086 ft

Initial Displacement: 1.94 ft
Static Water Column Height: 5.933 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.7 ft
Total Well Penetration Depth: 5.96 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.07715 ft
Gravel Pack Porosity: 0.

No. of Observations: 74

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	1.956	70.32	0.979
0.6	1.932	75.12	0.93
1.2	1.909	80.52	0.899
1.8	1.897	85.32	0.871
2.46	1.873	91.32	0.832
3.18	1.856	97.32	0.799
3.96	1.833	103.3	0.771
4.74	1.534	109.9	0.734
5.58	1.853	117.1	0.689
6.48	1.897	124.9	0.651
7.44	1.745	132.7	0.609
8.4	1.725	141.1	0.59
9.48	1.723	150.1	0.553
10.62	1.733	159.7	0.516

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
11.82	1.659	169.3	0.49
13.08	1.693	180.1	0.454
14.4	1.648	191.5	0.424
15.84	1.63	203.5	0.395
17.34	1.597	216.1	0.369
18.9	1.522	229.3	0.342
20.58	1.374	243.7	0.308
22.38	1.482	258.7	0.29
24.24	1.477	274.3	0.268
26.28	1.473	291.1	0.24
28.38	1.396	309.1	0.224
30.6	1.375	327.7	0.202
33.	1.341	348.1	0.182
35.52	1.322	369.1	0.162
38.16	1.283	391.3	0.146
40.98	1.257	415.3	0.127
43.98	1.218	440.5	0.112
47.16	1.178	466.9	0.101
50.52	1.136	495.1	0.088
54.12	1.112	525.1	0.082
57.72	1.072	556.9	0.069
61.92	1.047	590.5	0.057
66.12	1.004	626.5	0.051

SOLUTION

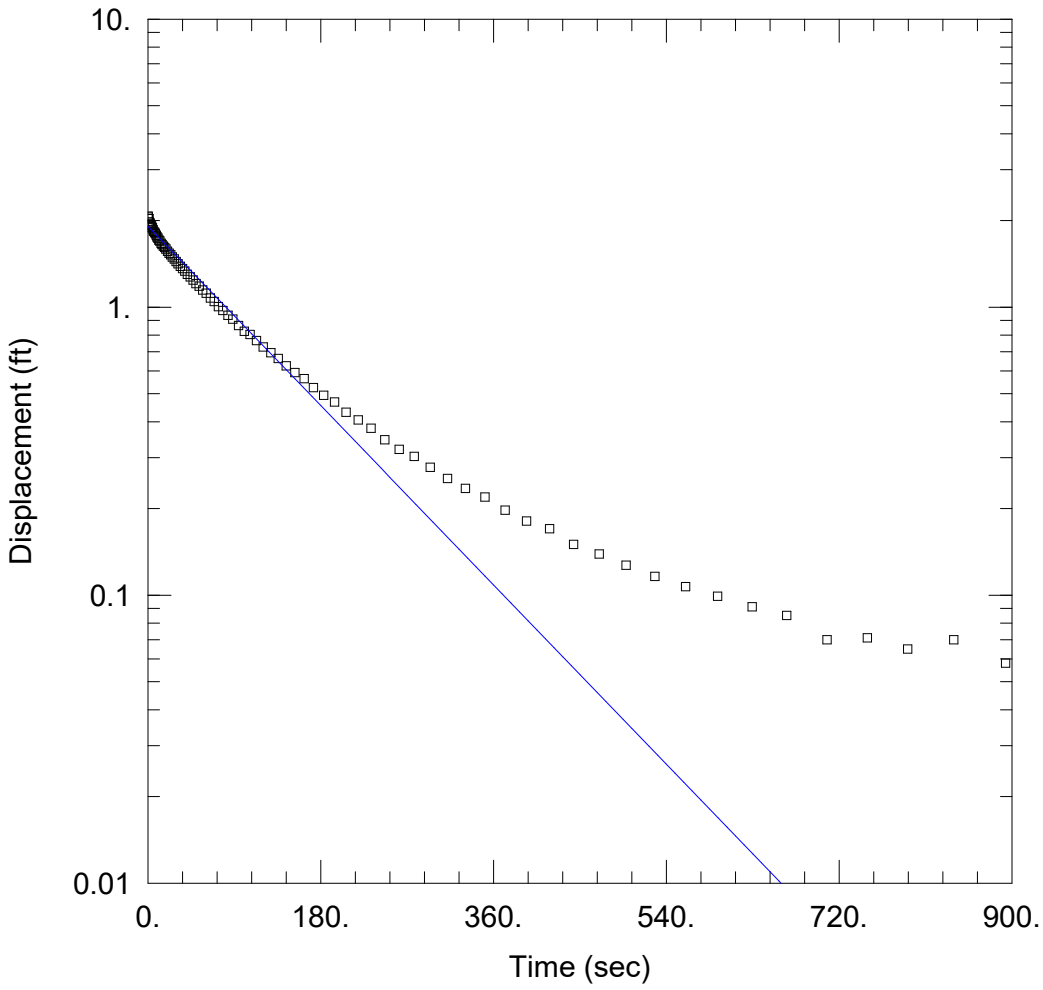
Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.029

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0004859	cm/sec
y0	1.99	ft

T = K*b = 0.0942 cm²/sec



AP-6S RECOVERY

Data Set: J:\...\AP-6S Recovery.aqt
Date: 09/02/25 Time: 09:54:19

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: AP-6S
Test Date: 8-19-25

AQUIFER DATA

Saturated Thickness: 6.36 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AP-6S)

Initial Displacement: 1.94 ft
Total Well Penetration Depth: 6.66 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 5.93 ft
Screen Length: 4.7 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 0.000509 cm/sec y0 = 1.907 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\AP-6S\AP-6S Recovery
Title: AP-6S Recovery
Date: 09/02/25
Time: 09:54:40

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-19-25
Test Well: AP-6S

AQUIFER DATA

Saturated Thickness: 6.36 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: AP-6S

X Location: 1130735.938 ft
Y Location: 2456104.086 ft

Initial Displacement: 1.94 ft
Static Water Column Height: 5.93 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.7 ft
Total Well Penetration Depth: 6.66 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.07715 ft
Gravel Pack Porosity: 0.

No. of Observations: 87

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.072	73.44	1.005
0.36	2.054	78.24	0.973
0.78	2.028	83.64	0.936
1.2	2.03	88.44	0.908
1.62	1.976	94.44	0.864
2.1	1.929	100.4	0.824
2.64	1.956	106.4	0.803
3.12	1.934	113.	0.766
3.72	1.912	120.2	0.728
4.32	1.895	128.	0.694
4.92	1.882	135.8	0.664
5.58	1.855	144.2	0.625
6.3	1.831	153.2	0.592
7.08	1.817	162.8	0.564

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
7.86	1.797	172.4	0.525
8.7	1.778	183.2	0.494
9.6	1.754	194.6	0.468
10.56	1.735	206.6	0.431
11.52	1.711	219.2	0.406
12.6	1.697	232.4	0.38
13.74	1.668	246.8	0.346
14.94	1.651	261.8	0.321
16.2	1.63	277.4	0.303
17.52	1.61	294.2	0.278
18.96	1.59	312.2	0.254
20.46	1.564	330.8	0.235
22.02	1.537	351.2	0.219
23.7	1.52	372.2	0.197
25.5	1.494	394.4	0.181
27.36	1.469	418.4	0.17
29.41	1.441	443.6	0.15
31.5	1.416	470.	0.139
33.72	1.386	498.2	0.127
36.12	1.361	528.2	0.116
38.64	1.332	560.	0.107
41.28	1.3	593.6	0.099
44.1	1.274	629.6	0.091
47.1	1.241	665.6	0.085
50.28	1.206	707.6	0.07
53.64	1.181	749.6	0.071
57.24	1.146	791.6	0.065
60.84	1.118	839.6	0.07
65.04	1.076	893.6	0.058
69.24	1.046		

SOLUTION

Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.313

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.000509	cm/sec
y0	1.907	ft

T = K*b = 0.09868 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio

K	0.000509	1.17E-5	+/- 2.325E-5	43.52	cm/sec
y0	1.907	0.01465	+/- 0.02912	130.2	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.09868 cm²/sec

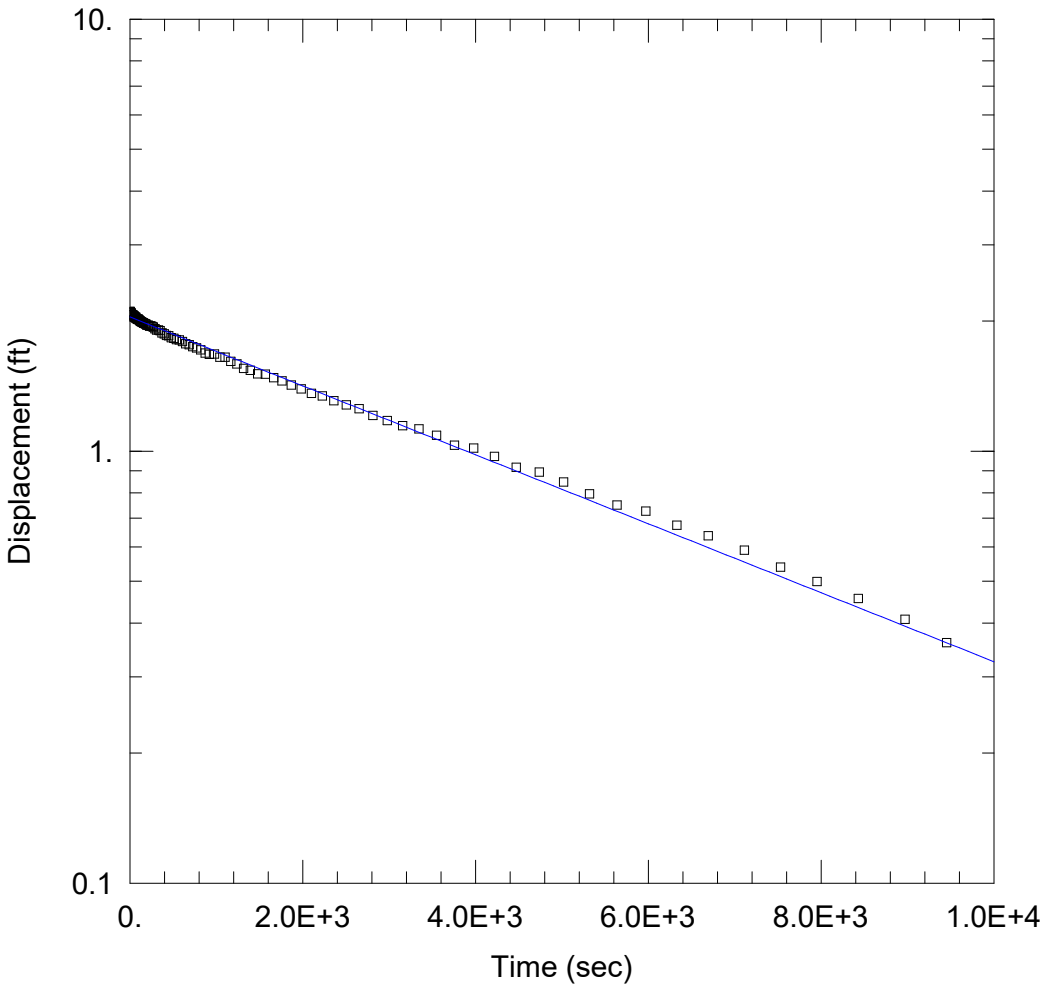
Parameter Correlations

	K	y0
K	1.00	0.58
y0	0.58	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 0.4247 ft^2
Variance ..... 0.004996 ft^2
Std. Deviation..... 0.07068 ft
Mean..... 0.02013 ft
No. of Residuals .. 87
No. of Estimates .. 2



AP-15D DRAWDOWN

Data Set: J:\...\AP-15D Drawdown.aqt
Date: 09/02/25 Time: 10:03:03

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: AP-15D
Test Date: 8-19-25

AQUIFER DATA

Saturated Thickness: 2. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AP-15D)

Initial Displacement: 2.107 ft
Total Well Penetration Depth: 29.85 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 23.3 ft
Screen Length: 2.4 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 3.189E-5 cm/sec
y0 = 2.044 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\AP-15D\AP-15D Drawd
Title: AP-15D Drawdown
Date: 09/02/25
Time: 10:02:54

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-19-25
Test Well: AP-15D

AQUIFER DATA

Saturated Thickness: 2. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: AP-15D

X Location: 1127956.648 ft
Y Location: 2455904.286 ft

Initial Displacement: 2.107 ft
Static Water Column Height: 23.3 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 2.4 ft
Total Well Penetration Depth: 29.85 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.07715 ft
Gravel Pack Porosity: 0.

No. of Observations: 103

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.107	507.8	1.825
1.559	2.096	539.6	1.813
3.24	2.099	573.2	1.809
5.039	2.098	609.2	1.794
6.899	2.093	645.2	1.771
8.939	2.093	687.2	1.762
11.04	2.083	729.2	1.745
13.26	2.088	771.2	1.733
15.66	2.083	819.2	1.717
18.18	2.074	873.2	1.687
20.82	2.072	921.2	1.675
23.64	2.068	981.2	1.678
26.64	2.069	1041.2	1.651
29.82	2.07	1101.2	1.649

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
33.18	2.065	1167.2	1.614
36.78	2.059	1239.2	1.592
40.38	2.061	1317.2	1.553
44.58	2.057	1395.2	1.539
48.78	2.046	1479.2	1.509
52.98	2.052	1569.2	1.508
57.78	2.044	1665.2	1.479
63.18	2.039	1761.2	1.453
67.98	2.04	1869.2	1.422
73.98	2.029	1983.2	1.394
79.98	2.027	2103.2	1.361
85.98	2.02	2229.2	1.341
92.58	2.019	2361.2	1.309
99.78	2.02	2505.2	1.279
107.6	2.009	2655.2	1.253
115.4	2.004	2811.2	1.21
123.8	1.997	2979.2	1.176
132.8	1.993	3159.2	1.145
142.4	1.988	3345.2	1.126
152.	1.984	3549.2	1.089
162.8	1.977	3759.2	1.032
174.2	1.972	3981.2	1.017
186.2	1.968	4221.2	0.972
198.8	1.957	4473.2	0.918
212.	1.957	4737.2	0.895
226.4	1.945	5019.2	0.848
241.4	1.949	5319.2	0.797
257.	1.943	5637.2	0.75
273.8	1.938	5973.2	0.726
291.8	1.92	6333.2	0.674
310.4	1.906	6693.2	0.637
330.8	1.907	7113.2	0.59
351.8	1.901	7533.2	0.539
374.	1.879	7953.2	0.499
398.	1.868	8433.2	0.456
423.2	1.854	8973.2	0.408
449.6	1.848	9453.2	0.36
477.8	1.832		

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.936

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.189E-5	cm/sec
y0	2.044	ft

T = K*b = 0.001944 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	3.189E-5	2.9E-7	+/- 5.754E-7	109.9	cm/sec
y0	2.044	0.004242	+/- 0.008417	481.9	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.001944 cm²/sec

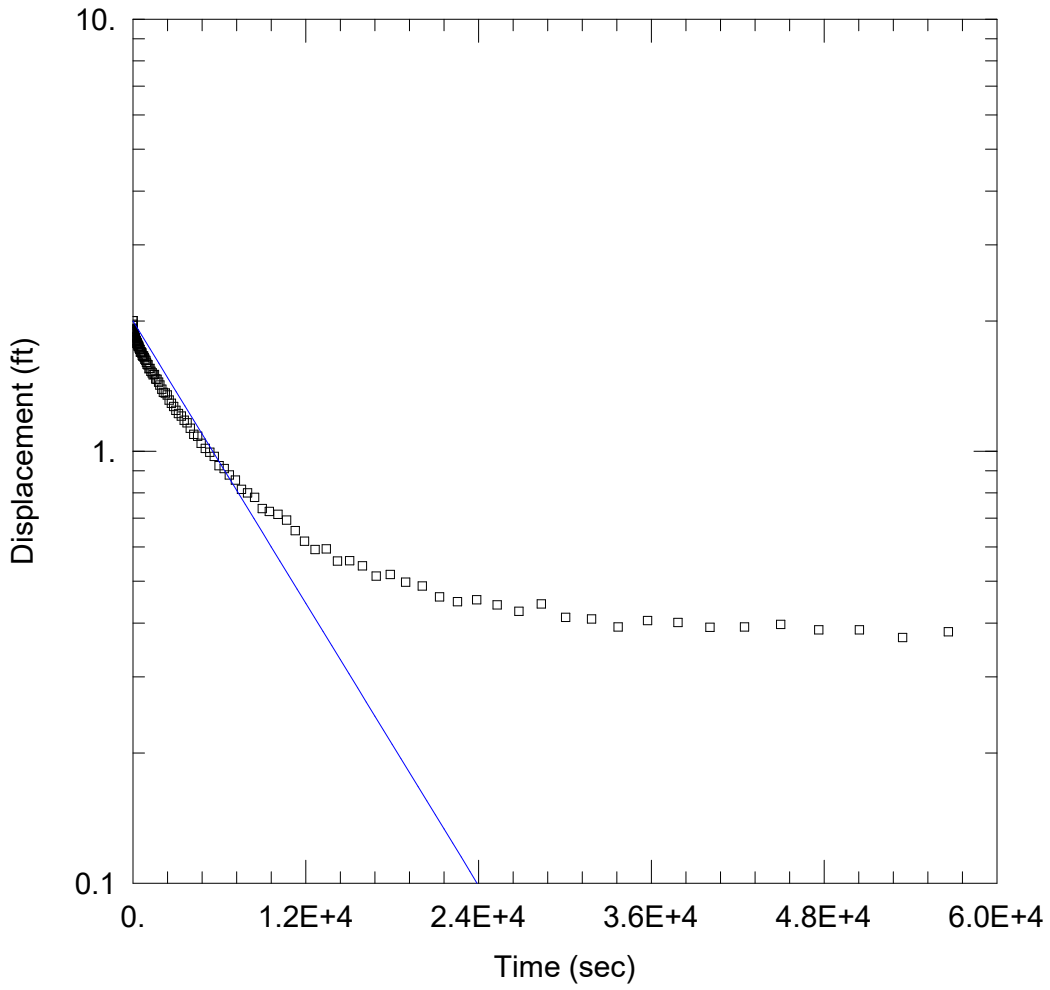
Parameter Correlations

	K	y0
K	1.00	0.50
y0	0.50	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 0.09811 ft^2
Variance ..... 0.0009714 ft^2
Std. Deviation..... 0.03117 ft
Mean..... 0.001176 ft
No. of Residuals .. 103
No. of Estimates .. 2



AP-15D RECOVERY

Data Set: J:\...\AP-15D Recovery.aqt
Date: 09/02/25 Time: 10:03:13

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: AP-15D
Test Date: 8-19-25

AQUIFER DATA

Saturated Thickness: 2. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AP-15D)

Initial Displacement: 2.004 ft
Total Well Penetration Depth: 29.85 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 23.3 ft
Screen Length: 2.4 ft
Well Radius: 0.08333 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 2.175E-5 cm/sec
y0 = 2. ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\AP-15D\AP-15D Recov
Title: AP-15D Recovery
Date: 09/02/25
Time: 10:03:22

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-19-25
Test Well: AP-15D

AQUIFER DATA

Saturated Thickness: 2. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: AP-15D

X Location: 1127956.057 ft
Y Location: 2455904.276 ft

Initial Displacement: 2.004 ft
Static Water Column Height: 23.3 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 2.4 ft
Total Well Penetration Depth: 29.85 ft

No. of Observations: 152

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.004	746.5	1.662
0.6	1.965	788.5	1.646
1.2	1.953	836.5	1.632
1.8	1.914	890.5	1.621
2.46	1.923	938.5	1.606
3.18	1.92	998.5	1.59
3.96	1.924	1058.5	1.584
4.741	1.915	1118.5	1.551
5.581	1.91	1184.5	1.553
6.481	1.907	1256.5	1.531
7.44	1.903	1334.5	1.518
8.4	1.908	1412.5	1.502
9.481	1.901	1496.5	1.505
10.62	1.902	1586.5	1.468
11.82	1.911	1682.5	1.467
13.08	1.897	1778.5	1.443

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
14.4	1.893	1886.5	1.423
15.84	1.894	2000.5	1.392
17.34	1.89	2120.5	1.367
18.9	1.892	2246.5	1.362
20.58	1.892	2378.5	1.35
22.38	1.89	2522.5	1.313
24.24	1.89	2672.5	1.291
26.28	1.883	2828.5	1.268
28.38	1.879	2996.5	1.243
30.6	1.88	3176.5	1.222
33.	1.88	3362.5	1.205
35.52	1.877	3566.5	1.178
38.16	1.872	3776.5	1.163
40.98	1.871	3998.5	1.13
43.98	1.868	4238.5	1.093
47.16	1.869	4490.5	1.083
50.52	1.865	4754.5	1.043
54.12	1.86	5036.5	1.015
57.72	1.868	5336.5	0.994
61.92	1.86	5654.5	0.972
66.12	1.86	5990.5	0.925
70.32	1.857	6350.5	0.912
75.12	1.848	6710.5	0.881
80.52	1.851	7130.5	0.857
85.32	1.85	7550.5	0.815
91.32	1.847	7970.5	0.8
97.32	1.841	8450.5	0.782
103.3	1.843	8990.5	0.736
109.9	1.844	9470.5	0.725
117.1	1.835	1.007E+4	0.714
124.9	1.838	1.067E+4	0.692
132.7	1.837	1.127E+4	0.654
141.1	1.829	1.193E+4	0.619
150.1	1.826	1.265E+4	0.592
159.7	1.827	1.343E+4	0.594
169.3	1.818	1.421E+4	0.557
180.1	1.809	1.505E+4	0.558
191.5	1.806	1.595E+4	0.543
203.5	1.8	1.691E+4	0.514
216.1	1.802	1.787E+4	0.518
229.3	1.8	1.895E+4	0.497
243.7	1.797	2.009E+4	0.487
258.7	1.791	2.129E+4	0.46
274.3	1.783	2.255E+4	0.448
291.1	1.777	2.387E+4	0.453
309.1	1.775	2.531E+4	0.441
327.7	1.771	2.681E+4	0.426
348.1	1.762	2.837E+4	0.443
369.1	1.752	3.005E+4	0.412
391.3	1.752	3.185E+4	0.409
415.3	1.749	3.371E+4	0.392
440.5	1.734	3.575E+4	0.405
466.9	1.723	3.785E+4	0.401

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
495.1	1.72	4.007E+4	0.391
525.1	1.696	4.247E+4	0.392
556.9	1.698	4.499E+4	0.397
590.5	1.692	4.763E+4	0.386
626.5	1.687	5.045E+4	0.386
662.5	1.668	5.345E+4	0.37
704.5	1.659	5.663E+4	0.382

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.827

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	2.175E-5	cm/sec
y0	2.	ft

T = K*b = 0.001326 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	1.576E-5	6.205E-7	+/- 1.226E-6	25.39	cm/sec
y0	1.824	0.01479	+/- 0.02922	123.3	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.0009605 cm²/sec

Parameter Correlations

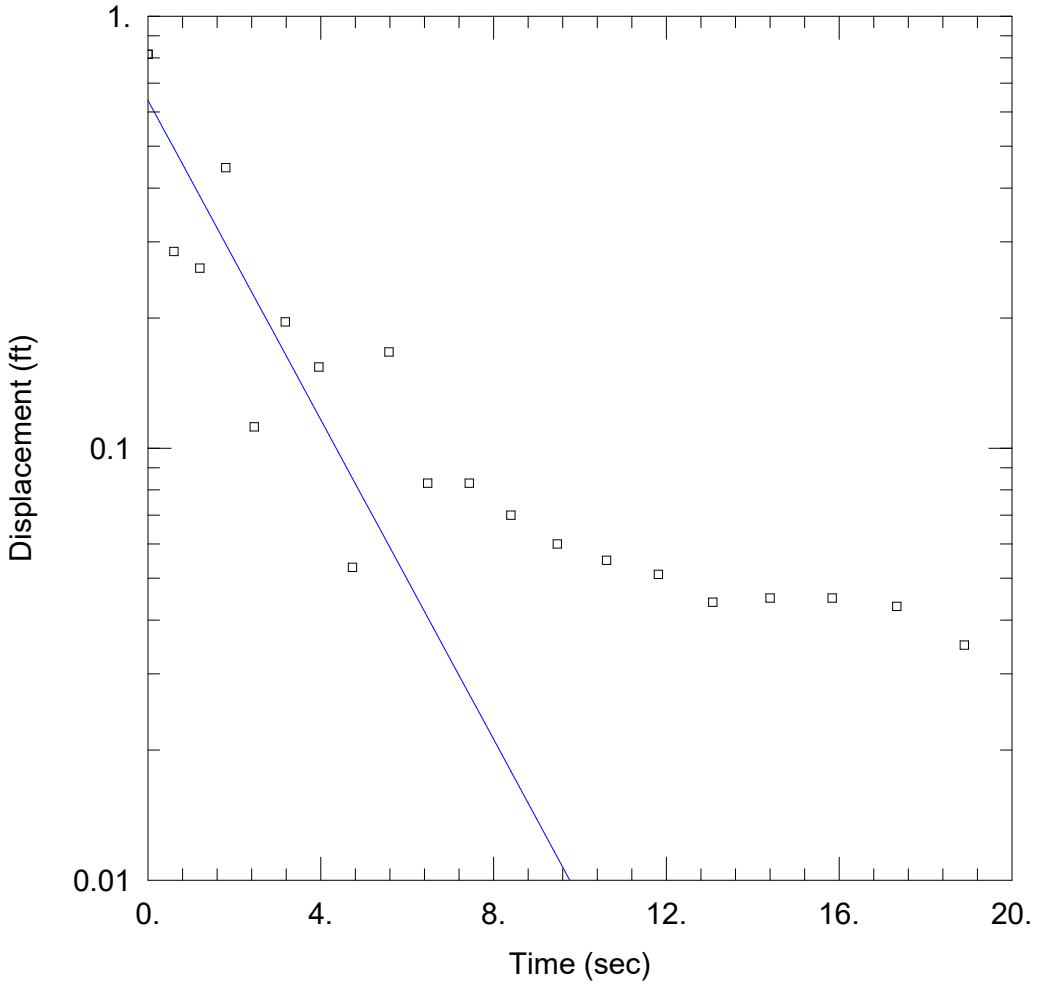
	K	y0
K	1.00	0.41
y0	0.41	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 2.758 ft^2
Variance ..... 0.01838 ft^2
Std. Deviation ..... 0.1356 ft
Mean ..... 0.03165 ft

No. of Residuals . . 152
No. of Estimates . . 2



AP-15S DRAWDOWN

Data Set: J:\...\AP-15S Drawdown.aqt
Date: 09/02/25 Time: 10:00:37

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: AP-15S
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 11.6 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AP-15S)

Initial Displacement: 0.815 ft
Total Well Penetration Depth: 22.2 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 16.6 ft
Screen Length: 4.73 ft
Well Radius: 0.08333 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 0.03296 cm/sec
y0 = 0.6383 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\AP-15S\AP-15S Drawd
Title: AP-15S Drawdown
Date: 09/02/25
Time: 10:00:46

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: AP-15S

AQUIFER DATA

Saturated Thickness: 11.6 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: AP-15S

X Location: 1127960.672 ft
Y Location: 2455903.692 ft

Initial Displacement: 0.815 ft
Static Water Column Height: 16.6 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.73 ft
Total Well Penetration Depth: 22.2 ft

No. of Observations: 20

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	0.815	7.44	0.083
0.6	0.285	8.4	0.07
1.2	0.261	9.48	0.06
1.8	0.446	10.62	0.055
2.46	0.112	11.82	0.051
3.18	0.196	13.08	0.044
3.96	0.154	14.4	0.045
4.74	0.053	15.84	0.045
5.58	0.167	17.34	0.043
6.48	0.083	18.9	0.035

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice

ln(Re/rw): 4.038

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.03006	cm/sec
y0	0.6383	ft

T = K*b = 10.63 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.03296	0.006996	+/- 0.0147	4.712	cm/sec
y0	0.6383	0.0773	+/- 0.1624	8.258	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 11.66 cm²/sec

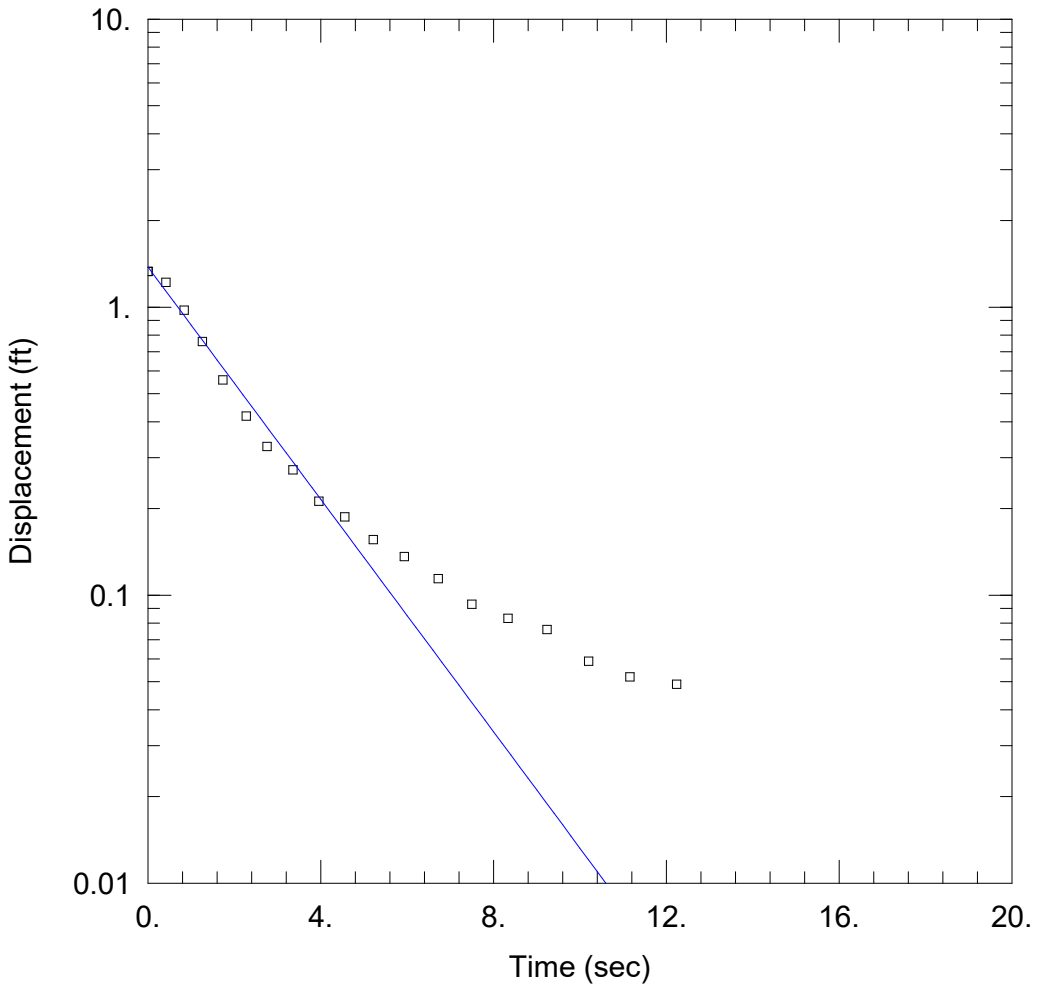
Parameter Correlations

	K	y0
K	1.00	0.61
y0	0.61	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 0.1628 ft^2
Variance ..... 0.009046 ft^2
Std. Deviation..... 0.09511 ft
Mean..... 0.02632 ft
No. of Residuals .. 20
No. of Estimates .. 2



AP-15S RECOVERY

Data Set: J:\...\AP-15S Recovery.aqt
Date: 09/02/25 Time: 10:00:57

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: AP-15S
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 11.6 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AP-15S)

Initial Displacement: 1.331 ft
Total Well Penetration Depth: 22.2 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 16.6 ft
Screen Length: 4.73 ft
Well Radius: 0.08333 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 0.03597 cm/sec
y0 = 1.378 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\AP-15S\AP-15S Recove
Title: AP-15S Recovery
Date: 09/02/25
Time: 10:01:11

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: AP-15S

AQUIFER DATA

Saturated Thickness: 11.6 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: AP-15S

X Location: 1127960.672 ft
Y Location: 2455903.692 ft

Initial Displacement: 1.331 ft
Static Water Column Height: 16.6 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 1. ft
Screen Length: 4.73 ft
Total Well Penetration Depth: 22.2 ft

No. of Observations: 19

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	1.331	5.22	0.156
0.42	1.22	5.94	0.136
0.84	0.977	6.72	0.114
1.26	0.76	7.5	0.093
1.74	0.559	8.34	0.083
2.28	0.418	9.24	0.076
2.76	0.328	10.2	0.059
3.36	0.272	11.16	0.052
3.96	0.212	12.24	0.049
4.56	0.187		

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice

ln(Re/rw): 4.038

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.03597	cm/sec
y0	1.378	ft

T = K*b = 12.72 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.03597	0.00174	+/- 0.003672	20.67	cm/sec
y0	1.378	0.03803	+/- 0.08025	36.23	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 12.72 cm²/sec

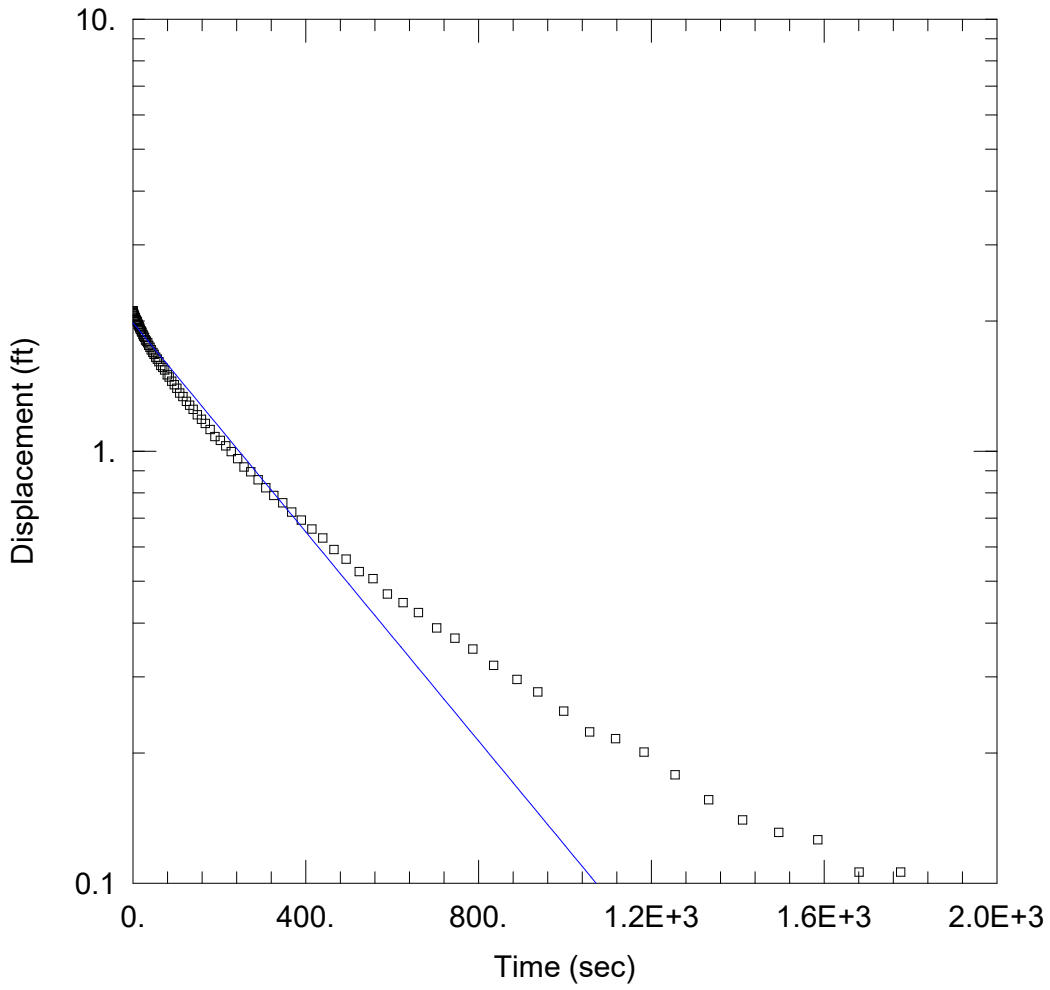
Parameter Correlations

	K	y0
K	1.00	0.63
y0	0.63	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 0.04332 ft^2
Variance ..... 0.002548 ft^2
Std. Deviation..... 0.05048 ft
Mean..... 0.01778 ft
No. of Residuals .. 19
No. of Estimates .. 2



AP-16 DRAWDOWN

Data Set: J:\...\AP-16 Drawdown.aqt
Date: 09/02/25 Time: 10:04:05

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: AP-16
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AP-16)

Initial Displacement: 2.113 ft
Total Well Penetration Depth: 16.15 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 10.01 ft
Screen Length: 4.68 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 0.0002079 cm/sec
y0 = 1.981 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\AP-16\AP-16 Drawdown
Title: AP-16 Drawdown
Date: 09/02/25
Time: 10:04:17

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: AP-16

AQUIFER DATA

Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: AP-16

X Location: 1131172.579 ft
Y Location: 2455836.828 ft

Initial Displacement: 2.113 ft
Static Water Column Height: 10.01 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.68 ft
Total Well Penetration Depth: 16.15 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.07715 ft
Gravel Pack Porosity: 0.

No. of Observations: 90

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.113	131.5	1.277
0.599	2.102	139.9	1.25
1.26	2.09	148.9	1.214
1.98	2.08	158.5	1.185
2.76	2.065	168.1	1.159
3.54	2.055	178.9	1.122
4.38	2.052	190.3	1.08
5.28	2.038	202.3	1.058
6.239	2.022	214.9	1.028
7.199	2.013	228.1	0.997
8.279	2.007	242.5	0.96
9.419	1.997	257.5	0.919
10.62	1.991	273.1	0.896
11.88	1.967	289.9	0.858

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
13.2	1.961	307.9	0.823
14.64	1.946	326.5	0.789
16.14	1.929	346.9	0.759
17.7	1.915	367.9	0.722
19.38	1.898	390.1	0.692
21.18	1.884	414.1	0.66
23.04	1.862	439.3	0.629
25.08	1.845	465.7	0.592
27.18	1.835	493.9	0.562
29.4	1.81	523.9	0.526
31.8	1.797	555.7	0.507
34.32	1.78	589.3	0.467
36.96	1.757	625.3	0.446
39.78	1.739	661.3	0.423
42.78	1.715	703.3	0.39
45.96	1.692	745.3	0.369
49.32	1.674	787.3	0.348
52.92	1.649	835.3	0.319
56.52	1.634	889.3	0.296
60.72	1.612	937.3	0.277
64.92	1.579	997.3	0.25
69.12	1.561	1057.3	0.224
73.92	1.54	1117.3	0.216
79.32	1.501	1183.3	0.201
84.12	1.484	1255.3	0.178
90.12	1.452	1333.3	0.156
96.12	1.424	1411.3	0.14
102.1	1.397	1495.3	0.131
108.7	1.362	1585.3	0.126
115.9	1.338	1681.3	0.106
123.7	1.304	1777.3	0.106

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.851

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0002079	cm/sec
y0	1.981	ft

T = K*b = 0.04436 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.0002079	5.116E-6	+/- 1.017E-5	40.64	cm/sec
y0	1.981	0.01501	+/- 0.02983	131.9	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.04436 cm²/sec

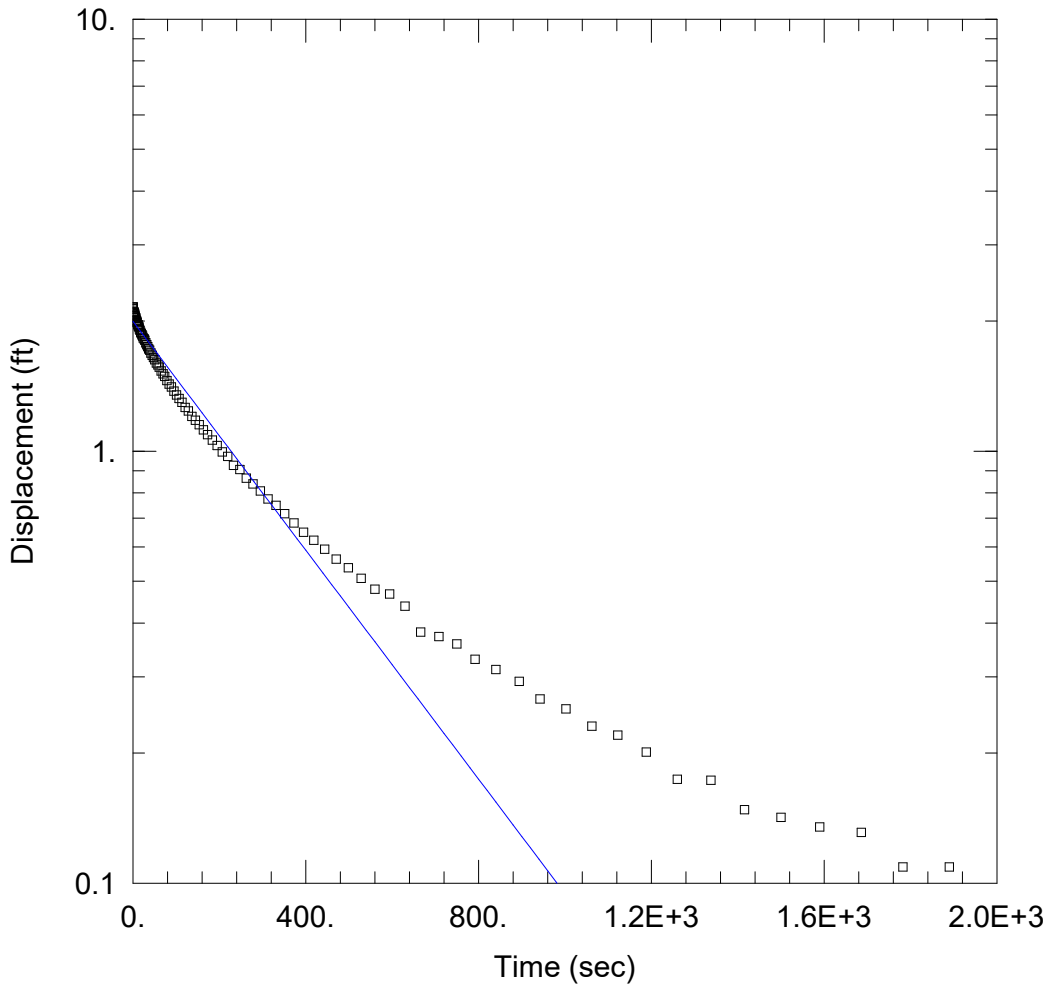
Parameter Correlations

	K	y0
K	1.00	0.56
y0	0.56	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 0.5863 ft^2
Variance ..... 0.006662 ft^2
Std. Deviation..... 0.08162 ft
Mean..... 0.01914 ft
No. of Residuals .. 90
No. of Estimates .. 2



AP-16 RECOVERY

Data Set: J:\...\AP-16 Recovery.aqt
Date: 09/02/25 Time: 10:04:43

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Well: AP-16
Test Date: 8-20-25

AQUIFER DATA

Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AP-16)

Initial Displacement: 2.156 ft
Total Well Penetration Depth: 16.15 ft
Casing Radius: 0.08333 ft
Static Water Column Height: 10.01 ft
Screen Length: 4.68 ft
Well Radius: 0.08333 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 0.0002276 cm/sec
y0 = 1.997 ft

Data Set: J:\S\Springfield CWLP\CWLP Ash Pond\GEO\Slug Testing Data\Converted Files\AP-16\AP-16 Recovery.
Title: AP-16 Recovery
Date: 09/02/25
Time: 10:04:58

PROJECT INFORMATION

Company: Andrews Engineering
Client: CWLP
Project: 240338
Location: CWLP
Test Date: 8-20-25
Test Well: AP-16

AQUIFER DATA

Saturated Thickness: 7. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: AP-16

X Location: 1131172.579 ft
Y Location: 2455836.828 ft

Initial Displacement: 2.156 ft
Static Water Column Height: 10.01 ft
Casing Radius: 0.08333 ft
Well Radius: 0.08333 ft
Well Skin Radius: 0.3438 ft
Screen Length: 4.68 ft
Total Well Penetration Depth: 16.15 ft
Corrected Casing Radius (Bouwer-Rice Method): 0.07715 ft
Gravel Pack Porosity: 0.

No. of Observations: 102

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
0.	2.156	101.	1.35
0.25	2.153	107.	1.325
0.609	2.136	113.6	1.296
0.97	2.133	120.8	1.263
1.389	2.11	128.6	1.239
1.809	2.103	136.4	1.203
2.229	2.097	144.8	1.179
2.71	2.091	153.8	1.151
3.249	2.086	163.4	1.12
3.729	2.079	173.	1.091
4.329	2.067	183.8	1.06
4.929	2.063	195.2	1.03
5.529	2.046	207.2	0.995
6.189	2.038	219.8	0.972

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
6.909	2.033	233.	0.927
7.689	2.012	247.4	0.907
8.47	2.004	262.4	0.866
9.31	1.997	278.	0.839
10.21	1.984	294.8	0.808
11.17	1.962	312.8	0.775
12.13	1.959	331.4	0.749
13.21	1.942	351.8	0.716
14.35	1.935	372.8	0.682
15.55	1.917	395.	0.649
16.81	1.904	419.	0.622
18.13	1.886	444.2	0.593
19.57	1.872	470.6	0.562
21.07	1.858	498.8	0.537
22.63	1.846	528.8	0.508
24.31	1.827	560.6	0.479
26.11	1.818	594.2	0.467
27.97	1.805	630.2	0.438
30.01	1.782	666.2	0.381
32.11	1.764	708.2	0.372
34.33	1.745	750.2	0.358
36.73	1.725	792.2	0.33
39.25	1.713	840.2	0.312
41.89	1.686	894.2	0.293
44.71	1.666	942.2	0.267
47.71	1.646	1002.2	0.253
50.89	1.626	1062.2	0.231
54.25	1.6	1122.2	0.22
57.85	1.584	1188.2	0.201
61.45	1.564	1260.2	0.174
65.65	1.533	1338.2	0.173
69.85	1.509	1416.2	0.148
74.05	1.488	1500.2	0.142
78.85	1.456	1590.2	0.135
84.25	1.43	1686.2	0.131
89.05	1.408	1782.2	0.109
95.05	1.377	1890.2	0.109

SOLUTION

Slug Test
Aquifer Model: Confined
Solution Method: Bouwer-Rice
ln(Re/rw): 3.851

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0002276	cm/sec
y0	1.997	ft

T = K*b = 0.04857 cm²/sec

AUTOMATIC ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	Std. Error	Approx. C.I.	t-Ratio	
K	0.0002276	6.531E-6	+/- 1.296E-5	34.86	cm/sec
y0	1.997	0.01632	+/- 0.03239	122.3	ft

C.I. is approximate 95% confidence interval for parameter
t-ratio = estimate/std. error
No estimation window

T = K*b = 0.04857 cm²/sec

Parameter Correlations

	K	y0
K	1.00	0.53
y0	0.53	1.00

Residual Statistics

for weighted residuals

Sum of Squares... 0.9793 ft^2
Variance ..... 0.009793 ft^2
Std. Deviation..... 0.09896 ft
Mean..... 0.02408 ft
No. of Residuals .. 102
No. of Estimates .. 2

PACKER TEST DATA

Packer Test Summary Table
CWLP Ash Pond Investigation

Boring	Bottom of Top Packer (ft. BGS)	Top of Bottom Packer (ft. BGS)	Hydraulic Conductivity	Formation	Comment
B100	93	103.5	1.00E-09	shale w/ claystone, limestone interbeddings	No take
B100	93	103.5	2.69E-07	shale w/ claystone, limestone interbeddings	took .05 gallons during test
B100	93	103.5	1.00E-09	shale w/ claystone, limestone interbeddings	No take
B100	93	103.5	1.00E-09	shale w/ claystone, limestone interbeddings	No take
B100	93	103.5	1.00E-09	shale w/ claystone, limestone interbeddings	No take
B100	82.5	93	1.00E-09	shale w/ claystone interbeddings	No take, switch gauges from 0-200 psi to 0-100 psi prior to test.
B100	82.5	93	1.00E-09	shale w/ claystone interbeddings	No take
B100	82.5	93	1.00E-09	shale w/ claystone interbeddings	No take
B100	82.5	93	1.00E-09	shale w/ claystone interbeddings	No take
B100	82.5	93	1.00E-09	shale w/ claystone interbeddings	No take
B100	72	82.5	1.00E-09	shale w/ claystone interbeddings	No take
B100	72	82.5	1.00E-09	shale w/ claystone interbeddings	No take
B100	72	82.5	1.00E-09	shale w/ claystone interbeddings	No take
B100	72	82.5	1.00E-09	shale w/ claystone interbeddings	No take
B100	72	82.5	1.00E-09	shale w/ claystone interbeddings	No take
B100	61.5	72	1.00E-09	shale w/ claystone interbeddings	No take
B100	61.5	72	1.00E-09	shale w/ claystone interbeddings	No take
B100	61.5	72	2.60E-07	shale w/ claystone interbeddings	
B100	61.5	72	4.33E-07	shale w/ claystone interbeddings	
B100	61.5	72	2.60E-07	shale w/ claystone interbeddings	
B100	51	61.5	1.00E-09	shale w/ claystone interbeddings	No take
B100	51	61.5	1.00E-09	shale w/ claystone interbeddings	No take
B100	51	61.5	1.20E-06	shale w/ claystone interbeddings	pressure drpped on 60 psi test so next test terminated.
B100	40.5	51	1.28E-05	shale w/ claystone interbeddings	
B100	40.5	51	3.17E-04	shale w/ claystone interbeddings	pressure drpped on 45 psi test so next test terminated.
B100	38.5	49	3.91E-05	shale	packer blowout. Replace backer and resumed test.
B100	38.5	49	4.26E-04	shale	could only maintain 28 psi on the planned 30 psi test.

Packer Test Solution - CWLP Ash Ponds - Springfield, IL.
"Methods and procedures for defining aquifer parameters" (by John Sevee);
in Practical Handbook of Ground-Water Monitor`
Friction loss calculation using Hazen-Williams formula.
[Hf = (3.022)(v)^1.85(L) / (C)^1.85(D)^1.165]

Shale
Date: 5/23/2024
Boring B100
0.14 Radius of test hole (in ft.)
2.67 Gauge height above ground (in ft.)
4.9 Depth to Water Below Ground (in ft.) - Water level after filling boring before testing.

Test No.	Bottom of Top Packer (ft)	Top of Bottom Packer (ft)	Depth [interval midpoint] (ft)	Length of Interval (ft)	Initial Gauge Reading (gal)	End Gauge Reading (gal)	Begin Time (min)	End Time (min)	Constant flow rate Q (in gal/min)	Static Head Hs (in feet)	Gauge pressure p (in psi)	Fluid head Hp = p * 2.3 (in feet)	Friction loss Hf (in feet)	Differential head Hs+Hp+Hg-Hf (in feet)		Hydraulic Cond K (in cm/sec)	Nat Log ln(L/r)	Inv Hyp Sin sinh-1 (L/2r)	Convert Q gal/min to cu ft/sec
1a	93	103.5	98.25	10.5	2711.65	2711.65	0	15	0	93.35	15	34.5	0	130.52	≦	1.00E-09	4.32	4.32	0.00E+00
1b	93	103.5	98.25	10.5	2711.8	2711.95	0	15	0.01	93.35	30	69	4.08E-05	165.02	≦	2.69E-07	4.32	4.32	2.23E-05
1c	93	103.5	98.25	10.5	2711.9	2711.9	0	15	0	93.35	45	103.5	0	199.52	≦	1.00E-09	4.32	4.32	0.00E+00
1d	93	103.5	98.25	10.5	2711.95	2711.95	0	15	0	93.35	60	138	0	234.02	≦	1.00E-09	4.32	4.32	0.00E+00
1e	93	103.5	98.25	10.5	2711.9	2711.9	0	15	0	93.35	45	103.5	0	199.52	≦	1.00E-09	4.32	4.32	0.00E+00
														mean K (cm/sec)		5.47E-08			

Shale
Date: 5/23/2024
Boring B100
0.14 Radius of test hole (in ft.)
2.67 Gauge height above ground (in ft.)
2.4 Depth to Water Below Ground (in ft.) - Water level after filling boring before testing.

Test No.	Bottom of Top Packer (ft)	Top of Bottom Packer (ft)	Depth [interval midpoint] (ft)	Length of Interval (ft)	Initial Gauge Reading (gal)	End Gauge Reading (gal)	Begin Time (min)	End Time (min)	Constant flow rate Q (in gal/min)	Static Head Hs (in feet)	Gauge pressure p (in psi)	Fluid head Hp = p * 2.3 (in feet)	Friction loss Hf (in feet)	Differential head Hs+Hp+Hg-Hf (in feet)		Hydraulic Cond K (in cm/sec)	Nat Log ln(L/r)	Inv Hyp Sin sinh-1 (L/2r)	Convert Q gal/min to cu ft/sec
1a	82.5	93	87.75	10.5	2712.35	2712.35	0	15	0	85.35	15	34.5	0	122.52	≦	1.00E-09	4.32	4.32	0.00E+00
1b	82.5	93	87.75	10.5	2712.4	2712.4	0	15	0	85.35	30	69	0	157.02	≦	1.00E-09	4.32	4.32	0.00E+00
1c	82.5	93	87.75	10.5	2712.4	2712.4	0	15	0	85.35	45	103.5	0	191.52	≦	1.00E-09	4.32	4.32	0.00E+00
1d	82.5	93	87.75	10.5	2712.4	2712.4	0	15	0	85.35	60	138	0	226.02	≦	1.00E-09	4.32	4.32	0.00E+00
1e	82.5	93	87.75	10.5	2712.4	2712.4	0	15	0	85.35	45	103.5	0	191.52	≦	1.00E-09	4.32	4.32	0.00E+00
														mean K (cm/sec)		1.00E-09			

Packer Test Solution - CWLP Ash Ponds - Springfield, IL.
"Methods and procedures for defining aquifer parameters" (by John Sevee);
in Practical Handbook of Ground-Water Monitor`
Friction loss calculation using Hazen-Williams formula.
[Hf = (3.022)(v)^1.85(L) / (C)^1.85(D)^1.165]

Shale
Date: 5/24/2024
Boring B100
0.14 Radius of test hole (in ft.)
2.67 Gauge height above ground (in ft.)
1.2 Depth to Water Below Ground (in ft.) - Water level after filling boring before testing.

Test No.	Bottom of Top Packer (ft)	Top of Bottom Packer (ft)	Depth [interval midpoint] (ft)	Length of Interval (ft)	Initial Gauge Reading (gal)	End Gauge Reading (gal)	Begin Time (min)	End Time (min)	Constant flow rate Q (in gal/min)	Static Head Hs (in feet)	Gauge pressure p (in psi)	Fluid head Hp = p * 2.3 (in feet)	Friction loss Hf (in feet)	Differential head Hs+Hp+Hg-Hf (in feet)		Hydraulic Cond K (in cm/sec)	Nat Log ln(L/r)	Inv Hyp Sin sinh-1 (L/2r)	Convert Q gal/min to cu ft/sec
1a	72	82.5	77.25	10.5	2717.85	2717.85	0	15	0	76.05	15	34.5	0	113.22	≦	1.00E-09	4.32	4.32	0.00E+00
1b	72	82.5	77.25	10.5	2717.85	2717.85	0	15	0	76.05	30	69	0	147.72	≦	1.00E-09	4.32	4.32	0.00E+00
1c	72	82.5	77.25	10.5	2717.85	2717.85	0	15	0	76.05	45	103.5	0	182.22	≦	1.00E-09	4.32	4.32	0.00E+00
1d	72	82.5	77.25	10.5	2717.85	2717.85	0	15	0	76.05	60	138	0	216.72	≦	1.00E-09	4.32	4.32	0.00E+00
1e	72	82.5	77.25	10.5	2717.85	2717.85	0	15	0	76.05	45	103.5	0	182.22	≦	1.00E-09	4.32	4.32	0.00E+00
														mean K (cm/sec)		1.00E-09			

Shale
Date: 5/24/2024
Boring B100
0.14 Radius of test hole (in ft.)
2.67 Gauge height above ground (in ft.)
2.2 Depth to Water Below Ground (in ft.) - Water level after filling boring before testing.

Test No.	Bottom of Top Packer (ft)	Top of Bottom Packer (ft)	Depth [interval midpoint] (ft)	Length of Interval (ft)	Initial Gauge Reading (gal)	End Gauge Reading (gal)	Begin Time (min)	End Time (min)	Constant flow rate Q (in gal/min)	Static Head Hs (in feet)	Gauge pressure p (in psi)	Fluid head Hp = p * 2.3 (in feet)	Friction loss Hf (in feet)	Differential head Hs+Hp+Hg-Hf (in feet)		Hydraulic Cond K (in cm/sec)	Nat Log ln(L/r)	Inv Hyp Sin sinh-1 (L/2r)	Convert Q gal/min to cu ft/sec
1a	61.5	72	66.75	10.5	2724.05	2724.05	0	15	0	64.55	15	34.5	0	101.72	≦	1.00E-09	4.32	4.32	0.00E+00
1b	61.5	72	66.75	10.5	2724.05	2724.05	0	15	0	64.55	30	69	0	136.22	≦	1.00E-09	4.32	4.32	0.00E+00
1c	61.5	72	66.75	10.5	2724.05	2724.2	0	15	0.01	64.55	45	103.5	2.77E-05	170.72	≦	2.60E-07	4.32	4.32	2.23E-05
1d	61.5	72	66.75	10.5	2724.2	2724.5	0	15	0.02	64.55	60	138	1.00E-04	205.22	≦	4.33E-07	4.32	4.32	4.46E-05
1e	61.5	72	66.75	10.5	2724.5	2724.65	0	15	0.01	64.55	45	103.5	2.77E-05	170.72	≦	2.60E-07	4.32	4.32	2.23E-05
														mean K (cm/sec)		1.91E-07			

Packer Test Solution - CWLP Ash Ponds - Springfield, IL.
"Methods and procedures for defining aquifer parameters" (by John Sevee);
in Practical Handbook of Ground-Water Monitor`
Friction loss calculation using Hazen-Williams formula.
[Hf = (3.022)(v)^1.85(L) / (C)^1.85(D)^1.165]

Shale
Date: 5/24/2024
Boring B100
0.14 Radius of test hole (in ft.)
2.67 Gauge height above ground (in ft.)
2.1 Depth to Water Below Ground (in ft.) - Water level after filling boring before testing.

Test No.	Bottom of Top Packer (ft)	Top of Bottom Packer (ft)	Depth [interval midpoint] (ft)	Length of Interval (ft)	Initial Gauge Reading (gal)	End Gauge Reading (gal)	Begin Time (min)	End Time (min)	Constant flow rate Q (in gal/min)	Static Head Hs (in feet)	Gauge pressure p (in psi)	Fluid head Hp = p * 2.3 (in feet)	Friction loss Hf (in feet)	Differential head Hs+Hp+Hg-Hf (in feet)		Hydraulic Cond K (in cm/sec)	Nat Log ln(L/r)	Inv Hyp Sin sinh-1 (L/2r)	Convert Q gal/min to cu ft/sec
1a	51	61.5	56.25	10.5	2732	2732	0	15	0	54.15	15	34.5	0	91.32	≦	1.00E-09	4.32	4.32	0.00E+00
1b	51	61.5	56.25	10.5	2732	2732	0	15	0	54.15	30	69	0	125.82	≦	1.00E-09	4.32	4.32	0.00E+00
1c	51	61.5	56.25	10.5	2732	2732.65	0	15	0.04	54.15	45	103.5	3.52E-04	160.32	≦	1.20E-06	4.32	4.32	9.65E-05
														mean K (cm/sec)		4.01E-07			

Shale
Date: 5/24/2024
Boring B100
0.14 Radius of test hole (in ft.)
2.67 Gauge height above ground (in ft.)
1.9 Depth to Water Below Ground (in ft.) - Water level after filling boring before testing.

Test No.	Bottom of Top Packer (ft)	Top of Bottom Packer (ft)	Depth [interval midpoint] (ft)	Length of Interval (ft)	Initial Gauge Reading (gal)	End Gauge Reading (gal)	Begin Time (min)	End Time (min)	Constant flow rate Q (in gal/min)	Static Head Hs (in feet)	Gauge pressure p (in psi)	Fluid head Hp = p * 2.3 (in feet)	Friction loss Hf (in feet)	Differential head Hs+Hp+Hg-Hf (in feet)		Hydraulic Cond K (in cm/sec)	Nat Log ln(L/r)	Inv Hyp Sin sinh-1 (L/2r)	Convert Q gal/min to cu ft/sec
1a	40.5	51	45.75	10.5	2814.4	2817.9	0	15	0.23	43.65	15	34.5	0.01	80.81	≦	1.28E-05	4.32	4.32	5.20E-04
1b	40.5	51	45.75	10.5	2718.8	2837.5	0	15	7.91	43.65	30	69	4.38	110.94	≦	3.17E-04	4.32	4.32	1.76E-02
														mean K (cm/sec)		1.65E-04			

Packer Test Solution - CWLP Ash Ponds - Springfield, IL.
"Methods and procedures for defining aquifer parameters" (by John Sevee);
in Practical Handbook of Ground-Water Monitor`
Friction loss calculation using Hazen-Williams formula.
[Hf = (3.022)(v)^1.85(L) / (C)^1.85(D)^1.165]

Shale
Date: 5/24/2024
Boring B100
0.14 Radius of test hole (in ft.)
2.67 Gauge height above ground (in ft.)
1.2 Depth to Water Below Ground (in ft.) - Water level after filling boring before testing.

Test No.	Bottom of Top Packer (ft)	Top of Bottom Packer (ft)	Depth [interval midpoint] (ft)	Length of Interval (ft)	Initial Gauge Reading (gal)	End Gauge Reading (gal)	Begin Time (min)	End Time (min)	Constant flow rate Q (in gal/min)	Static Head Hs (in feet)	Gauge pressure p (in psi)	Fluid head Hp = p * 2.3 (in feet)	Friction loss Hf (in feet)	Differential head Hs+Hp+Hg-Hf (in feet)		Hydraulic Cond K (in cm/sec)	Nat Log ln(L/r)	Inv Hyp Sin sinh-1 (L/2r)	Convert Q gal/min to cu ft/sec
1a	38.5	49	43.75	10.5	2914	2924.4	0	15	0.69	41.65	15	34.5	0.05	78.77	≦	3.91E-05	4.32	4.32	1.54E-03
1b	38.5	49	43.75	10.5	2925.8	3073	0	15	9.81	41.65	28	64.4	6.23	102.49	≦	4.26E-04	4.32	4.32	2.19E-02
														mean K (cm/sec)		2.32E-04			

APPENDIX E:
LABORATORY SOILS ANALYSES

APPENDIX E1:
APPLICATION LOG NO. 1995-243

Table 4
Summary of Laboratory Test Results for Creek Fill Materials

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf)	Hydraulic Conductivity (cm/sec)	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI				
B-7	SS-4	6.0-8.0	CL	24.4	0	33	46/21*							
CB-1	3T-5	8.0-10.0	CL	27.4				44	23	18	95.5		$1.5x10^{-7}$	
CB-1	3T-5	8.0-10.0	CL	29.4							94.4	0.6		
CB-2	3T-9	16.0-18.0	ML	37.8				34	25	9	79.6		$2.4x10^{-7}$	
CB-3	SS-4	6.0-8.0	CL-ML	20.5	0	48	52							
CB-8	SS-3	4.0-6.0	OL	31.4				35	21	14				
CB-9	SS-5	8.0-10.0	OL	34.2										18.1
P-1D	SS-5	8.0-10.0	OL	20.4				46	20	26				
P-2D	3T-15	28.0-30.0	CL	25.9							99.1		$7.3x10^{-7}$	
P-1S	SS-2A	38.0-38.7	SC**	19.3	2	65	33							
P-3S	SS-3	10.0-12.0	SM**	-	0	55	45							
P-5D	SS-4	6.0-8.0	OL	31.8				45	25	20				
P-5S	3T-2	10.0-12.0	OL	26.3							95.7		$7.6x10^{-8}$	
P-8D	SS-4	60.-8.0	OL	25.3				37	21	16				
P-8S	SS-3	10.0-12.0	OL	41.0	0	12	62/26*							
B-13***	2-ST	5.0-7.0	CL/OL	37.2	0	2	67/31*	39	23	16	83.7		$2.2x10^{-7}$	14.0
B-16***	2-ST	5.0-7.0	CL/OL	22.1	0	5	67/28*	38	28	10	104.4		$2.1x10^{-7}$	16.0
P-9D****	3T-8	14.0-16.0	CL	22.7							102.3		$3.3x10^{-8}$	

* *Represent percentages of silt and clay based on hydrometer analysis*
** *Granular Creek Fill*
*** *Based on PSI (1989) investigation*
**** *Berm Fill*

ref:hb\496b\496b-4.tbl

Table 5

Summary of Slug Test Results for Creek Fill

Location	Soil Type Tested	USCS Classification	Calculated Hydraulic Conductivity (cm/sec)		
			Recovery Test	Drawdown Test	Average Value
P-1S	Clayey sand	SC	2.4×10^{-4}	6.1×10^{-5}	1.5×10^{-4}
P-3S	Silty sand	SM	5.6×10^{-3}	1.5×10^{-2}	1.0×10^{-2}
P-5S	Organic silty clay	OL	7.1×10^{-5}	1.1×10^{-4}	8.6×10^{-5}
P-8S	Clayey sand	SC	1.2×10^{-4}	NT	1.2×10^{-4}

Refer to Appendix D for detailed test results.
NT = Not Tested

ref:hb/496b/496b-5.tbl

Table 6
Summary of Laboratory Test Results for Upper Cohesive Deposit

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf)	Hydraulic Conductivity (cm/sec)	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI				
B-4	3T-4	6.0 - 8.0	CL	28.0							98.7		4.7×10^{-8}	
P-6D	SS-2	2.0 - 4.0	CL	21.2				29	18	11				
P-6S	SS-2A	6.0 - 6.5	CL	23.4	0	14	86							
P-7D	SS-3	4.0 - 6.0	CL	21.7				33	19	14				
P-7D	SS-4	6.0 - 8.0	CL	25.3										16.5
P-7D	3T-5	8.0 - 10.0	CL	22.6							101.2		2.0×10^{-7}	
P-7S	SS-1B	10.5 - 11.0	CL	-	0	43	40/17*							
B-5**	2-ST	5.0 - 7.0	CL/ML	24.3	0	18	63/19*	23	21	2	100.8		1.6×10^{-8}	11.0
B-15**	2-ST	5.0 - 7.0	CL/ML	23.9	0	15	62/23*	27	19	8	102.8		5.2×10^{-7}	12.0
B-16**	4-ST	10.0 - 12.0	CL/ML	24.2	0	40	55/5*	Non-Plastic			102.1		7.6×10^{-8}	10.0

* Represent percentages of silt and clay based on hydrometer analysis.
** Based on PSI (1989) investigation.

ref:hb\496b\496b-6.tbl

Table 7
Summary of Laboratory Test Results for Shallow Sand

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf)	Hydraulic Conductivity (cm/sec)	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI				
B-1	SS-7	12.0 - 14.0	SC	21.8	0	50	50							
P-7D	SS-6B	11.5 - 12.0	SC	23.1	0	52	48							

ref:hb\496b\496b-7.tbl

** Represent percentages of silt and clay based on hydrometer analysis.*

Table 8

Summary of Slug Test Results for Shallow Sand

Location	Soil Type Tested	USCS Classification	Calculated Hydraulic Conductivity (cm/sec)		
			Recovery Test	Drawdown Test	Average Value
P-6S	Clayey sand	SC	2.9×10^{-2}	1.6×10^{-2}	2.2×10^{-2}
P-7S	Clayey sand	SC	3.6×10^{-3}	4.3×10^{-3}	3.9×10^{-3}

Refer to Appendix D for detailed test results
NT = Not Tested

ref:hb/496b/496b-8.tbl

Table 9
Summary of Laboratory Test Results for Lower Cohesive Deposits

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf)	Hydraulic Conductivity (cm/sec)	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI				
B-1	SS-9	16.0 - 18.0	ML/CL-ML	36.9				25	22	3				
B-3	3T-20	38.0 - 40.0	CL	24.6							104.2		8.2×10^{-8}	
B-4	SS-8	12.0 - 14.0	CL	29.1	0	8	70/22*	32	20	12				
B-6	SS-10	18.0 - 20.0	CL-ML/CL	23.5				25	20	5				
B-6	SS-14	26.0 - 28.0	CL-ML	25.1	0	44	56							
B-7	SS-9	16.0 - 18.0	CL-ML	18.2	0	38	50/12*							
B-9	SS-8	14.0 - 16.0	CL	24.6										10.7
CB-2	SS-11	20.0 - 22.0	CL	34.9				47	22	25				
CB-3	SS-9	16.0 - 18.0	CL-ML	27.1	0	33	55/12*							
CB-4	3T-9	16.0 - 18.0	CL/CL-ML	23.9							103.3		4.3×10^{-7}	
CB-6	3T-7	12.0 - 14.0	CL	29.9							95.3		5.3×10^{-7}	
CB-6	3T-7	12.0 - 14.0	CL	26.4							99.0	1.4		
CB-6	SS-12	22.0 - 24.0	ML/CL-ML	23.6				23	20	3				
P-3D	3T-9	16.0 - 18.0	CL	34.5							89.2		1.3×10^{-8}	
P-3D	SS-13	24.0 - 26.0	CH	53.7				71	32	39				
P-4	3T-11	20.0 - 22.0	CH	40.9							78.2		2.9×10^{-8}	
P-4	SS-16	30.0 - 32.0	CH	52.6				67	30	37				
P-7D	SS-8	14.0 - 16.0	CL-ML/CL	26.9				29	22	7				
P-7D	SS-13	24.0 - 26.0	CL-ML	24.3	0	34	54/12*							
P-7M	3T-2	18.0 - 20.0	CL	22.5							101.4		1.5×10^{-7}	
P-9D	SS-26	50.0 - 52.0	CL	20.7	0	33	53/14*							
P-9S	3T-1	34.0 - 36.0	CL	24.1							101.2		1.3×10^{-6}	
B-2**	3-ST	10.0 - 12.0	CL-ML	22.9	0	32	58/10*	← Non-Plastic →			93.4		8.4×10^{-7}	9.0
B-2**	5-ST	15.0 - 17.0	CL	22.0	0	15	77/18*	30	18	12	104.9		5.1×10^{-7}	7.0
B-2**	7-ST	20.0 - 22.0	CL	23.1	0	38	50/12*	← Non-Plastic →			103.2		3.2×10^{-7}	6.0
B-13**	4-ST	10.0 - 12.0	CL-ML	21.7	0	48	42/10*	← Non-Plastic →			105.4		9.7×10^{-7}	8.0
B-13**	6-ST	15.0 - 17.0	CL-ML	24.8	0	20	62/18*	← Non-Plastic →			100.6		1.8×10^{-6}	

** Represent percentages of silt and clay based on hydrometer analysis.*

Table 10

Summary of Slug Test Results for Lower Cohesive Deposit

Location	Soil Type Tested	USCS Classification	Calculated Hydraulic Conductivity (cm/sec)		
			Recovery Test	Drawdown Test	Average Value
P-7M	Silty clay	CL	NT	7.6×10^{-5}	7.6×10^{-5}
P-9S	Silty clay	CL	NT	4.9×10^{-5}	4.9×10^{-5}

Refer to Appendix D for detailed test results
NT = Not Tested

ref:hb/496b/496b-10.tbl

Table 11
Summary of Laboratory Test Results for Basal Sand

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf)	Hydraulic Conductivity (cm/sec)	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI				
B-4	SS-14	26.0-28.0	SC	17.6	0	56	44							
B-13	SS-14	26.0-28.0	SM	15.1	16	65	19							
CB-1	SS-13	24.0-26.0	SM	21.1	0	69	31							
CB-6	SS-14	26.0-28.0	SC	30.9	0	62	38							
P-1D	SS-25B	48.0-50.0	SC	21.1	0	64	36							
P-2D	SS-28A	54.0-54.5	SW-SM	-	3	91	6							
P-3D	SS-17B	33.0-33.5	SM	17.9	0	58	42							
P-4	SS-19	36.0-38.0	SW-SM	-	23	69	8							
P-5D	SS-14A	26.0-27.3	SM	-	29	54	17							
P-6D	SS-15	28.0-30.0	SM	14.6	23	55	22							
P-7D	SS-15	29.0-30.0	SW-SM/SM	10.9	27	59	14							
P-8D	SS-13A	24.0-25.5	SW-SM/SM	-	34	50	16							
P-9D	SS-29A	56.0-57.5	SP-SM/SM	-	22	66	12							

ref:hb\496b\496b-11.tbl

Table 12

Summary of Slug Test Results for Basal Sand

Location	Soil Type Tested	USCS Classification	Calculated Hydraulic Conductivity (cm/sec)		
			Recovery Test	Drawdown Test	Average Value
P-1D	Silty to clayey Sand to sand	SC/SM/SP	6.1×10^{-4}	1.1×10^{-3}	8.4×10^{-4}
P-3D	Silty sand	SM	1.6×10^{-2}	7.6×10^{-3}	1.2×10^{-2}
P-4	Silty sand	SP-SM/SM	2.0×10^{-3}	3.0×10^{-3}	2.5×10^{-3}
P-5D	Silty sand	SM/SW-SM	5.0×10^{-3}	3.8×10^{-3}	4.4×10^{-3}
P-6D	Silty sand	SM	3.6×10^{-2}	3.3×10^{-2}	3.4×10^{-2}
P-7D	Silty sand	SW-SM/SM	5.6×10^{-3}	6.1×10^{-3}	5.8×10^{-3}
P-8D	Silty sand to sand	SM/SW-SM	2.3×10^{-2}	3.0×10^{-2}	2.6×10^{-2}
P-9D	Silty sand	SM/SP-SM	7.2×10^{-4}	5.6×10^{-4}	6.4×10^{-4}

Refer to Appendix D for detailed test results.
NT = Not Tested

ref:hb/496b/496b-12.tbl

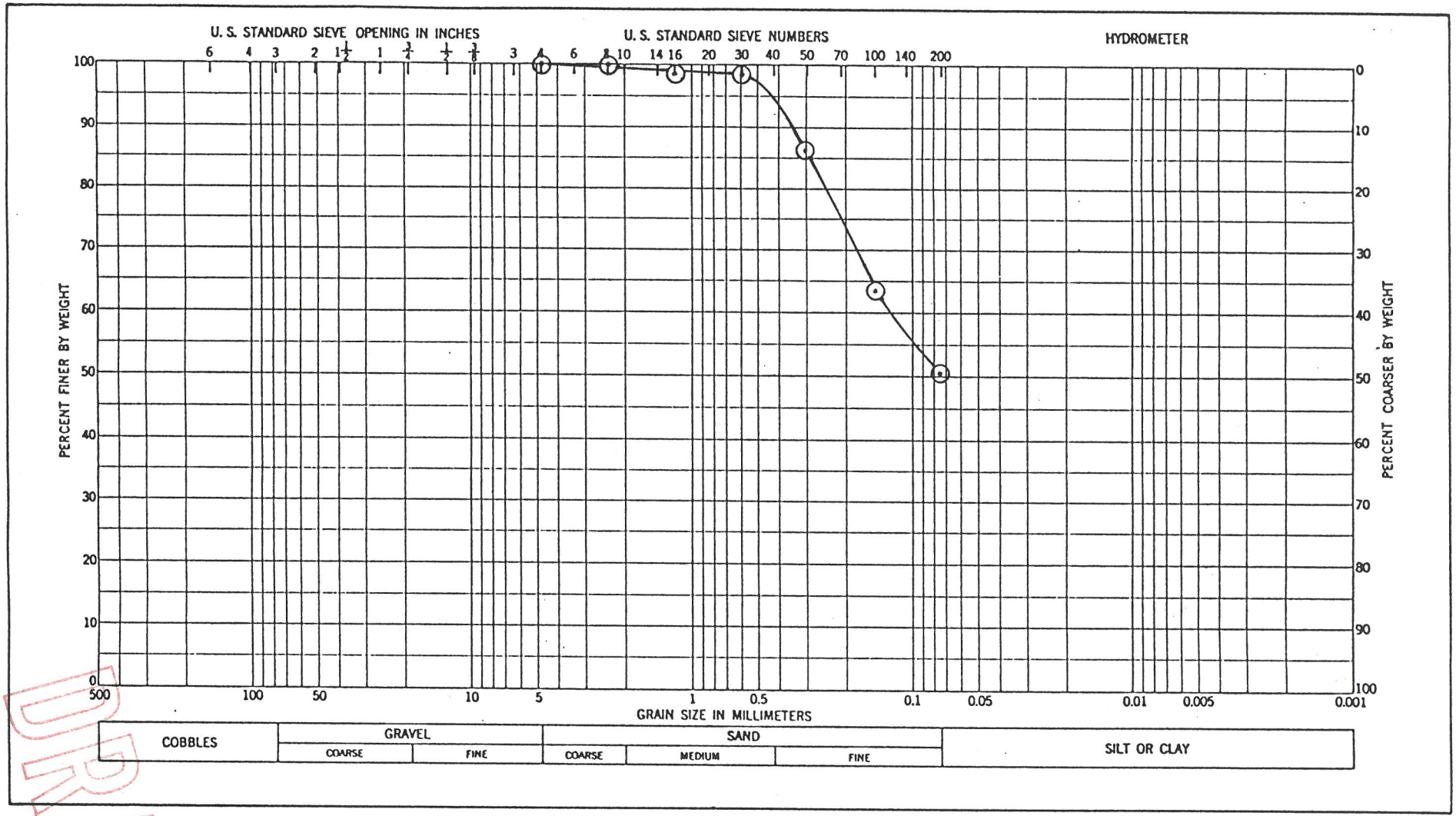
Table 13

Summary of Slug Test Results for Bedrock (Shale)

Location	Soil Type Tested	USCS Classification	Calculated Hydraulic Conductivity (cm/sec)		
			Recovery Test	Drawdown Test	Average Value
P-7R	Shale	-	NT	1.8×10^{-7}	1.8×10^{-7}
P-6R	Shale	-	NT	1.3×10^{-6}	1.3×10^{-6}

Refer to Appendix D for detailed test results
NT = Not Tested

ref:hb/496b/496b-13.tbl



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Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
B-1	12.0'-14.0'	Gray clayey sand and	20.0				
SS-7		silt					
		SC					

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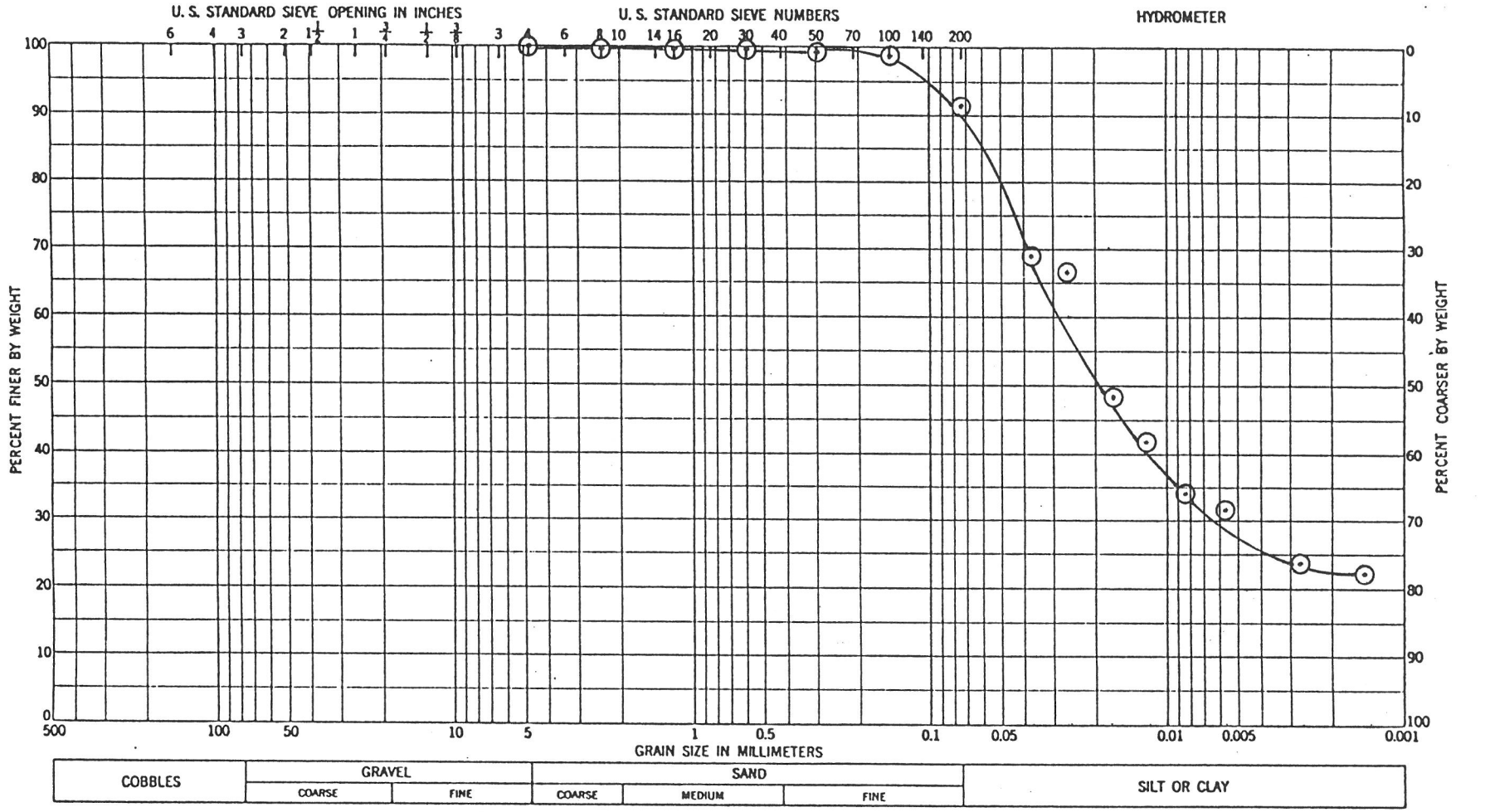

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
B-4	14.0'-16.0'	Dark gray silty clay,	29.1				
SS-8		trace fine sand					
		CL					

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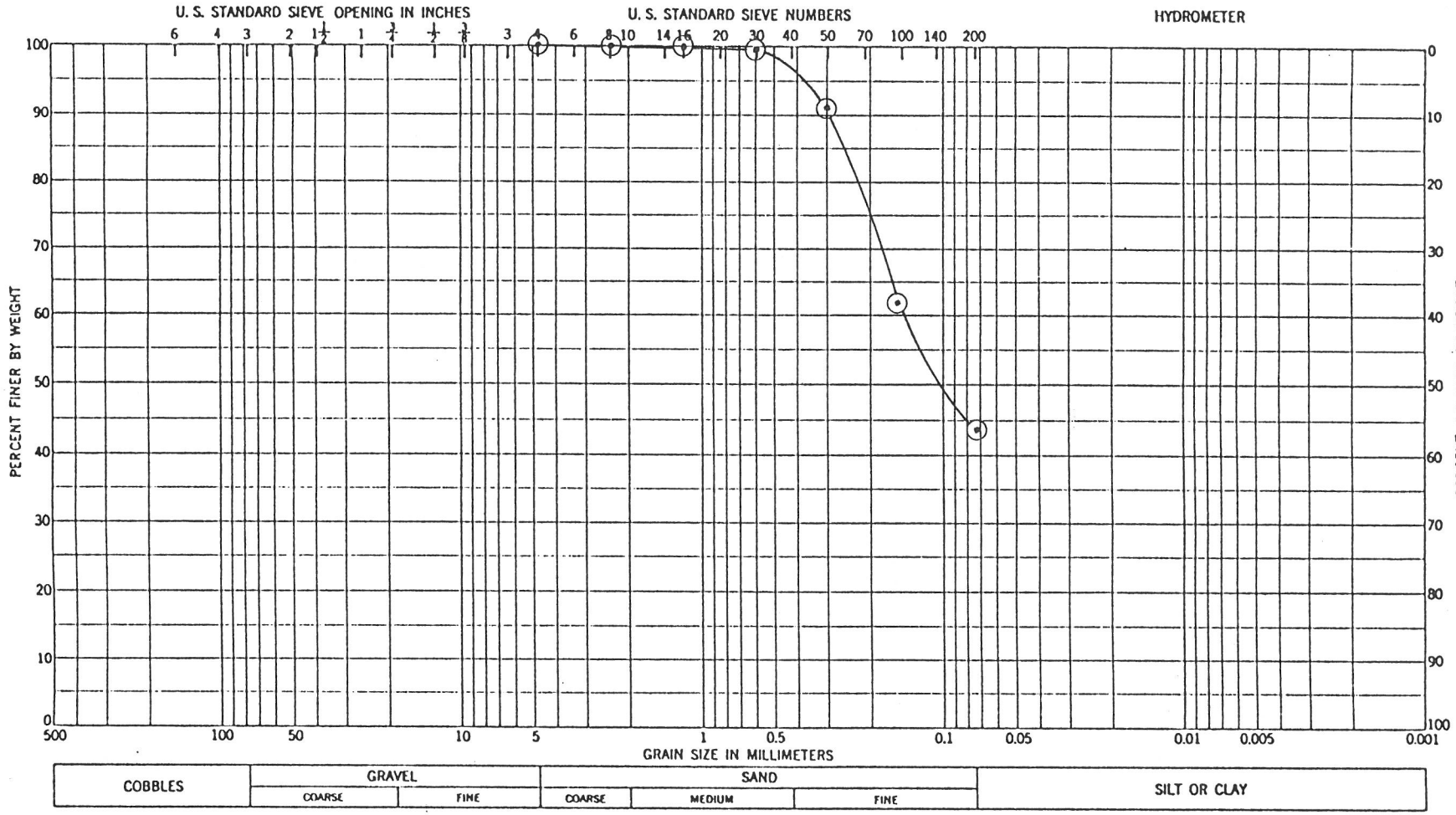

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
B-4	26.0'-28.0'	Gray clayey fine sand and	17.7				
SS-14		silt					
		SC					

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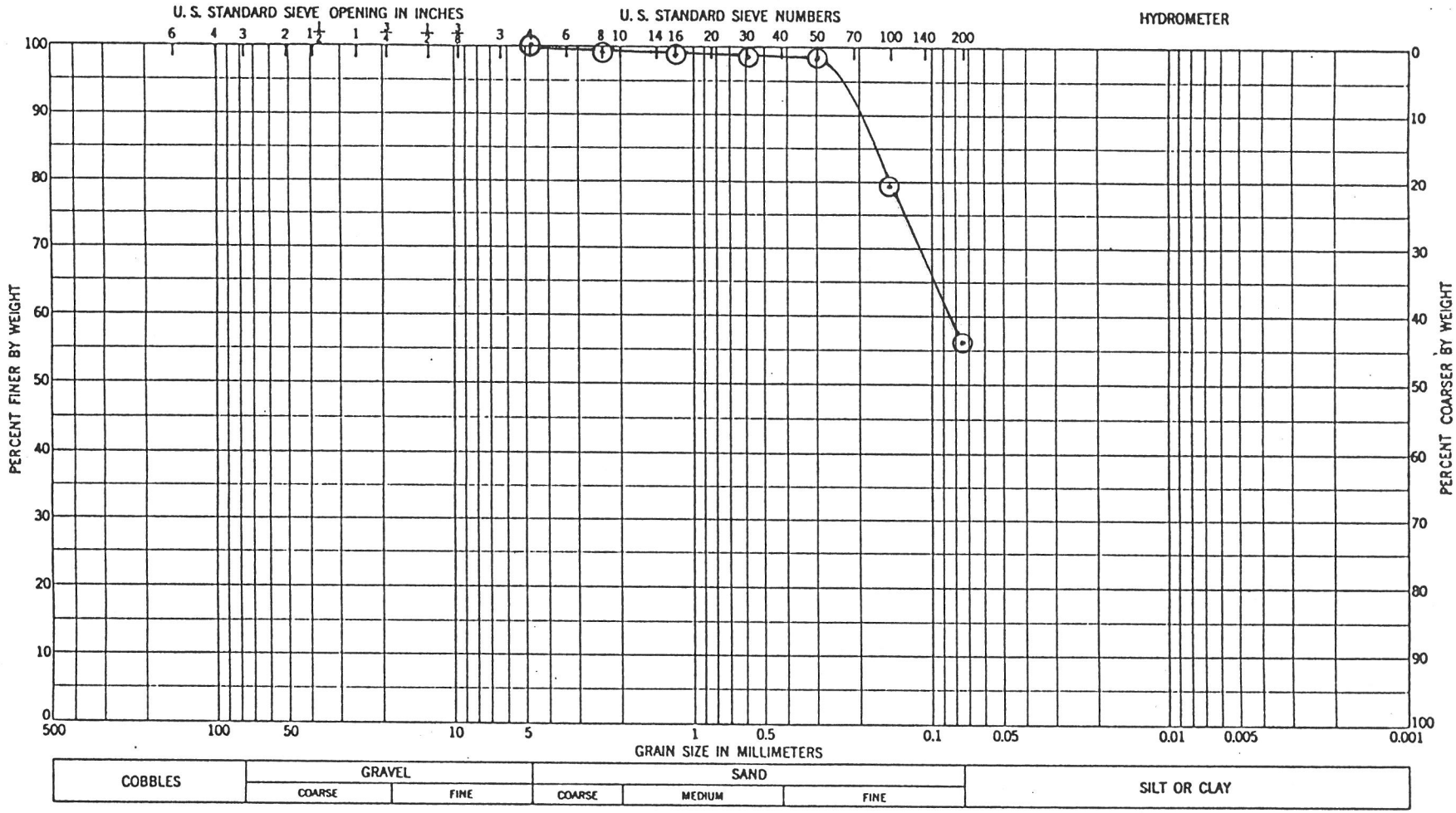

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
B-6	26.0'-28.0'	Gray clayey silt to clayey	24.6				
SS-14		sand					
		CL-ML/SC					

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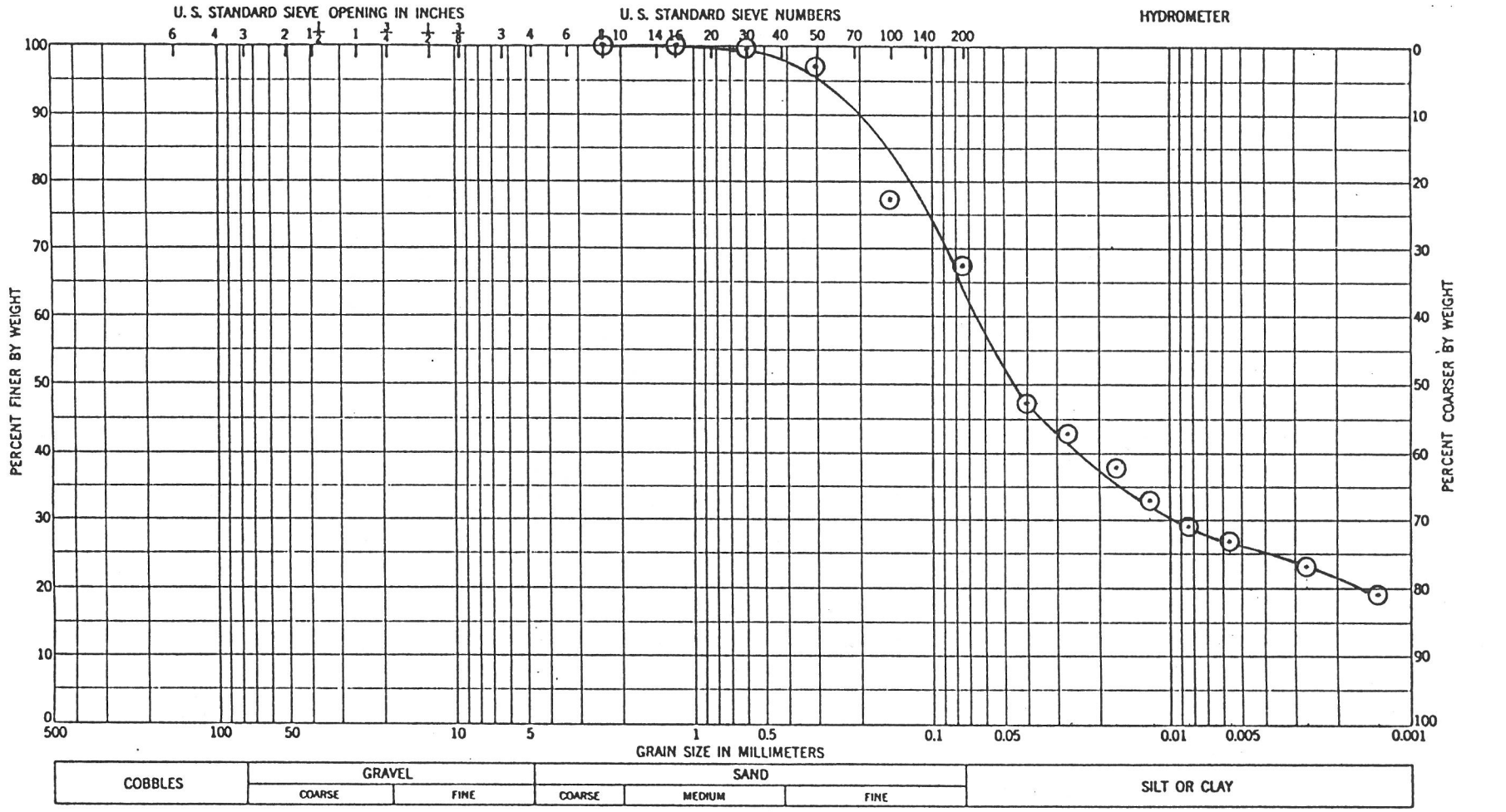

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
B-7	6.0'-8.0'	Gray silty clay and	24.4				
SS-4		medium to fine sand					
		CL					

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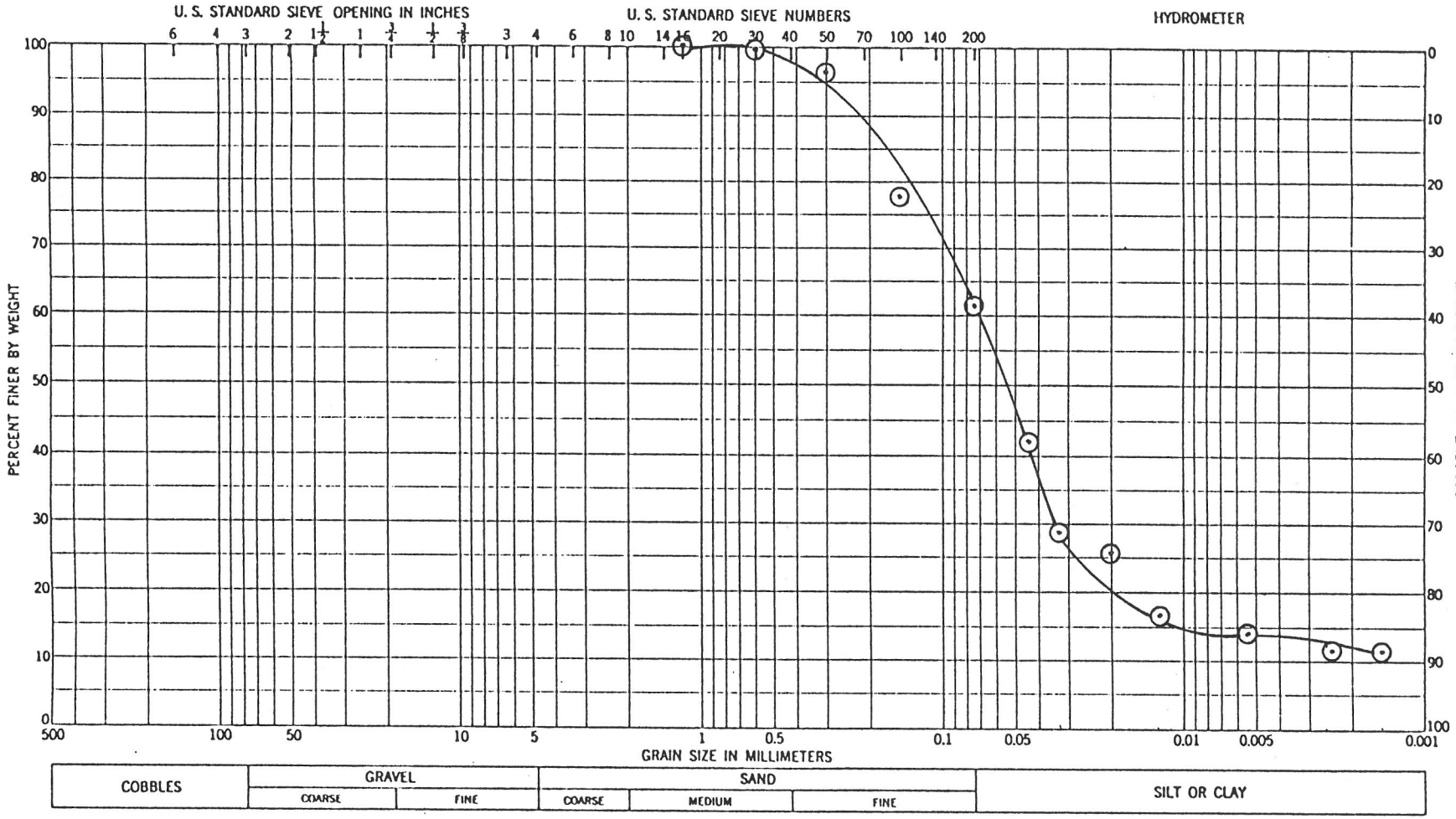

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
B-7	16.0'-18.0'	Gray clayey silt and fine	18.2				
SS-9		sand					
		CL-ML					

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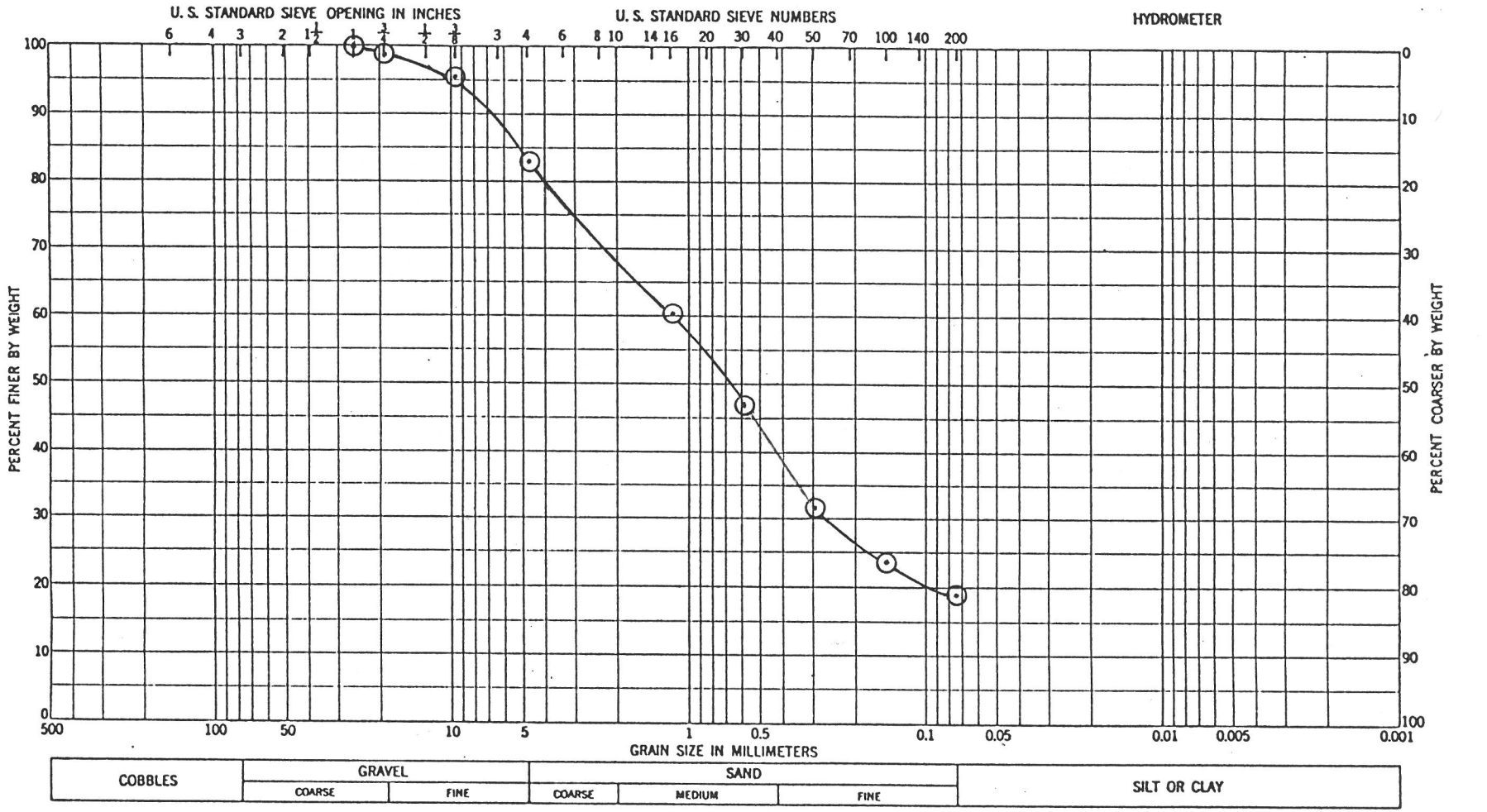

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
B-13	26.0'-28.0'	Gray coarse to fine sand,	14.3				
SS-14		little fine gravel, little					
		silt					
		SM					

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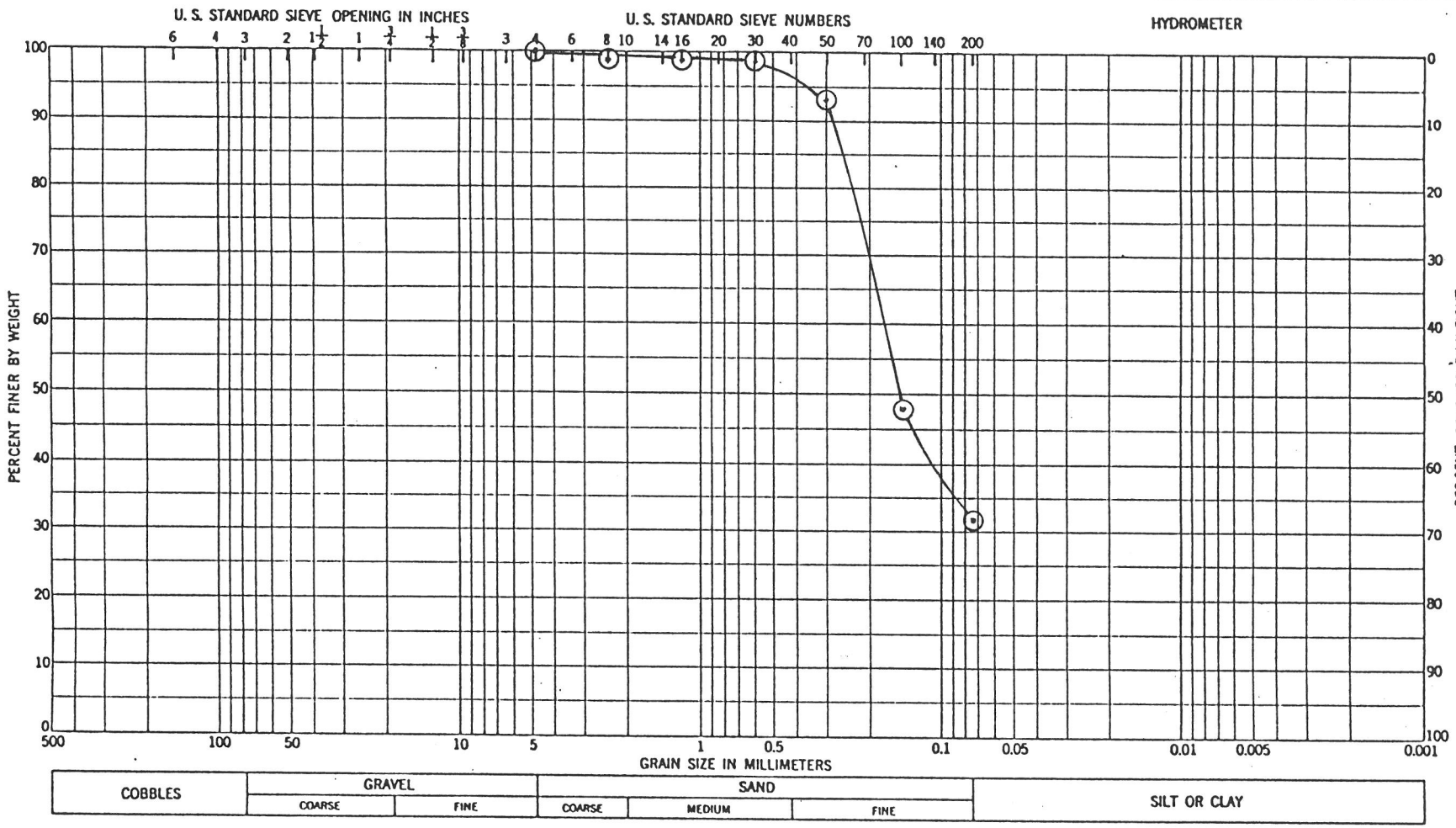

Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Remarks
CB-1	24.0'-26.0'	Gray medium to fine sand	21.1				
SS-13		and clayey silt					
		SM					

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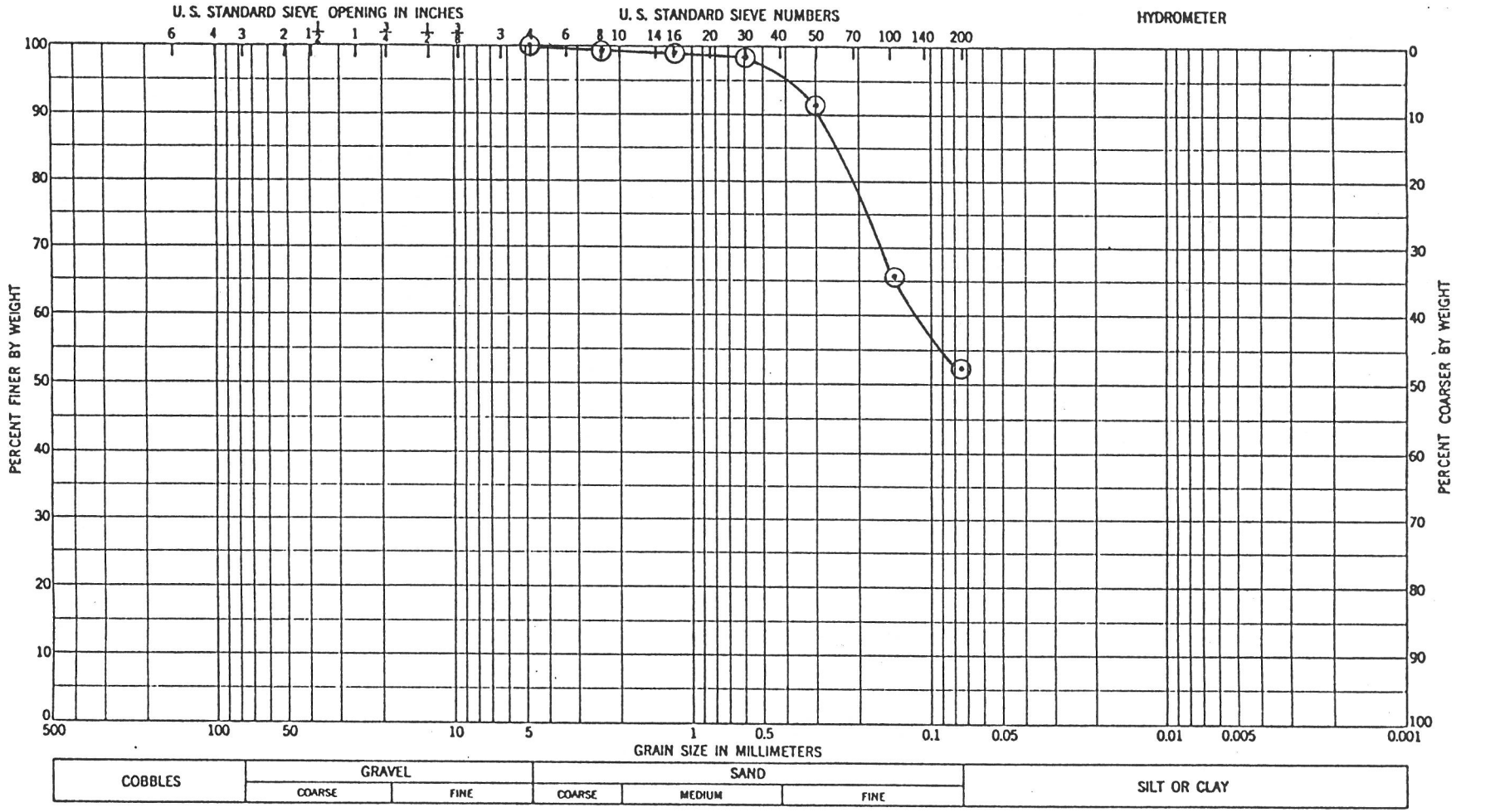

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
CB-3	6.0'-8.0'	Brown and tan clayey silt	20.5				
SS-4		and fine sand					
		CL-ML					

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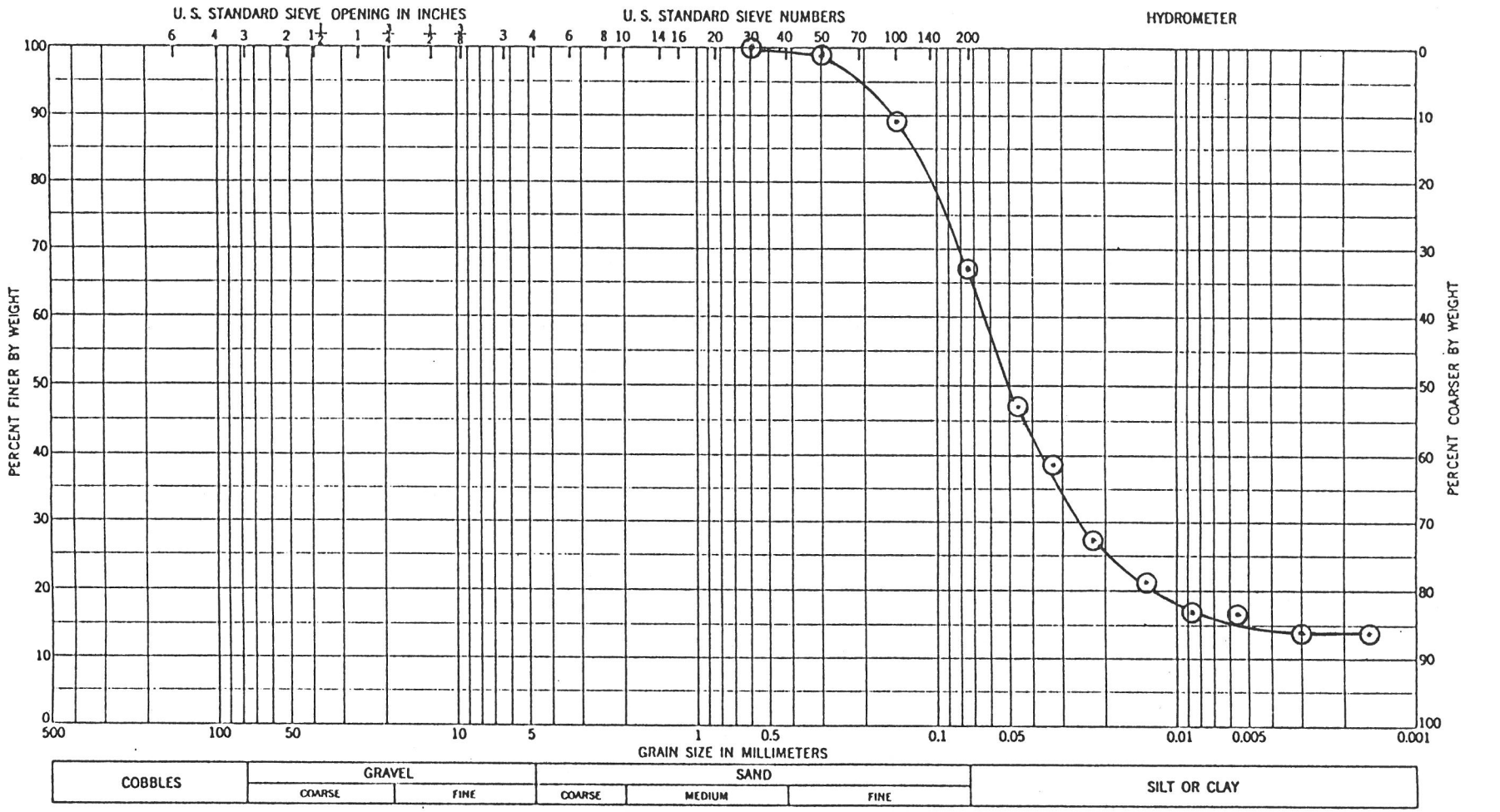

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
CB-3	16.0'-18.0'	Gray clayey silt and fine	22.6				
SS-9		sand					
		CL-ML					

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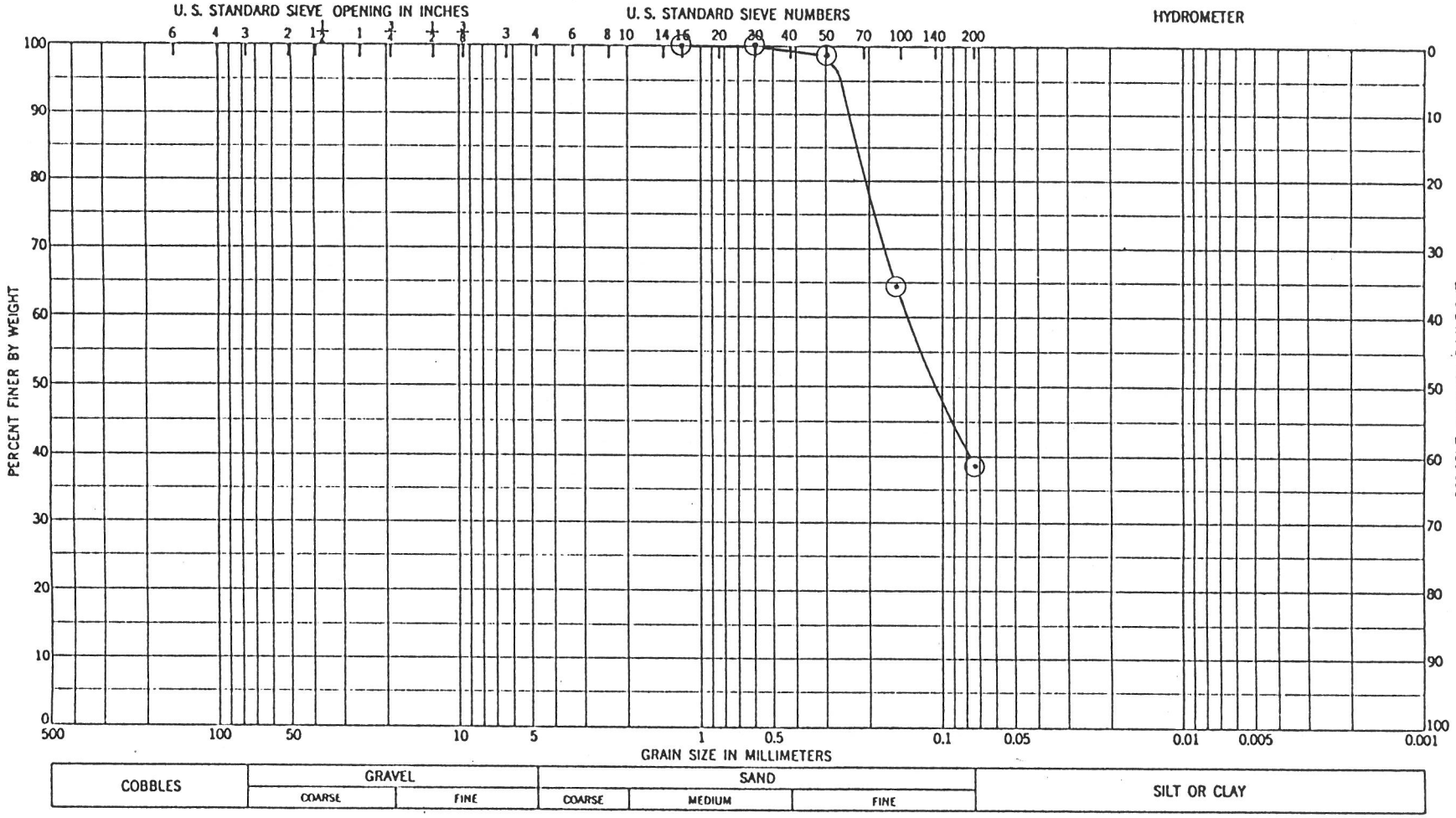

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
CB-6	26.0'-28.0'	Gray clayey fine sand and	26.1				
SS-14		silt					
		SC					

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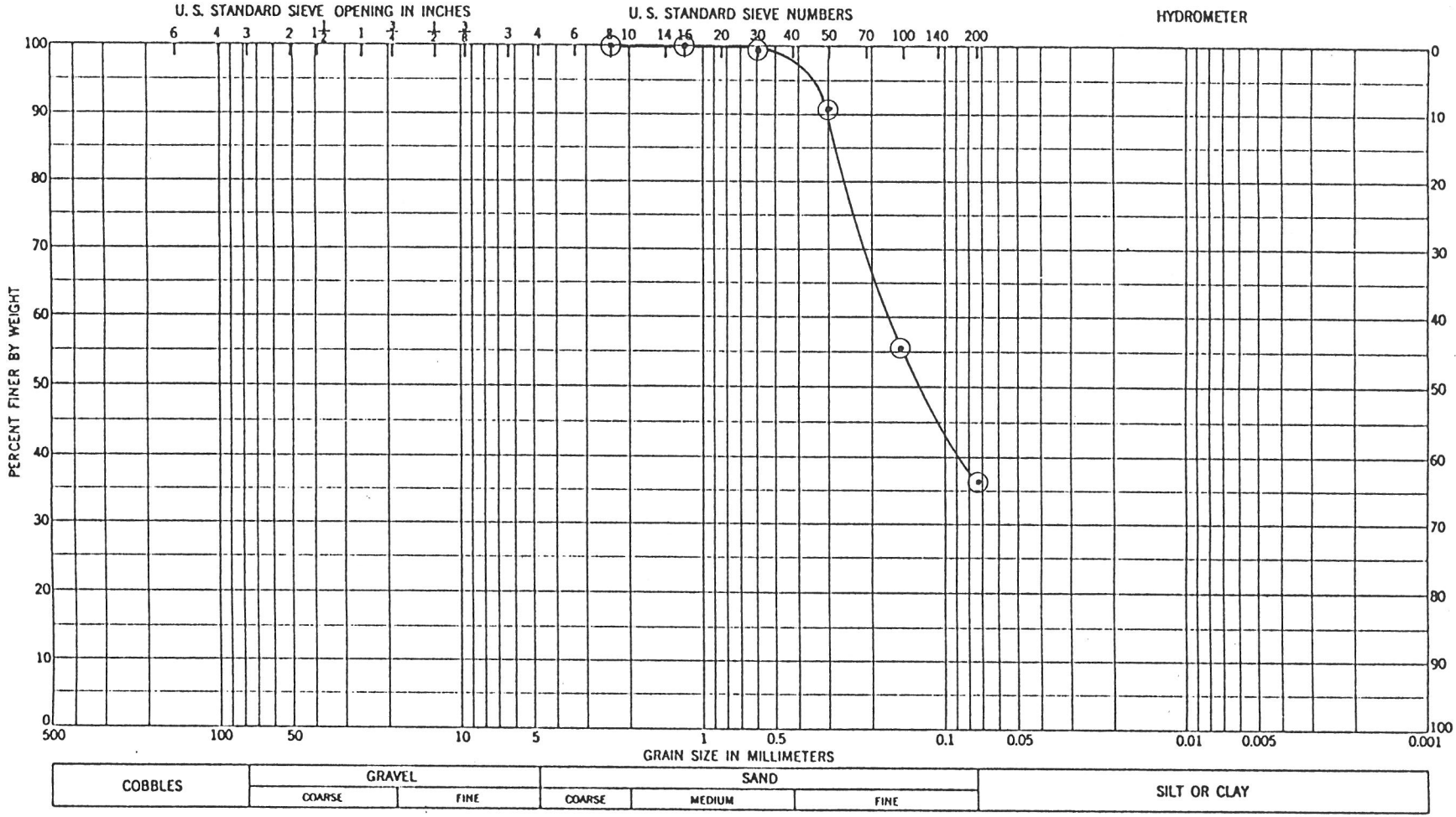

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-1D	48.0'-50.0'	Gray clayey fine sand	20.8				
SS-25B		and silt					
		SC					

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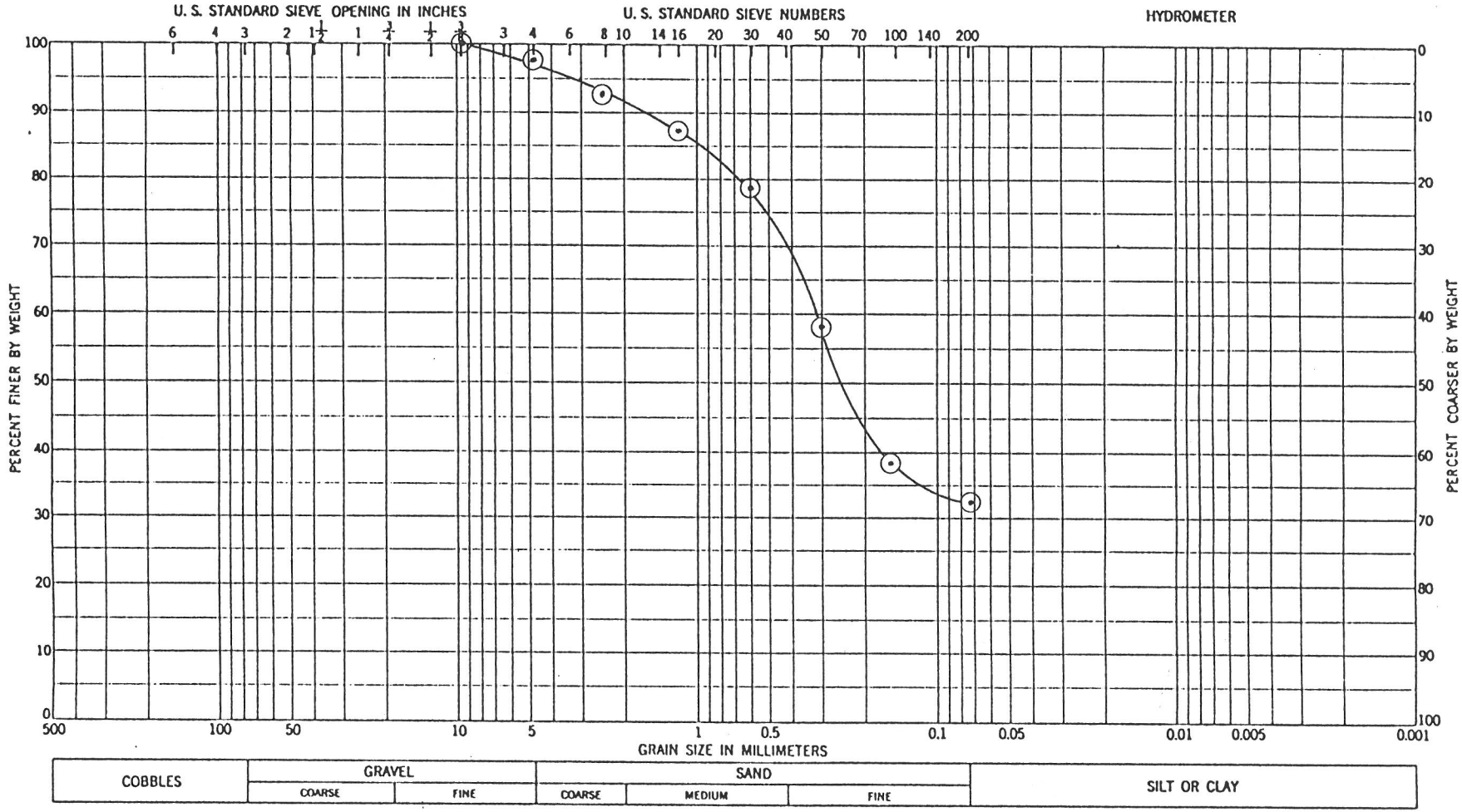

Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Remarks
P-1S	38.0'-40.0'	Gray coarse to fine sand	18.7				
SS-2A		and silt, trace fine					
		gravel					
		SC					

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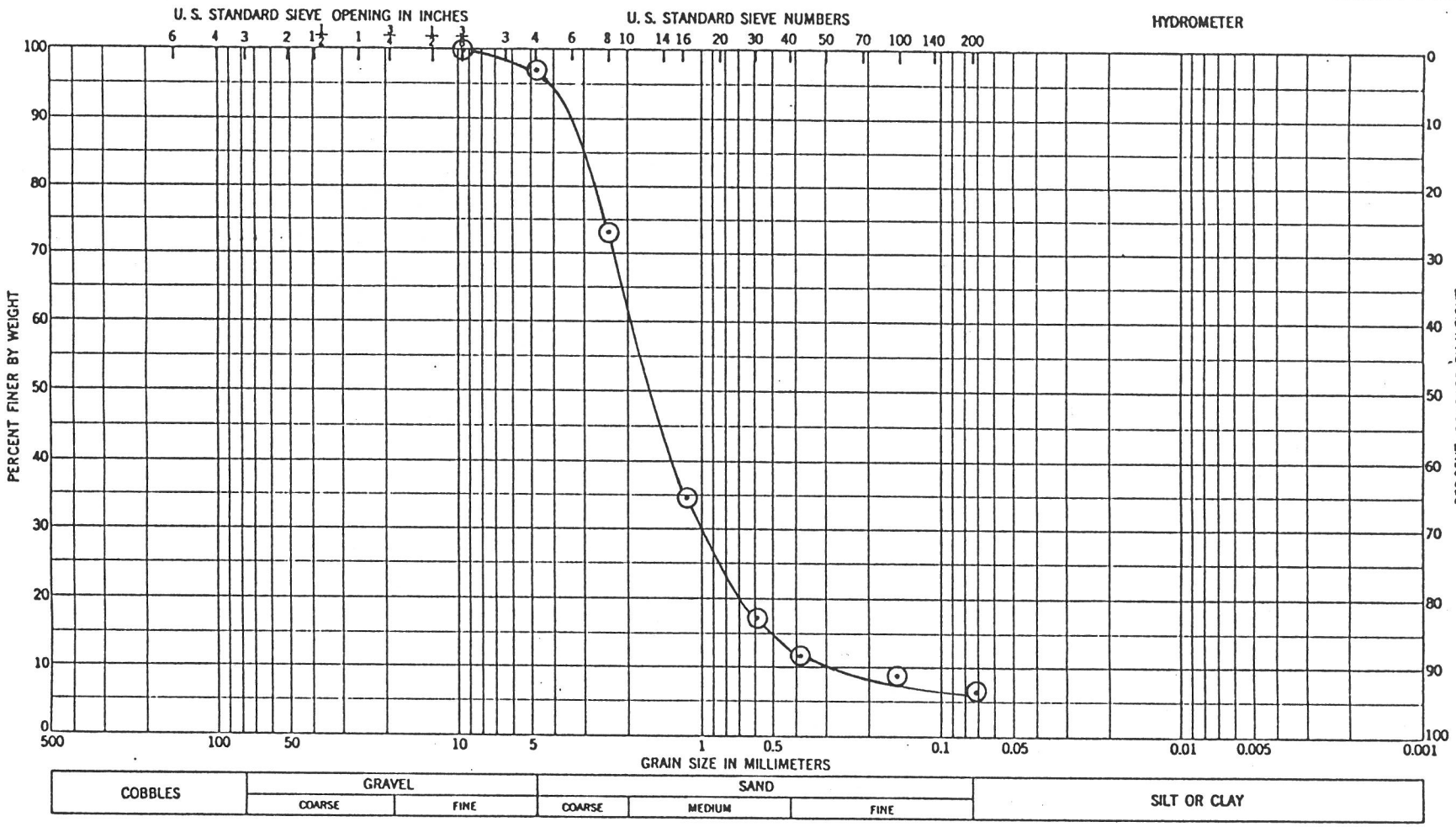

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-2D	54.0'-54.5'	Gray coarse to fine sand,	16.2				
SS-28A		trace fine gravel, trace					
		silt					
		SP-SM					

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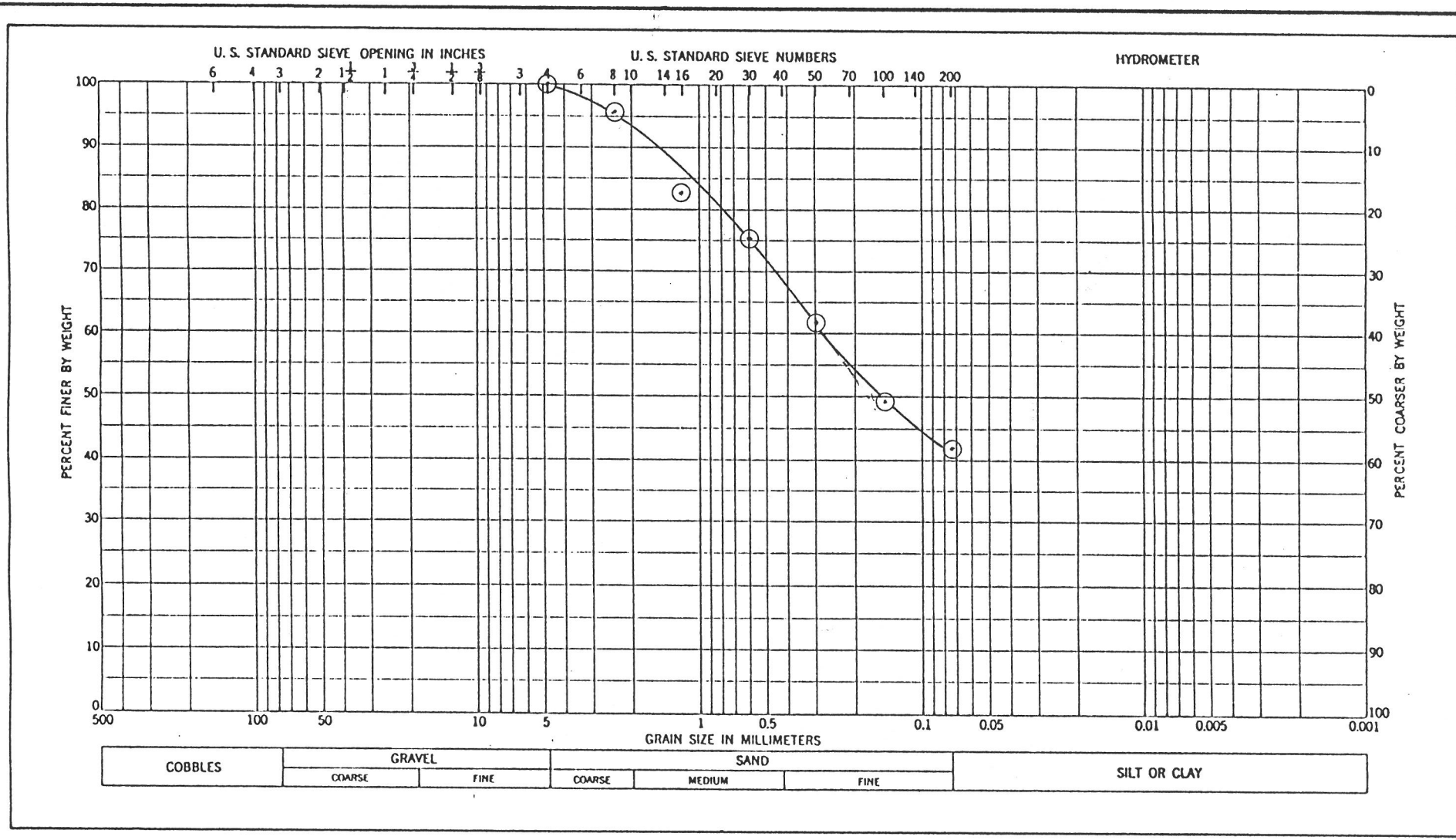

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-3D	32.0-34.0	Gray coarse to fine sand	17.9				
SS-17B		and silt.					
		SM					

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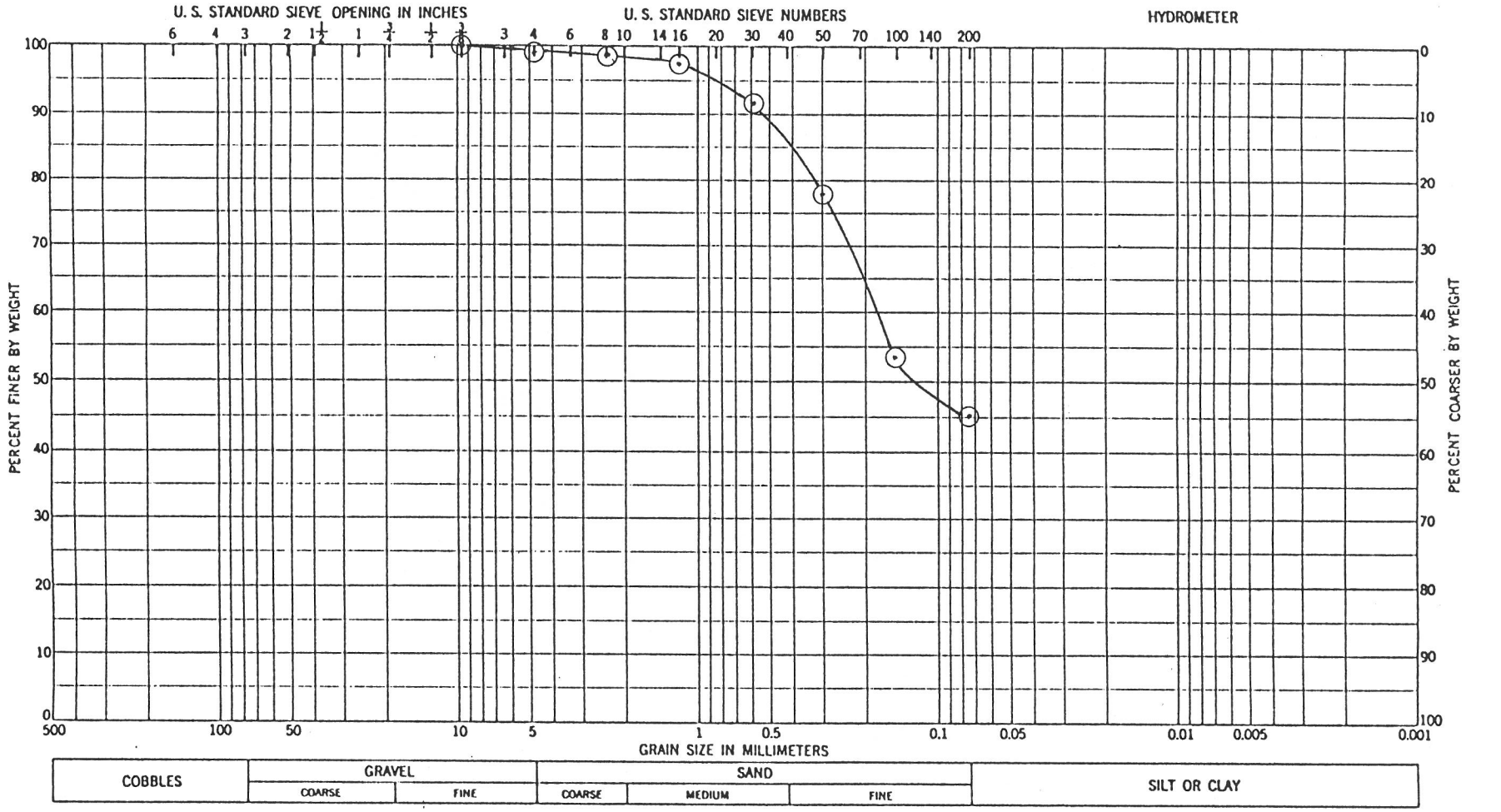

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-3S	10.0'-12.0'	Dark gray medium to fine					
SS-3		sand and silt, trace					
		coarse sand.					
		SM					

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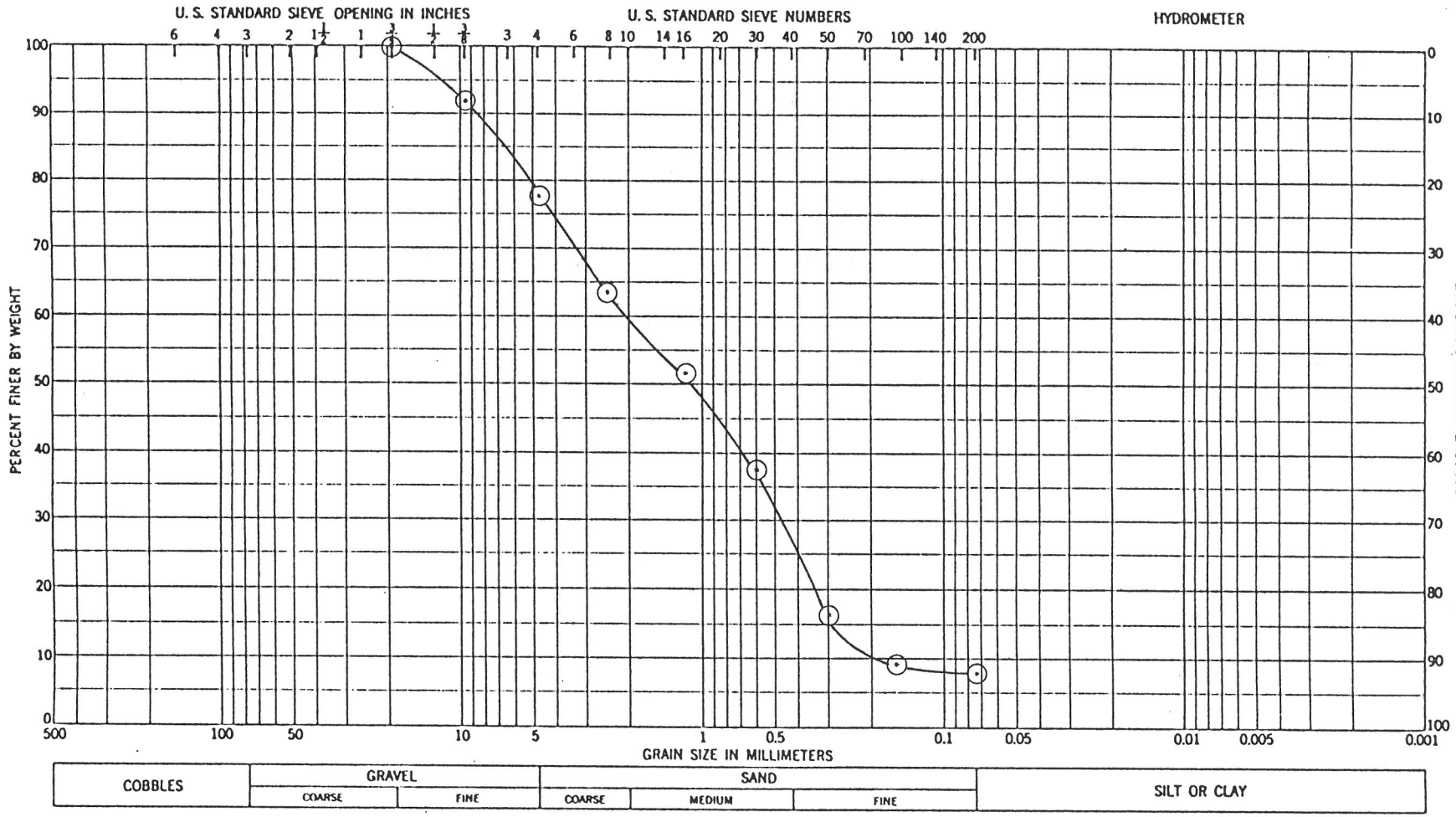

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-4	36.0'-38.0'	Gray coarse to fine					
SS-19		sand, some fine gravel,					
		trace silt					
		SW-SM					

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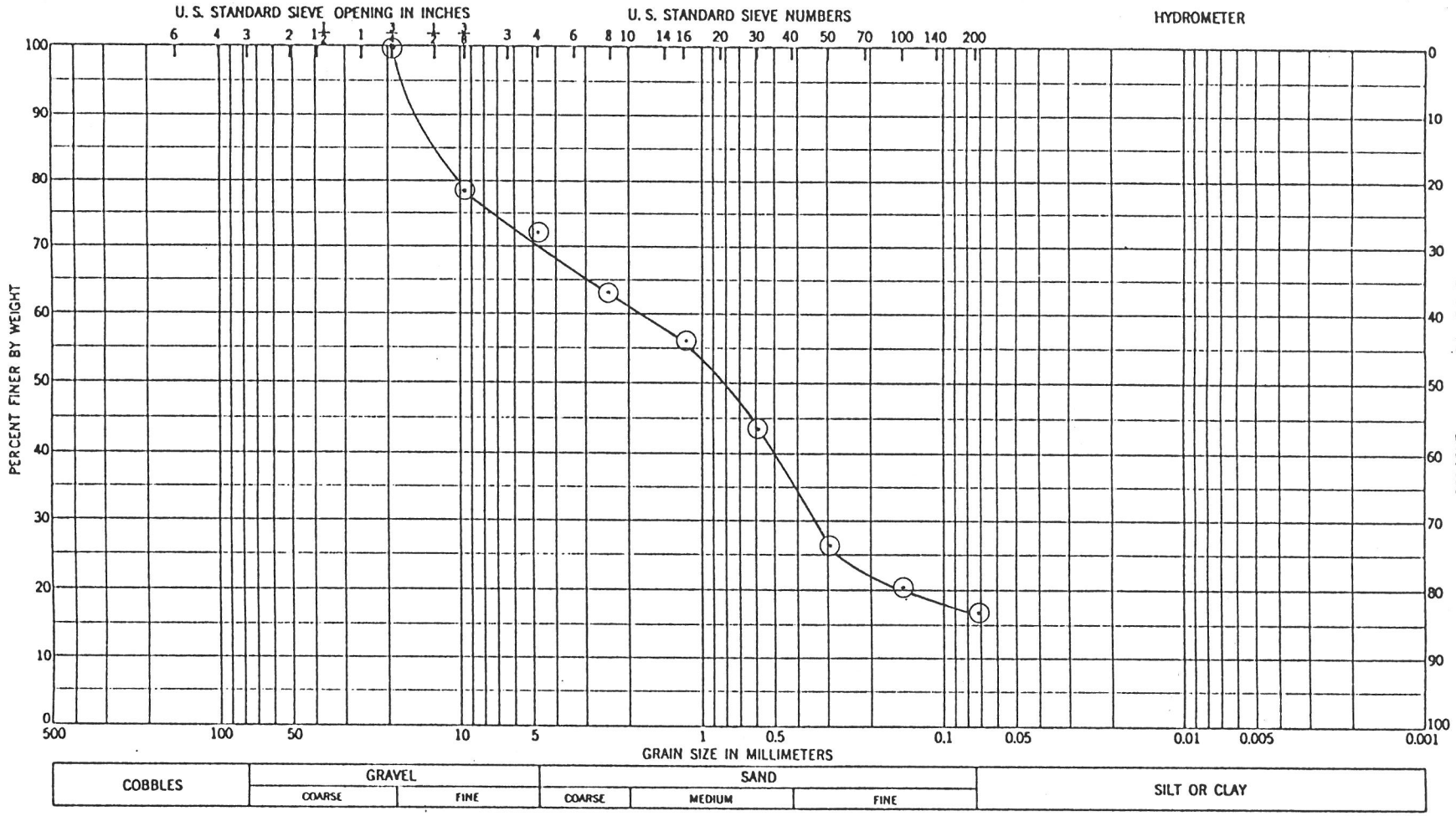

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-5D	26.0'-28.0'	Gray coarse to fine sand					
SS-14A		some fine gravel,					
		little silt.					
		SM					

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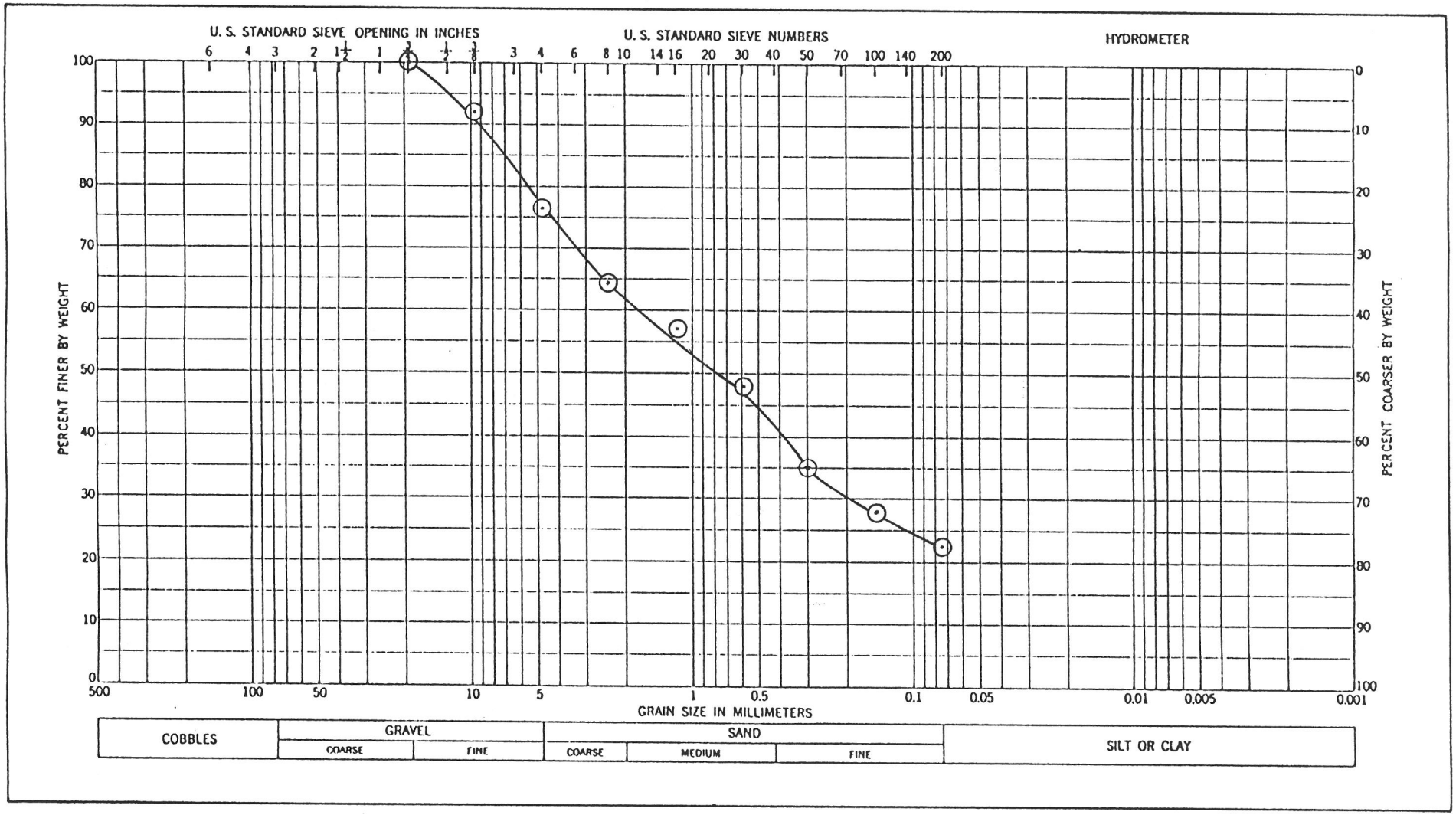

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-6D	28.0'-30.0'	Gray Coarse to fine	14.6				
SS-15		sand, some fine gravel,					
		some silt					
		SM					

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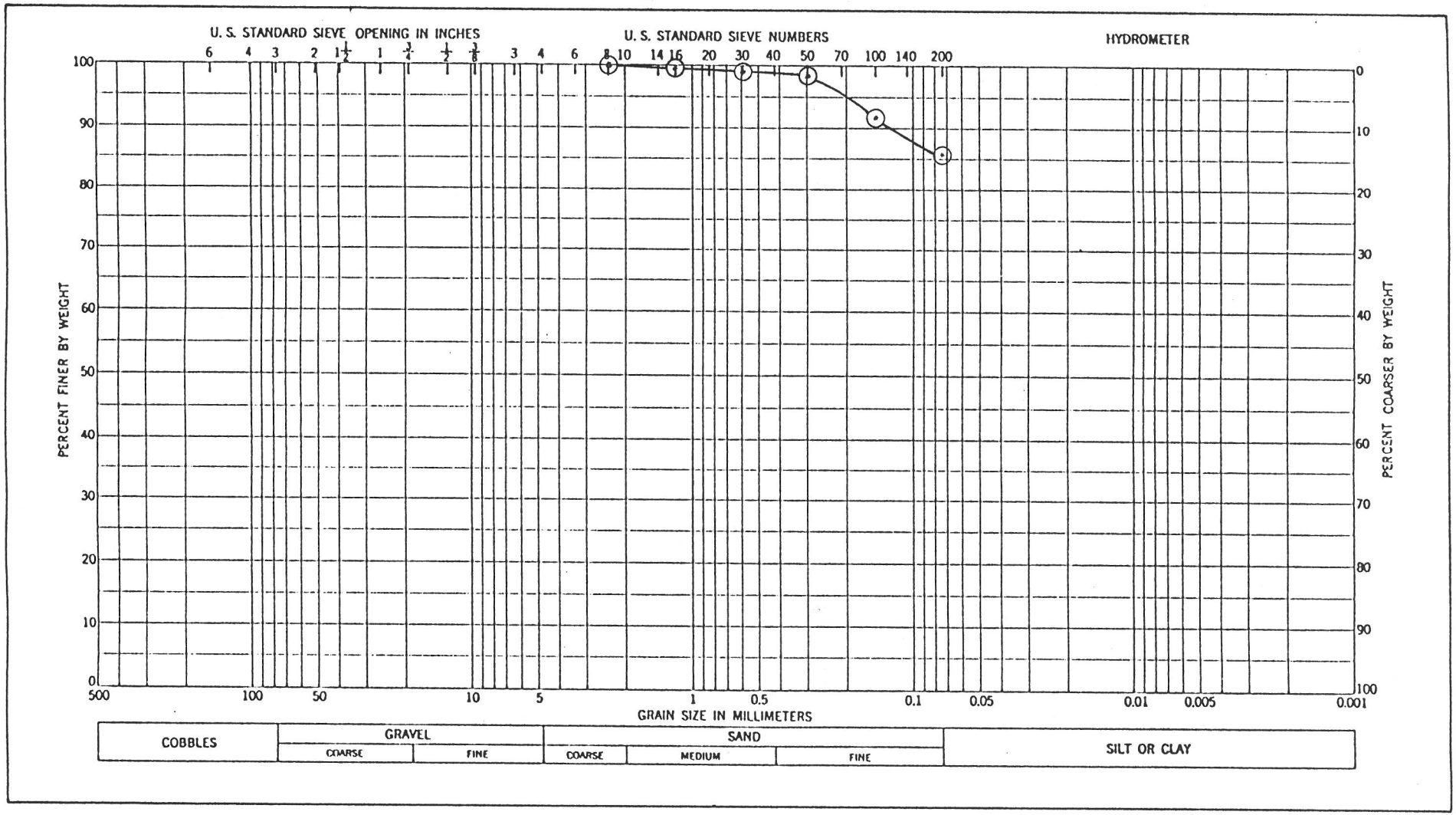

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-6S	6.0'-8.0'	Brown silty clay, little	23.4				
SS-2A		fine sand					
		CL					

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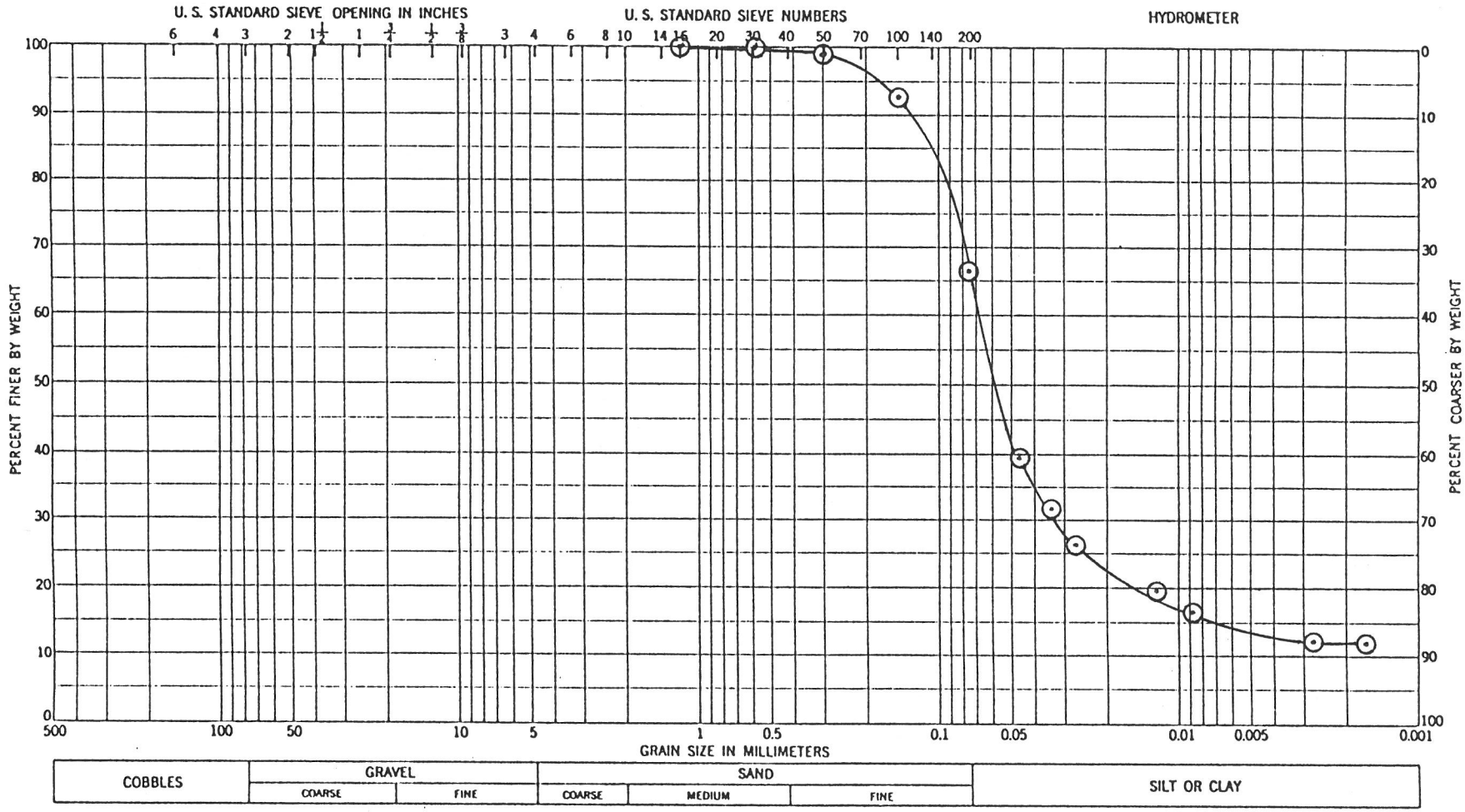

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-7D	24.0'-26.0'	Gray clayey silt and fine	24.3				
SS-13		sand					
		CL-ML					

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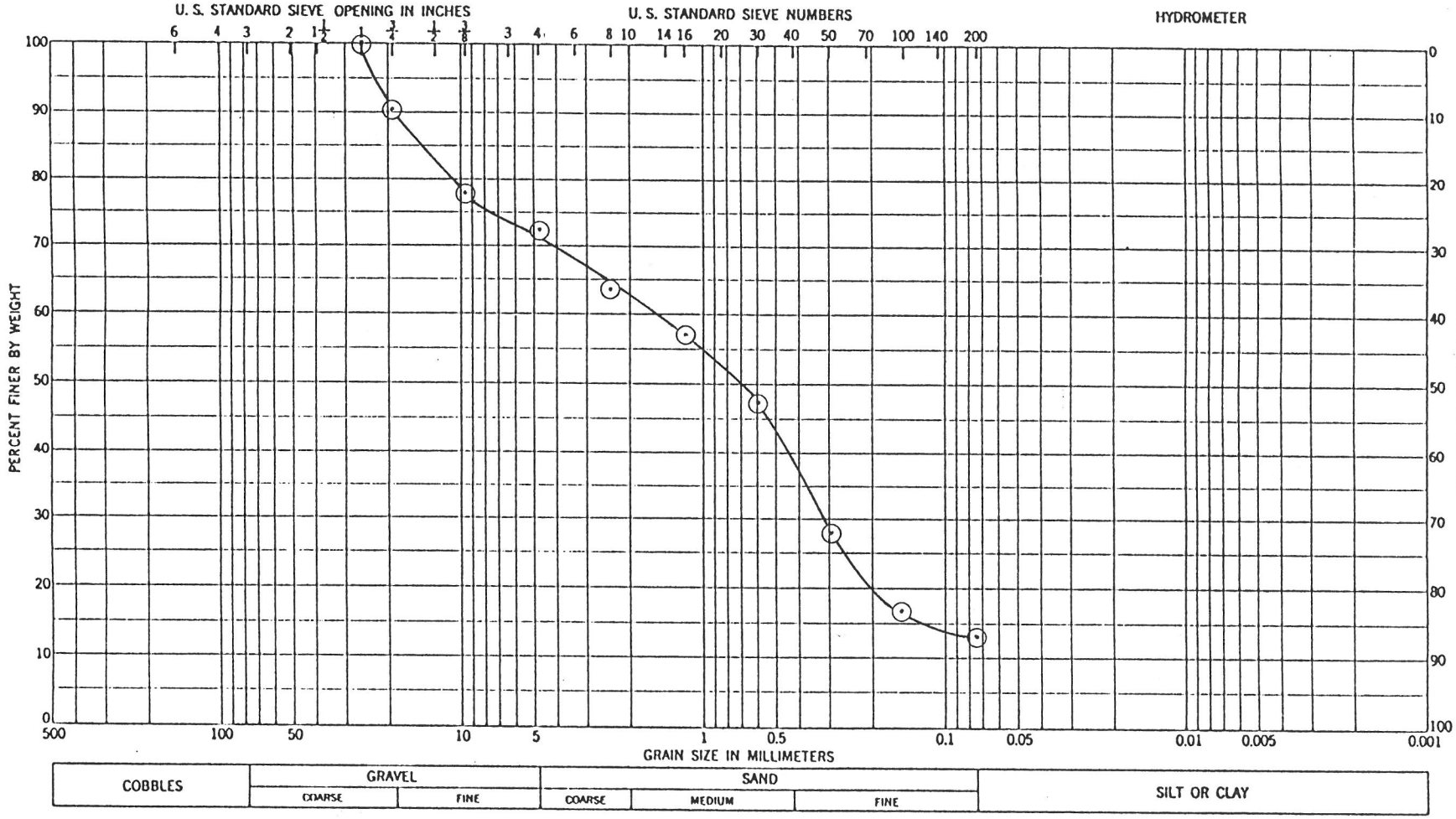

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-7D	28.0'-30.0'	Gray coarse to fine	10.9				
SS-15		sand, some coarse to					
		fine gravel, little silt.					
		SW-SM					

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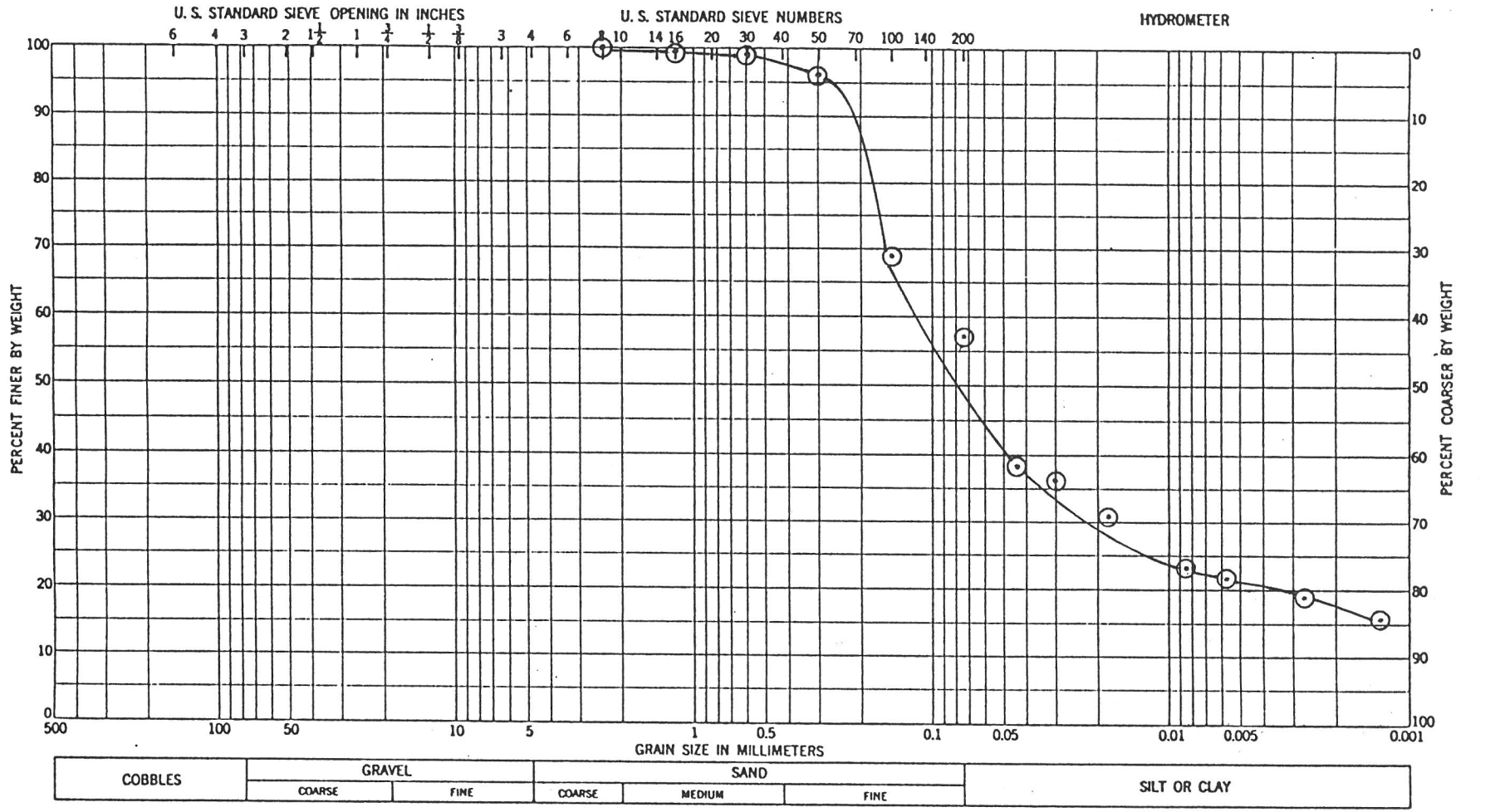

Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Remarks
P-7S	10.5'-11.0'	Gray clayey silt to					
SS-1B		clayey sand					
		SC/ML					

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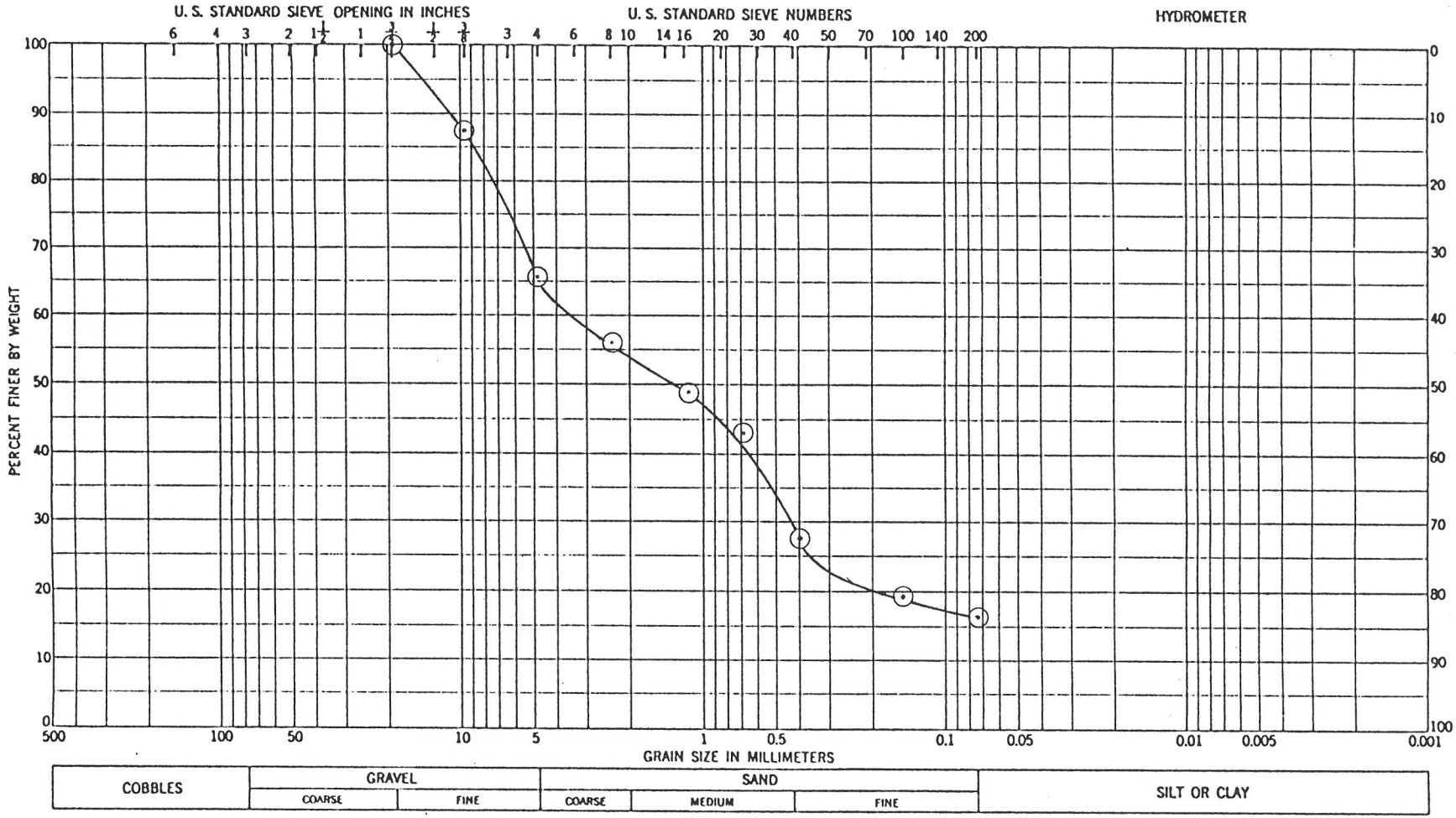

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-8D	24.0'-26.0'	Gray coarse to fine					
SS-13A		sand and fine gravel,					
		little silt					
		SM					

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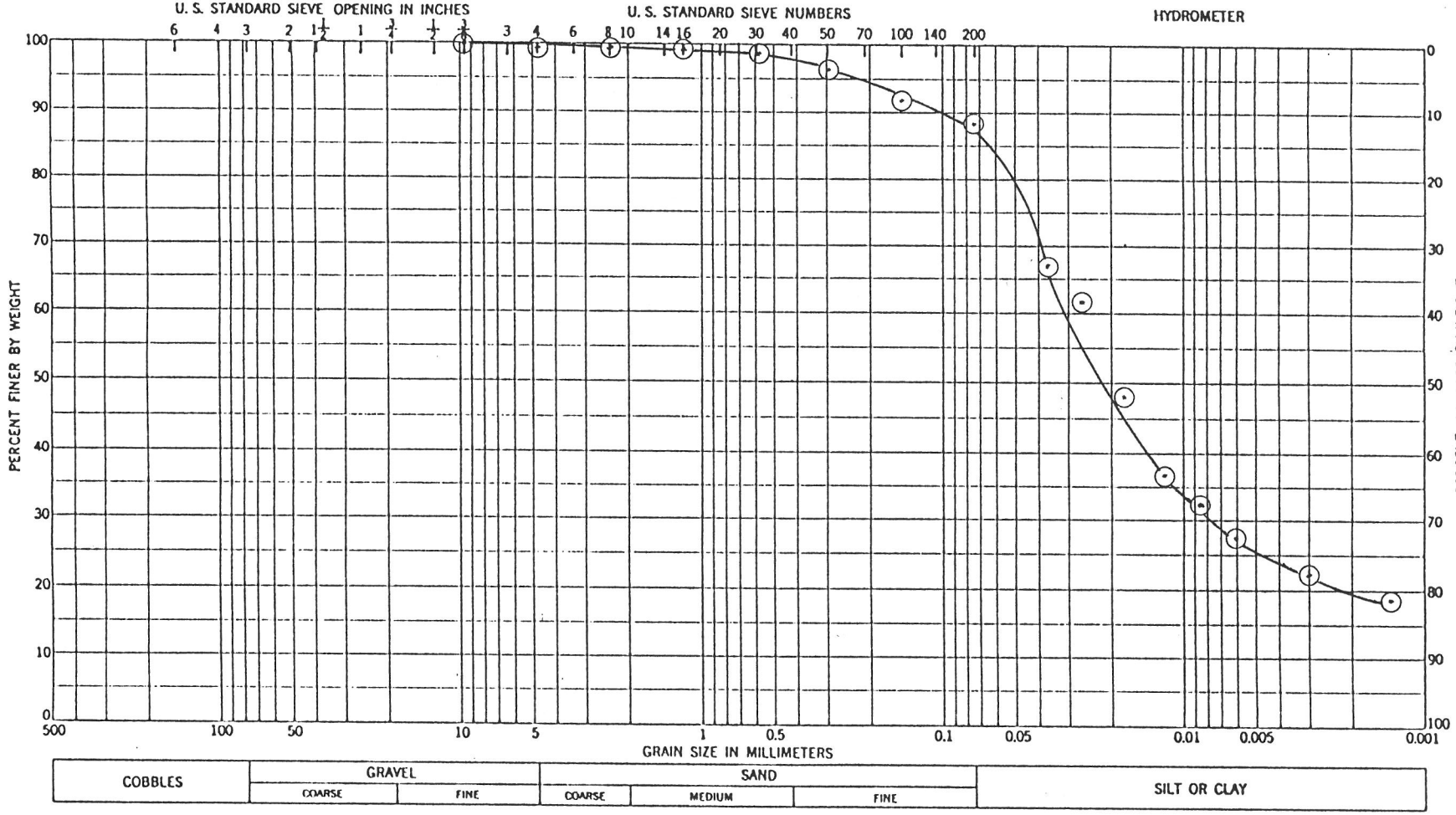

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-8S	10.0'-12.0'	Dark gray to black	41.0				
SS-3		organic silty clay,					
		little coarse to fine					
		sand, wood present					
		OL					

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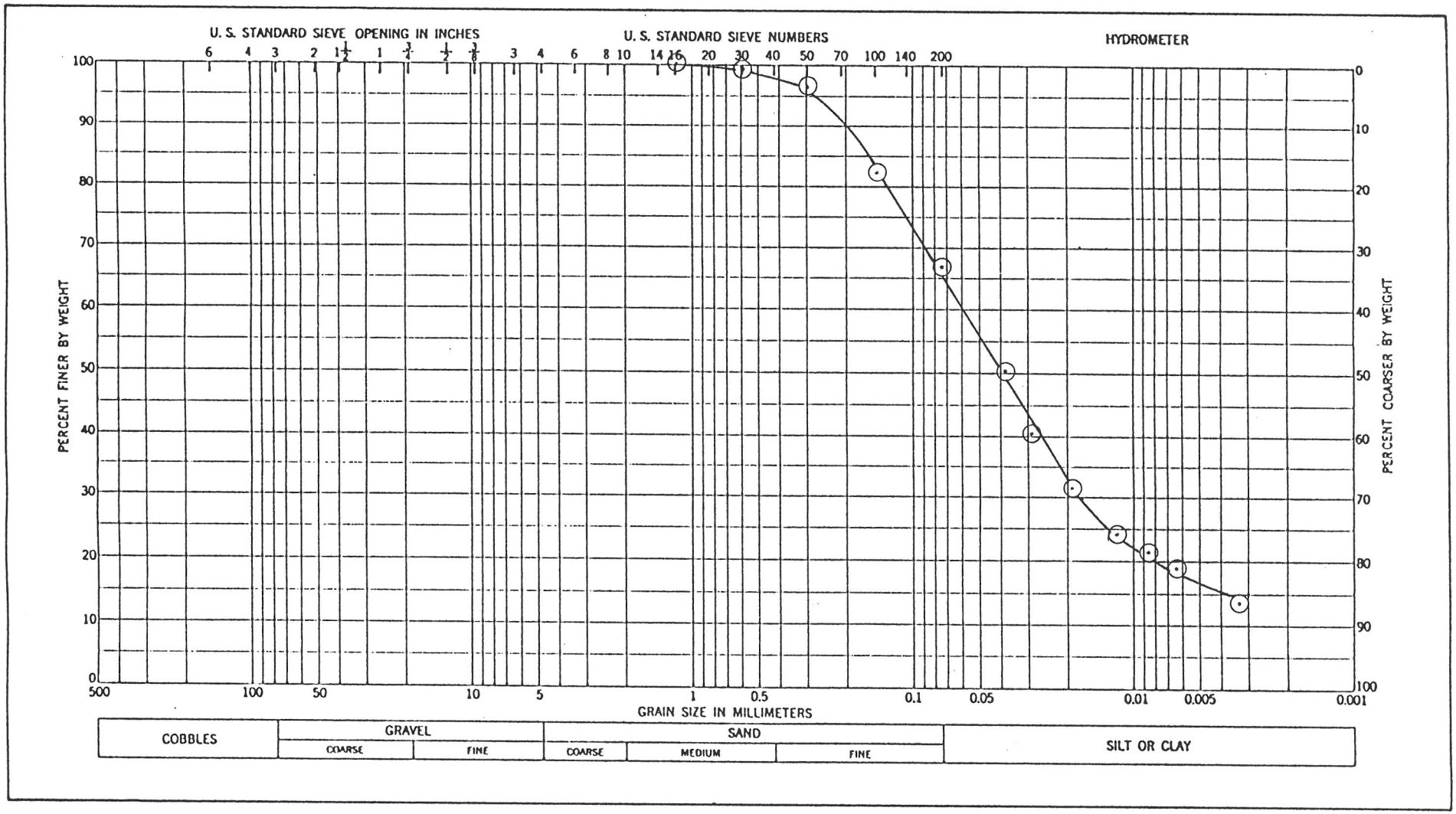

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-9D	50.0'-52.0'	Gray clayey silt and	20.7				
SS-26		medium to fine sand					
		CL-ML					

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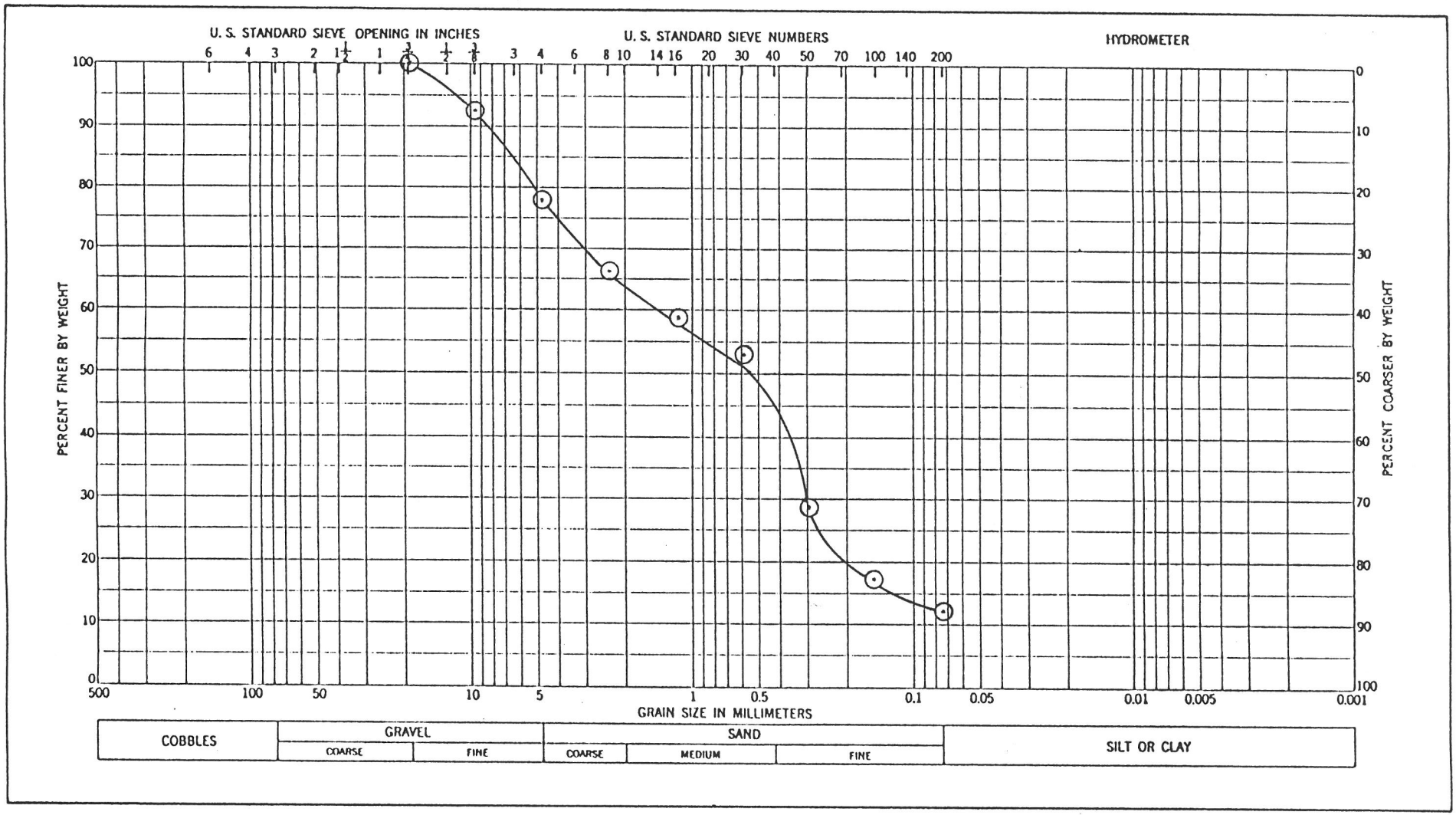

Sample No.	Elev. or Depth	Classification	Nat w%	LL	PL	PI	Remarks
P-9D	56.0'-58.0'	Gray coarse to fine sand,					
SS-29A		some fine gravel, little					
		silt					
		SM					

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PARTICLE SIZE DISTRIBUTION

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UNCONFINED COMPRESSIVE STRENGTHS

UNCONFINED COMPRESSION TEST

Job No. 496B Client: City of Springfield (CWLP)

Sample: CB-1 3T-5 8.0'-10.0'

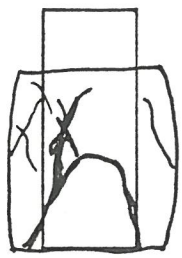
Sample Height: 5.8 in dia.: 2.8 in

Moisture content 29.4%

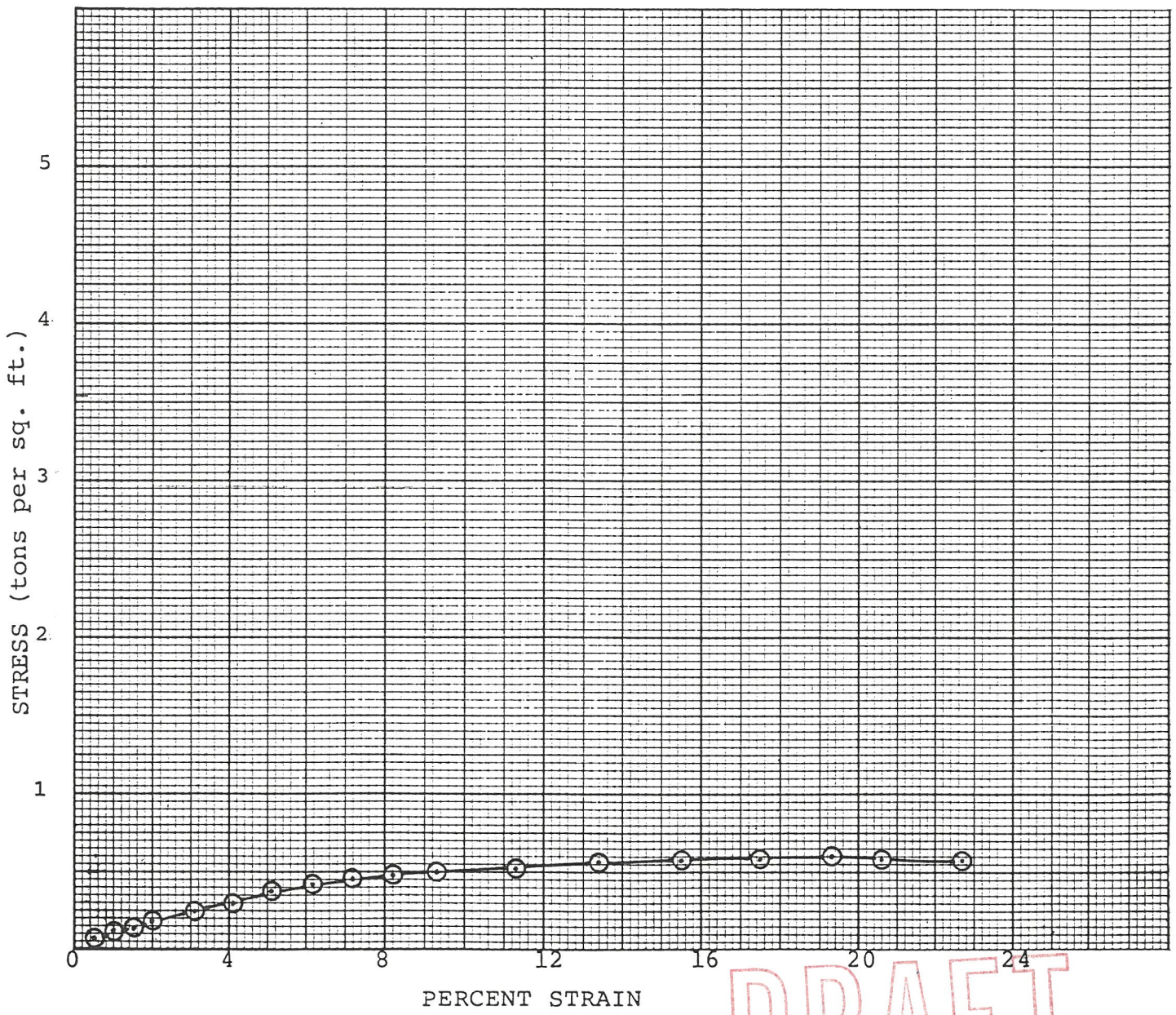
Dry density: 94.4 pcf

Max. compr. stress: 0.6 tsf @ 15.0 % strain

Remarks:



FAILURE SKETCH



DRAFT

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UNCONFINED COMPRESSION TEST

Job No. 496B Client: City of Springfield (CWLP)

Sample: CB-6, 3T-7 12.0'-14.0'

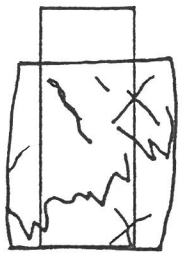
Sample Height: 5.9 in dia.: 2.8 in

Moisture content 26.4%

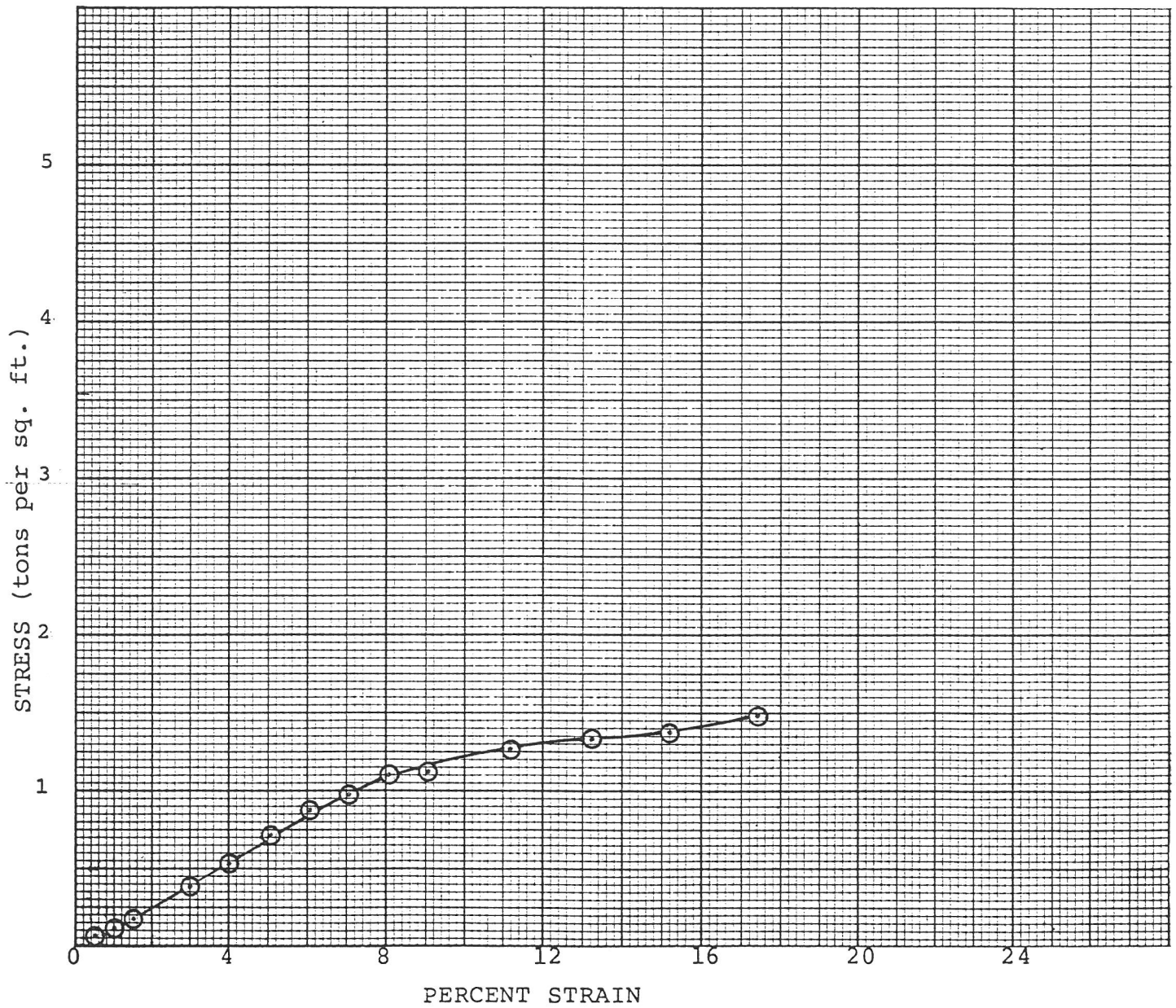
Dry density: 99.0 pcf

Max. compr. stress: 1.4 tsf @ 15.0 % strain

Remarks:



FAILURE SKETCH



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TRIAXIAL HYDRAULIC CONDUCTIVITY TEST RESULTS

Coefficient of Permeability - Calculation Sheet — Tech. - JCV — Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	B-3	Tare no.	136	131
Sample No.	3T-20	Tare wt. (g)	21.41	21.1
Description:	GRAY CL-ML	Wt. wet soil & tare (g)	182.00	100.55
		Wt. dry soil & tare (g)	150.26	85.82
		Moisture Content (%)	24.63	22.76
	Diameter (cm)	7.07		
	Height (cm)	15.02		
	Volume (cm3)	589.7		
	Wet Wt. (g)	1226.70		
	Dry Density (pcf)	104.2		
	Specific Gravity	2.70		
	Void Ratio	0.618		
	Saturation (%)	108		

DRAFT FOR REVIEW

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 4.7	Bottom: 3.60	
Volume change (cm3):	15.0		
Consolidated volume (cm3):	574.6		
Dry weight of sample (g):	984.25		
% change each dimension:	0.00849		
Consolidated diameter (cm):	7.01	2.76	in.
Consolidated height (cm):	14.89	5.86	in.
Consolidated area (cm2):	38.6	5.98	in2
Consolidated dry density (pcf):	106.9		
Consolidated void ratio:	0.576		
Consolidated % saturation:	107		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	69.7	69.7			
Top pressure (psi):	58.2	58.2			
Bottom pressure (psi):	61.3	61.2			
Gradient:	15	14	0	0	0
Confining Pressure (psi):	9.95	10	*Error*	*Error*	*Error*
Date initial reading:	10/27/92	10/28/92			
Time initial reading:	4:53 PM	5:07 PM			
Date final reading:	10/28/92	10/29/92			
Time final reading:	8:57 AM	8:41 AM			
Initial man. rdg. (in) Top=	66.05	68.3			
Bottom=	66.1	64			
Final man. rdg. (in) Top=	67.55	69.6			
Bottom=	64.7	62.7			
Δ Top (in.)	1.5	1.3	0	0	0
Δ Bottom (in.)	1.40	1.3	0	0	0
Δ Time (hrs.)	16.07	15.57	0.00	0.00	0.00
Top "K" value (cm/sec) =	8.9E-08	8.2E-08	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	8.3E-08	8.2E-08	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 8.2E-08 — Conf. Pres. (psi) = 10

DRAFT

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Coefficient of Permeability - Calculation Sheet

Tech. - JCV Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	B-4	Tare no.	log	201
Sample No.	3T-4	Tare wt. (g)	20.41	21.03
Description:		Wt. wet soil & tare (g)	103.90	154.45
		Wt. dry soil & tare (g)	85.66	126.65
		Moisture Content (%)	27.95	26.32

Diameter (cm)	7.25
Height (cm)	12.92
Volume (cm3)	533.4
Wet Wt. (g)	1079.07
Dry Density (pcf)	98.7
Specific Gravity	2.70
Void Ratio	0.708
Saturation (%)	107

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 0.8	Bottom: 1.10	
Volume change (cm3):	3.4		
Consolidated volume (cm3):	529.9		
Dry weight of sample (g):	843.33		
% change each dimension:	0.00215		
Consolidated diameter (cm):	7.23	2.85	in.
Consolidated height (cm):	12.89	5.08	in.
Consolidated area (cm2):	41.1	6.37	in2
Consolidated dry density (pcf):	99.3		
Consolidated void ratio:	0.697		
Consolidated % saturation:	102		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	60	60.1			
Top pressure (psi):	47.6	47.8			
Bottom pressure (psi):	51.4	51.4			
Gradient:	21	20	0	0	0
Confining Pressure (psi):	10.5	10.5	*Error*	*Error*	*Error*
Date initial reading:	8/28/92	8/28/92			
Time initial reading:	9:04 AM	10:02 PM			
Date final reading:	8/28/92	8/29/92			
Time final reading:	1:44 PM	8:43 PM			
Initial man. rdg. (in) Top=	64.75	66			
Bottom=	71	69.8			
Final man. rdg. (in) Top=	65.25	67.6			
Bottom=	70.5	68.2			
Δ Top (in.)	0.50	1.60	0	0	0
Δ Bottom (in.)	0.50	1.60	0	0	0
Δ Time (hrs.)	4.67	22.68	0.00	0.00	0.00
Top "K" value (cm/sec) =	6.8E-08	4.7E-08	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	6.8E-08	4.7E-08	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 4.7E-08 Conf. Pres. (psi) = 10.5

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Coefficient of Permeability - Calculation Sheet — Tech. - JCV — Check -

Job No.	496B		Initial WC%	Final W%
Boring Number:	CB-1	Tare no.	log	225
Sample No.	3T-5	Tare wt. (g)	20.56	20.89
Description:	Vry Dk Gr Silty Clay	Wt. wet soil & tare (g)	124.71	118.38
		Wt. dry soil & tare (g)	102.32	97.34
		Moisture Content (%)	27.39	27.52
	Diameter (cm)	7.20		
	Height (cm)	14.17		
	Volume (cm3)	576.9		
	Wet Wt. (g)	1124.63		
	Dry Density (pcf)	95.5		
	Specific Gravity	2.70		
	Void Ratio	0.764		
	Saturation (%)	97		

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 6.7	Bottom: 4.30	
Volume change (cm3):	19.9		
Consolidated volume (cm3):	557.0		
Dry weight of sample (g):	882.86		
% change each dimension:	0.01150		
Consolidated diameter (cm):	7.12	2.80	in.
Consolidated height (cm):	14.01	5.51	in.
Consolidated area (cm2):	39.8	6.17	in2
Consolidated dry density (pcf):	98.9		
Consolidated void ratio:	0.704		
Consolidated % saturation:	106		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	59.4	59.4			
Top pressure (psi):	47.4	47.4			
Bottom pressure (psi):	51.7	51.7			
Gradient:	22	22	0	- 0	0
Confining Pressure (psi):	9.85	9.85	*Error*	*Error*	*Error*
Date initial reading:	8/27/92	8/27/92			
Time initial reading:	9:26 AM	1:45 PM			
Date final reading:	8/27/92	8/27/92			
Time final reading:	1:45 PM	8:03 PM			
Initial man. rdg. (in) Top=	62.65	64.2			
Bottom=	68.8	67.9			
Final man. rdg. (in) Top=	64.2	65.7			
Bottom=	67.9	66.7			
Δ Top (in.)	1.55	1.5	0	0	0
Δ Bottom (in.)	0.9	1.2	0	0	0
Δ Time (hrs.)	4.32	6.30	0.00	0.00	0.00
Top "K" value (cm/sec) =	2.2E-07	1.5E-07	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	1.3E-07	1.2E-07	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 1.5E-07 Conf. Pres. (psi) = 9.85

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Coefficient of Permeability - Calculation Sheet — Tech. - JCV — Check -

Job No.	496B		Initial WC%	Final W%
Boring Number:	CB-2	Tare no.	log	266
Sample No.	3T-9	Tare wt. (g)	20.98	20.61
Description:		Wt. wet soil & tare (g)	110.34	86.99
		Wt. dry soil & tare (g)	85.81	69.88
		Moisture Content (%)	37.84	34.73

Diameter (cm)	7.15
Height (cm)	7.11
Volume (cm3)	285.5
Wet Wt. (g)	501.73
Dry Density (pcf)	79.6
Specific Gravity	2.70
Void Ratio	1.118
Saturation (%)	91

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 3.4	Bottom: 4.25	
Volume change (cm3):	13.8		
Consolidated volume (cm3):	271.6		
Dry weight of sample (g):	364.00		
% change each dimension:	0.01616		
Consolidated diameter (cm):	7.03	2.77	in.
Consolidated height (cm):	7.00	2.75	in.
Consolidated area (cm2):	38.9	6.02	in2
Consolidated dry density (pcf):	83.6		
Consolidated void ratio:	1.015		
Consolidated % saturation:	92		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	50.1	50.1			
Top pressure (psi):	38.8	38.8			
Bottom pressure (psi):	40.6	40.6			
Gradient:	18	18	0	0	0
Confining Pressure (psi):	10.4	10.4	*Error*	*Error*	*Error*
Date initial reading:	8/27/92	8/27/92			
Time initial reading:	9:25 AM	1:40 AM			
Date final reading:	8/27/92	8/27/92			
Time final reading:	1:40 PM	7:46 AM			
Initial man. rdg. (in) Top=	65.4	66.9			
Bottom=	72.85	71.6			
Final man. rdg. (in) Top=	66.9	68.8			
Bottom=	71.6	69.9			
Δ Top (in.)	1.5	1.9	0	0	0
Δ Bottom (in.)	1.25	1.7	0	0	0
Δ Time (hrs.)	4.25	6.10	0.00	0.00	0.00
Top "K" value (cm/sec) =	2.7E-07	2.4E-07	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	2.2E-07	2.1E-07	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 2.4E-07 — Conf. Pres. (psi) = 10.4

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Coefficient of Permeability - Calculation Sheet — Tech. - JCV — Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	CB-4	Tare no.	log	228
Sample No.	3T-9	Tare wt. (g)	20.60	20.84
Description:	Dk Gr Silt	Wt. wet soil & tare (g)	111.80	75.91
		Wt. dry soil & tare (g)	94.24	65.37
		Moisture Content (%)	23.85	23.67
	Diameter (cm)	7.20		
	Height (cm)	14.75		
	Volume (cm3)	600.5		
	Wet Wt. (g)	1231.78		
	Dry Density (pcf)	103.3		
	Specific Gravity	2.70		
	Void Ratio	0.630		
	Saturation (%)	102		

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top:	6.2	Bottom:	5.10
Volume change (cm3):		20.4		
Consolidated volume (cm3):		580.1		
Dry weight of sample (g):		994.61		
% change each dimension:		0.01135		
Consolidated diameter (cm):		7.12	2.80	in.
Consolidated height (cm):		14.58	5.74	in.
Consolidated area (cm2):		39.8	6.17	in2
Consolidated dry density (pcf):		107.0		
Consolidated void ratio:		0.575		
Consolidated % saturation:		111		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	40.1	40.1	40.1		
Top pressure (psi):	28.2	28.4	28.2		
Bottom pressure (psi):	31.6	31.4	31.6		
Gradient:	16	14	16	0	0
Confining Pressure (psi):	10.2	10.2	10.2	*Error*	*Error*
Date initial reading:	8/26/92	8/26/92	8/26/92		
Time initial reading:	7:52 AM	9:58 PM	11:19 AM		
Date final reading:	8/26/92	8/27/92	8/26/92		
Time final reading:	9:58 PM	8:36 AM	9:58 PM		
Initial man. rdg. (in) Top=	59.2	66.9	61.35		
Bottom=	70.05	63	68.3		
Final man. rdg. (in) Top=	66.9	71.75	66.9		
Bottom=	63	58.15	63		
Δ Top (in.)	7.7	4.85	5.55	0	0
Δ Bottom (in.)	7.05	4.85	5.3	0	0
Δ Time (hrs.)	14.10	10.63	10.65	0.00	0.00
Top "K" value (cm/sec) =	4.5E-07	4.3E-07	4.3E-07	*Error*	*Error*
Bottom "K" value (cm/sec) =	4.1E-07	4.3E-07	4.1E-07	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 4.3E-07 Conf. Pres. (psi) = 10.2

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet

Tech. - JCV | Check -

Job No.	496B		Initial WC%	Final W%
Boring Number:	CB-6	Tare no.	log	200
Sample No.	3T-7	Tare wt. (g)	20.94	20.45
Description:	Gr. Silty Clay	Wt. wet soil & tare (g)	124.57	149.79
		Wt. dry soil & tare (g)	100.75	121.98
		Moisture Content (%)	29.85	27.39

Diameter (cm)	7.10
Height (cm)	9.09
Volume (cm3)	359.9
Wet Wt. (g)	713.69
Dry Density (pcf)	95.3
Specific Gravity	2.70
Void Ratio	0.768
Saturation (%)	105

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 4.7	Bottom: 2.65	
Volume change (cm3):	13.3		
Consolidated volume (cm3):	346.6		
Dry weight of sample (g):	549.64		
% change each dimension:	0.01232		
Consolidated diameter (cm):	7.01	2.76	in.
Consolidated height (cm):	8.98	3.53	in.
Consolidated area (cm2):	38.6	5.99	in2
Consolidated dry density (pcf):	99.0		
Consolidated void ratio:	0.703		
Consolidated % saturation:	105		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	50.2	50.4	50.2		
Top pressure (psi):	38.5	38.9	38.5		
Bottom pressure (psi):	41.3	41.4	41.3		
Gradient:	22	20	22	0	0
Confining Pressure (psi):	10.3	10.25	10.3	*Error*	*Error*
Date initial reading:	8/28/92	8/28/92	8/28/92		
Time initial reading:	1:43 PM	3:33 PM	1:43 PM		
Date final reading:	8/28/92	8/28/92	8/28/92		
Time final reading:	3:33 PM	10:01 PM	10:01 PM		
Initial man. rdg. (in) Top=	62	63.9	62		
Bottom=	67.3	66	67.3		
Final man. rdg. (in) Top=	63.9	68.7	68.7		
Bottom=	66	61.55	61.55		
Δ Top (in.)	1.9	4.8	6.7	0	0
Δ Bottom (in.)	1.3	4.45	5.75	0	0
Δ Time (hrs.)	1.83	6.47	8.30	0.00	0.00
Top "K" value (cm/sec) =	6.6E-07	5.3E-07	5.1E-07	*Error*	*Error*
Bottom "K" value (cm/sec) =	4.5E-07	4.9E-07	4.4E-07	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 5.3E-07 Conf. Pres. (psi) = 10.25

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet — Tech. - JCV — Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	P-2D	Tare no.	105	248
Sample No.	3T-15	Tare wt. (g)	21.99	20.32
Description:	Brown CL-ML	Wt. wet soil & tare (g)	153.04	116.65
		Wt. dry soil & tare (g)	126.07	97.23
		Moisture Content (%)	25.91	25.25
	Diameter (cm)	7.24		
	Height (cm)	15.28		
	Volume (cm3)	629.1		
	Wet Wt. (g)	1257.45		
	Dry Density (pcf)	99.1		
	Specific Gravity	2.70		
	Void Ratio	0.701		
	Saturation (%)	100		

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 4.00	Bottom: 2.00	
Volume change (cm3):	10.9		
Consolidated volume (cm3):	618.2		
Dry weight of sample (g):	998.67		
% change each dimension:	0.00575		
Consolidated diameter (cm):	7.20	2.83	in.
Consolidated height (cm):	15.19	5.98	in.
Consolidated area (cm2):	40.7	6.31	in2
Consolidated dry density (pcf):	100.8		
Consolidated void ratio:	0.671		
Consolidated % saturation:	102		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	59.7	59.7			
Top pressure (psi):	48	47.3			
Bottom pressure (psi):	51.7	51.1			
Gradient:	17	18	0	0	0
Confining Pressure (psi):	9.85	10.5	*Error*	*Error*	*Error*
Date initial reading:	8/3/92	8/3/92			
Time initial reading:	8:49 AM	2:39 PM			
Date final reading:	8/3/92	8/3/92			
Time final reading:	2:16 PM	4:27 PM			
Initial man. rdg. (in) Top=	63.5	68.7			
Bottom=	68	63.05			
Final man. rdg. (in) Top=	68.7	70.4			
Bottom=	63.1	61.45			
Δ Top (in.)	5.2	1.7	0	0	0
Δ Bottom (in.)	4.9	1.6	0	0	0
Δ Time (hrs.)	5.45	1.80	0.00	0.00	0.00
Top "K" value (cm/sec) =	7.4E-07	7.1E-07	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	6.9E-07	6.7E-07	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 7.3E-07* Conf. Pres. (psi) = 10.2

*percentage of "k" values for trials 1 and 2 added for weighted composite value for 7.25 hours.

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet

Tech. - JCV | Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	P-3D	Tare no.	213	213
Sample No.	3T-9	Tare wt. (g)	20.63	20.63
Description:	Olive gray CL w/ silt	Wt. wet soil & tare (g)	98.59	111.47
		Wt. dry soil & tare (g)	78.58	89.49
		Moisture Content (%)	34.53	31.92
	Diameter (cm)	7.20		
	Height (cm)	14.78		
	Volume (cm3)	601.8		
	Wet Wt. (g)	1157.82		
	Dry Density (pcf)	89.2		
	Specific Gravity	2.70		
	Void Ratio	0.888		
	Saturation (%)	105		

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top:	2.1	Bottom:	2.25
Volume change (cm3):		7.9		
Consolidated volume (cm3):		593.9		
Dry weight of sample (g):		860.64		
% change each dimension:		0.00436		
Consolidated diameter (cm):		7.17	2.82	in.
Consolidated height (cm):		14.72	5.79	in.
Consolidated area (cm2):		40.4	6.26	in2
Consolidated dry density (pcf):		90.4		
Consolidated void ratio:		0.863		
Consolidated % saturation:		100		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	69.3	69.3			
Top pressure (psi):	57.8	57.8			
Bottom pressure (psi):	61.2	61.2			
Gradient:	16	16	0	0	0
Confining Pressure (psi):	9.8	9.8	*Error*	*Error*	*Error*
Date initial reading:	11/3/92	11/2/92			
Time initial reading:	4:25 PM	5:07 PM			
Date final reading:	11/4/92	11/3/92			
Time final reading:	8:25 AM	8:26 AM			
Initial man. rdg. (in) Top=	65.05	64.7			
Bottom=	63.75	64.1			
Final man. rdg. (in) Top=	65.3	65			
Bottom=	63.5	63.9			
Δ Top (in.)	0.25	0.30	0.00	0.00	0.00
Δ Bottom (in.)	0.25	0.20	0.00	0.00	0.00
Δ Time (hrs.)	16.00	15.32	0.00	0.00	0.00
Top "K" value (cm/sec) =	1.3E-08	1.6E-08	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	1.3E-08	1.1E-08	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 1.3E-08 Conf. Pres. (psi) = 9.8

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet — Tech. - JCV — Check -

Job No.	496B		Initial WC%	Final W%
Boring Number:	P-4	Tare no.	LOG	114
Sample No.	3T-11	Tare wt. (g)		21.27
Description:	GRAY CH	Wt. wet soil & tare (g)		91.69
		Wt. dry soil & tare (g)		68.22
		Moisture Content (%)	40.88	49.99
	Diameter (cm)	7.26		
	Height (cm)	14.13		
	Volume (cm3)	584.9		
	Wet Wt. (g)	1032.84		
	Dry Density (pcf)	78.2		
	Specific Gravity	2.70		
	Void Ratio	1.154		
	Saturation (%)	96		

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 3.1		Bottom: 2.95	
Volume change (cm3):		10.9		
Consolidated volume (cm3):		574.0		
Dry weight of sample (g):		733.13		
% change each dimension:		0.00624		
Consolidated diameter (cm):		7.21	2.84	in.
Consolidated height (cm):		14.04	5.53	in.
Consolidated area (cm2):		40.9	6.34	in2
Consolidated dry density (pcf):		79.7		
Consolidated void ratio:		1.114		
Consolidated % saturation:		121		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	130.9	130.5	130.9		
Top pressure (psi):	119.1	119.1	119.4		
Bottom pressure (psi):	122.6	122.5	122.7		
Gradient:	18	17	17	0	0
Confining Pressure (psi):	10.05	9.7	9.85	*Error*	*Error*
Date initial reading:	11/4/92	11/4/92	11/5/92		
Time initial reading:	8:42 AM	5:18 PM	8:55 AM		
Date final reading:	11/4/92	11/5/92	11/5/92		
Time final reading:	5:18 PM	8:55 AM	5:16 PM		
Initial man. rdg. (in) Top=	60.8	61.1	61.3		
Bottom=	61.4	61.05	60.6		
Final man. rdg. (in) Top=	61.1	61.3	61.5		
Bottom=	61.05	60.6	60.3		
Δ Top (in.)	0.30	0.20	0.20	0.00	0.00
Δ Bottom (in.)	0.35	0.45	0.30	0.00	0.00
Δ Time (hrs.)	8.60	15.62	8.35	0.00	0.00
Top "K" value (cm/sec) =	2.6E-08	9.9E-09	1.9E-08	*Error*	*Error*
Bottom "K" value (cm/sec) =	3.1E-08	2.2E-08	2.9E-08	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 2.9E-08 — Conf. Pres. (psi) = 9.85

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet — Tech. - JCV — Check -

Job No.	496B		Initial WC%	Final W%
Boring Number:	P-5S	Tare no.	LOG	254
Sample No.	3T-2	Tare wt. (g)		20.75
Description:	VERY DK. GRAY CL	Wt. wet soil & tare (g)		96.87
		Wt. dry soil & tare (g)		81.8
		Moisture Content (%)	26.30	24.68
	Diameter (cm)	7.10		
	Height (cm)	12.81		
	Volume (cm3)	507.2		
	Wet Wt. (g)	982.85		
	Dry Density (pcf)	95.7		
	Specific Gravity	2.70		
	Void Ratio	0.760		
	Saturation (%)	93		

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top:	1.9	Bottom:	-1.05
Volume change (cm3):		1.5		
Consolidated volume (cm3):		505.6		
Dry weight of sample (g):		778.19		
% change each dimension:		0.00101		
Consolidated diameter (cm):		7.09	2.79	in.
Consolidated height (cm):		12.80	5.04	in.
Consolidated area (cm2):		39.5	6.12	in2
Consolidated dry density (pcf):		96.0		
Consolidated void ratio:		0.754		
Consolidated % saturation:		88		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	89.9	90			
Top pressure (psi):	78.6	78.9			
Bottom pressure (psi):	81.6	81.5			
Gradient:	16	14	0	0	0
Confining Pressure (psi):	9.8	9.8	*Error*	*Error*	*Error*
Date initial reading:	11/4/92	11/4/92			
Time initial reading:	8:42 AM	5:17 PM			
Date final reading:	11/4/92	11/5/92			
Time final reading:	5:17 PM	8:56 AM			
Initial man. rdg. (in) Top=	64.25	65			
Bottom=	68.8	68			
Final man. rdg. (in) Top=	65	66.15			
Bottom=	68	66.75			
Δ Top (in.)	0.75	1.15	0.00	0.00	0.00
Δ Bottom (in.)	0.80	1.25	0.00	0.00	0.00
Δ Time (hrs.)	8.58	15.65	0.00	0.00	0.00
Top "K" value (cm/sec) =	7.2E-08	7.0E-08	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	7.7E-08	7.6E-08	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 7.6E-08 Conf. Pres. (psi) = 9.8

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet

Tech. - JCV | Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	P7D	Tare no.	log	203
Sample No.	3T-5	Tare wt. (g)	20.46	20.6
Description:		Wt. wet soil & tare (g)	116.29	136.53
		Wt. dry soil & tare (g)	98.60	115.96
		Moisture Content (%)	22.64	21.57

Diameter (cm)	7.23
Height (cm)	14.13
Volume (cm3)	580.1
Wet Wt. (g)	1153.85
Dry Density (pcf)	101.2
Specific Gravity	2.70
Void Ratio	0.665
Saturation (%)	92

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 3.5	Bottom: 3.25	
Volume change (cm3):	12.2		
Consolidated volume (cm3):	567.9		
Dry weight of sample (g):	940.85		
% change each dimension:	0.00702		
Consolidated diameter (cm):	7.18	2.83	in.
Consolidated height (cm):	14.03	5.52	in.
Consolidated area (cm2):	40.5	6.27	in2
Consolidated dry density (pcf):	103.4		
Consolidated void ratio:	0.630		
Consolidated % saturation:	92		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	79.6	79.6			
Top pressure (psi):	68	68			
Bottom pressure (psi):	71.7	71.7			
Gradient:	19	19	0	0	0
Confining Pressure (psi):	9.75	9.75	*Error*	*Error*	*Error*
Date initial reading:	8/31/92	8/31/92			
Time initial reading:	9:16 AM	9:16 AM			
Date final reading:	8/31/92	8/31/92			
Time final reading:	12:14 PM	5:00 PM			
Initial man. rdg. (in) Top=	66.5	66.5			
Bottom=	69.4	69.4			
Final man. rdg. (in) Top=	67.35	68.7			
Bottom=	68.55	67.2			
Δ Top (in.)	0.85	2.2	0	0	0
Δ Bottom (in.)	0.85	2.2	0	0	0
Δ Time (hrs.)	2.97	7.73	0.00	0.00	0.00
Top "K" value (cm/sec) =	2.1E-07	2.0E-07	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	2.1E-07	2.0E-07	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 2.0E-07 Conf. Pres. (psi) = 9.75

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet

Tech. - JCV Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	P-7M	Tare no.	log	265
Sample No.	3T-2	Tare wt. (g)	20.65	20.65
Description:		Wt. wet soil & tare (g)	126.92	182.16
		Wt. dry soil & tare (g)	107.43	154.42
		Moisture Content (%)	22.46	20.74

Diameter (cm)	7.35
Height (cm)	14.04
Volume (cm3)	595.7
Wet Wt. (g)	1185.50
Dry Density (pcf)	101.4
Specific Gravity	2.70
Void Ratio	0.661
Saturation (%)	92

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top:	6.6	Bottom:	3.15
Volume change (cm3):		17.6		
Consolidated volume (cm3):		578.1		
Dry weight of sample (g):		968.08		
% change each dimension:		0.00987		
Consolidated diameter (cm):		7.28	2.87	in.
Consolidated height (cm):		13.90	5.47	in.
Consolidated area (cm2):		41.6	6.45	in2
Consolidated dry density (pcf):		104.5		
Consolidated void ratio:		0.612		
Consolidated % saturation:		91		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	49.9	49.9			
Top pressure (psi):	38.4	38.4			
Bottom pressure (psi):	41.7	41.7			
Gradient:	17	17	0	0	0
Confining Pressure (psi):	9.85	9.85	*Error*	*Error*	*Error*
Date initial reading:	8/31/92	8/31/92			
Time initial reading:	12:13 PM	9:14 AM			
Date final reading:	8/31/92	8/31/92			
Time final reading:	4:54 PM	4:54 PM			
Initial man. rdg. (in) Top=	63.5	62.8			
Bottom=	69.35	69.8			
Final man. rdg. (in) Top=	64.3	64.3			
Bottom=	68.6	68.6			
Δ Top (in.)	0.80	1.50	0	0	0
Δ Bottom (in.)	0.75	1.20	0	0	0
Δ Time (hrs.)	4.68	7.67	0.00	0.00	0.00
Top "K" value (cm/sec) =	1.3E-07	1.5E-07	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	1.2E-07	1.2E-07	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 1.5E-07 Conf. Pres. (psi) = 9.85

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet

Tech. - JCV | Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	P-9D	Tare no.	140	227
Sample No.	3T-8	Tare wt. (g)	21.39	20.86
Description:	VERY DK. GR. CL	Wt. wet soil & tare (g)	157.72	67.52
		Wt. dry soil & tare (g)	132.45	58.86
		Moisture Content (%)	22.75	22.79
	Diameter (cm)	7.11		
	Height (cm)	14.93		
	Volume (cm3)	592.8		
	Wet Wt. (g)	1192.37		
	Dry Density (pcf)	102.3		
	Specific Gravity	2.70		
	Void Ratio	0.648		
	Saturation (%)	95		

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: 9.9	Bottom: 3.35	
Volume change (cm3):	24.0		
Consolidated volume (cm3):	568.8		
Dry weight of sample (g):	971.35		
% change each dimension:	0.01348		
Consolidated diameter (cm):	7.01	2.76	in.
Consolidated height (cm):	14.73	5.80	in.
Consolidated area (cm2):	38.6	5.99	in2
Consolidated dry density (pcf):	106.6		
Consolidated void ratio:	0.581		
Consolidated % saturation:	106		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	110	110	110.3		
Top pressure (psi):	98.3	98.3	98.6		
Bottom pressure (psi):	101.6	101.6	101.8		
Gradient:	16	16	15	0	0
Confining Pressure (psi):	10.05	10.05	10.1	*Error*	*Error*
Date initial reading:	11/1/92	10/30/92	11/3/92		
Time initial reading:	12:28 PM	5:04 PM	4:27 PM		
Date final reading:	11/2/92	11/1/92	11/4/92		
Time final reading:	8:25 AM	12:28 PM	8:28 AM		
Initial man. rdg. (in) Top=	66.45	63.4	68.75		
Bottom=	64.35	65.85	62.7		
Final man. rdg. (in) Top=	67.2	66.45	69.4		
Bottom=	63.7	64.35	62.45		
Δ Top (in.)	0.75	3.05	0.65	0	0
Δ Bottom (in.)	0.65	1.5	0.25	0	0
Δ Time (hrs.)	19.95	43.40	16.02	0.00	0.00
Top "K" value (cm/sec) =	3.3E-08	6.2E-08	3.7E-08	*Error*	*Error*
Bottom "K" value (cm/sec) =	2.9E-08	3.1E-08	1.4E-08	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 3.3E-08 Conf. Pres. (psi) = 10.05

PATRICK ENGINEERING, INC.

Coefficient of Permeability - Calculation Sheet — Tech. - JCV — Check -

			Initial WC%	Final W%
Job No.	496B			
Boring Number:	P-9S	Tare no.	112	114
Sample No.	3T-1	Tare wt. (g)	21.81	21.24
Description:	Gray CL/CL-ML	Wt. wet soil & tare (g)	162.51	147.21
		Wt. dry soil & tare (g)	135.17	122.17
		Moisture Content (%)	24.12	24.81
	Diameter (cm)	7.17		
	Height (cm)	14.31		
	Volume (cm3)	577.8		
	Wet Wt. (g)	1163.11		
	Dry Density (pcf)	101.2		
	Specific Gravity	2.70		
	Void Ratio	0.665		
	Saturation (%)	98		

Dimensional Change During Consolidation (assuming isotropic consolidation)

Manometer change (in)=	Top: -1		Bottom: 5.70	
Volume change (cm3):		8.5		
Consolidated volume (cm3):		569.3		
Dry weight of sample (g):		937.10		
% change each dimension:		0.00491		
Consolidated diameter (cm):		7.13	2.81	in.
Consolidated height (cm):		14.24	5.61	in.
Consolidated area (cm2):		40.0	6.20	in2
Consolidated dry density (pcf):		102.7		
Consolidated void ratio:		0.640		
Consolidated % saturation:		105		

	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL4	TRIAL 5
Cell pressure (psi):	69.7	69.6			
Top pressure (psi):	58.3	58.8			
Bottom pressure (psi):	62.1	61.8			
Gradient:	19	15	0	0	0
Confining Pressure (psi):	9.5	9.3	*Error*	*Error*	*Error*
Date initial reading:	10/27/92	10/28/92			
Time initial reading:	12:14 PM	8:58 AM			
Date final reading:	10/27/92	10/28/92			
Time final reading:	4:51 PM	5:06 PM			
Initial man. rdg. (in) Top=	59.4	59.6			
Bottom=	71.6	71.4			
Final man. rdg. (in) Top=	67.6	71.3			
Bottom=	63.5	59.7			
Δ Top (in.)	8.2	11.7	0	0	0
Δ Bottom (in.)	8.1	11.7	0	0	0
Δ Time (hrs.)	4.62	8.13	0.00	0.00	0.00
Top "K" value (cm/sec) =	1.3E-06	1.3E-06	*Error*	*Error*	*Error*
Bottom "K" value (cm/sec) =	1.3E-06	1.3E-06	*Error*	*Error*	*Error*

PERMEABILITY VALUE (CM/SEC.) = 1.3E-06 — Conf. Pres. (psi) = 9.3

NOTE: Root passing 3/4 of length from top.

PATRICK ENGINEERING, INC.

CATION EXCHANGE CAPACITY TEST RESULTS

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 W. Bartlett Rd.
Bartlett , IL 60103
Tel: (708) 289-3100
Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Krishna Redby
PATRICK ENGINEERING, INC.
346 Taft Ave.
Glen Ellyn, IL 60137

11/13/1992

NET Job Number: 92.50181

Enclosed are the Analytical Results for the following samples submitted to NET, Inc. Bartlett Division for analysis:

Project Description: 496B; Springfield

Sample Number	Sample Description	Date Taken	Date Received
186568	P-7D; SS-4; Soil		11/03/1992
186569	B-9; SS-8; Soil		11/03/1992
186570	CB-9; SS-5; Soil		11/03/1992

Sample analysis in support of the project referenced above has been completed and results are presented on the following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please do not hesitate to call. NET has been pleased to provide these analytical services for you.

Approved By: Darla J. Kalicki

Darla J. Kalicki
Project Manager

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 W. Bartlett Rd.
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ANALYTICAL REPORT

Mr. Jim Davis
PATRICK ENGINEERING, INC.
346 Taft Ave.
Glen Ellyn, IL 60137

11/13/1992

Sample No. : 186568

NET Job No.: 92.50181

Sample Description: P-7D; SS-4; Soil
496B; Springfield

Date Taken:
Time Taken:
IEPA Cert. No. 100221

Date Received: 11/03/1992
Time Received: 11:15
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	97.3	%	11/05/1992	2540 (4)
Cation Exchange Capacity	16.5	meq/100g	11/12/1992	9080 (1)
CEC - Calcium	179.	mg/100g	11/13/1992	9080 (1)
CEC - Magnesium	71.	mg/100g	11/12/1992	9080 (1)
CEC - Sodium	2.6	mg/100g	11/12/1992	9080 (1)
CEC - Potassium	6.5	mg/100g	11/12/1992	9080 (1)

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 W. Bartlett Rd.
Bartlett , IL 60103
Tel: (708) 289-3100
Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Jim Davis
PATRICK ENGINEERING, INC.
346 Taft Ave.
Glen Ellyn, IL 60137

11/13/1992

Sample No. : 186569

NET Job No.: 92.50181

Sample Description: B-9; SS-8; Soil
496B; Springfield

Date Taken:
Time Taken:
IEPA Cert. No. 100221

Date Received: 11/03/1992
Time Received: 11:15
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	98.3	%	11/05/1992	2540 (4)
Cation Exchange Capacity	10.7	meq/100g	11/12/1992	9080 (1)
CEC - Calcium	133.	mg/100g	11/13/1992	9080 (1)
CEC - Magnesium	35.	mg/100g	11/12/1992	9080 (1)
CEC - Sodium	1.8	mg/100g	11/12/1992	9080 (1)
CEC - Potassium	4.8	mg/100g	11/12/1992	9080 (1)

OCEAN GROUP

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 W. Bartlett Rd.
Bartlett , IL 60103
Tel: (708) 289-3100
Fax: (708) 289-5445

ANALYTICAL REPORT

Mr. Jim Davis
PATRICK ENGINEERING, INC.
346 Taft Ave.
Glen Ellyn, IL 60137

11/13/1992

Sample No. : 186570

NET Job No.: 92.50181

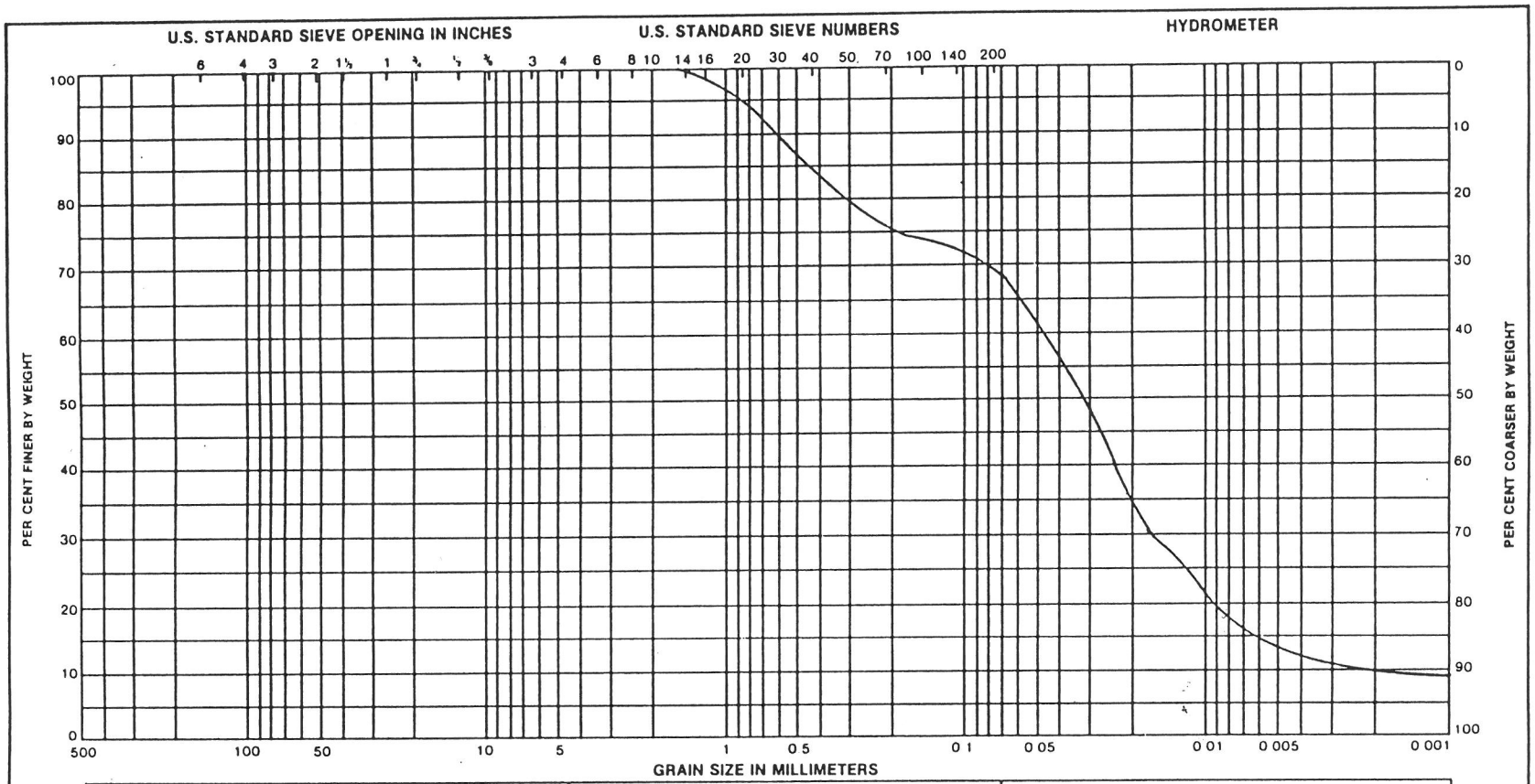
Sample Description: CB-9; SS-5; Soil
496B; Springfield

Date Taken:
Time Taken:
IEPA Cert. No. 100221

Date Received: 11/03/1992
Time Received: 11:15
WDNR Cert. No. 999447130

Parameter	Results	Units	Date of Analysis	Analytical Method
Solids, Total	97.1	%	11/05/1992	2540 (4)
Cation Exchange Capacity	18.1	meq/100g	11/12/1992	9080 (1)
CEC - Calcium	208.	mg/100g	11/13/1992	9080 (1)
CEC - Magnesium	70.	mg/100g	11/12/1992	9080 (1)
CEC - Sodium	3.3	mg/100g	11/12/1992	9080 (1)
CEC - Potassium	6.7	mg/100g	11/12/1992	9080 (1)

APPENDIX D-2
LABORATORY TESTS BY OTHERS

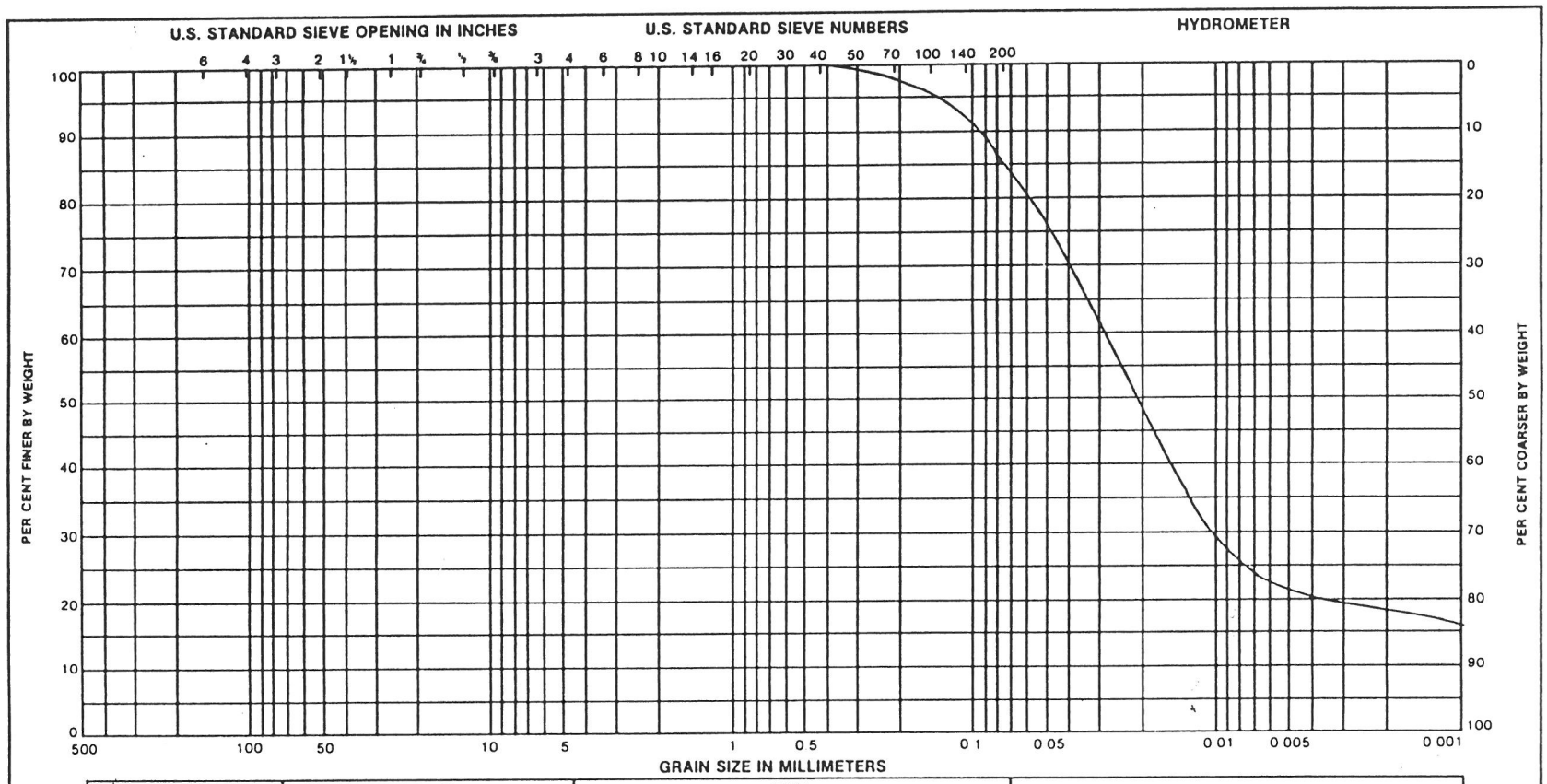


Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project
B-2	3-ST	10'-12'	Silty sand, grey, brown		NOT PLASTIC			Subsurface Exploration
								CWLP Ash Disposal Cell
								Springfield, Illinois

REPORT OF SOIL ANALYSIS

File No. 020-95039

PDF_2509

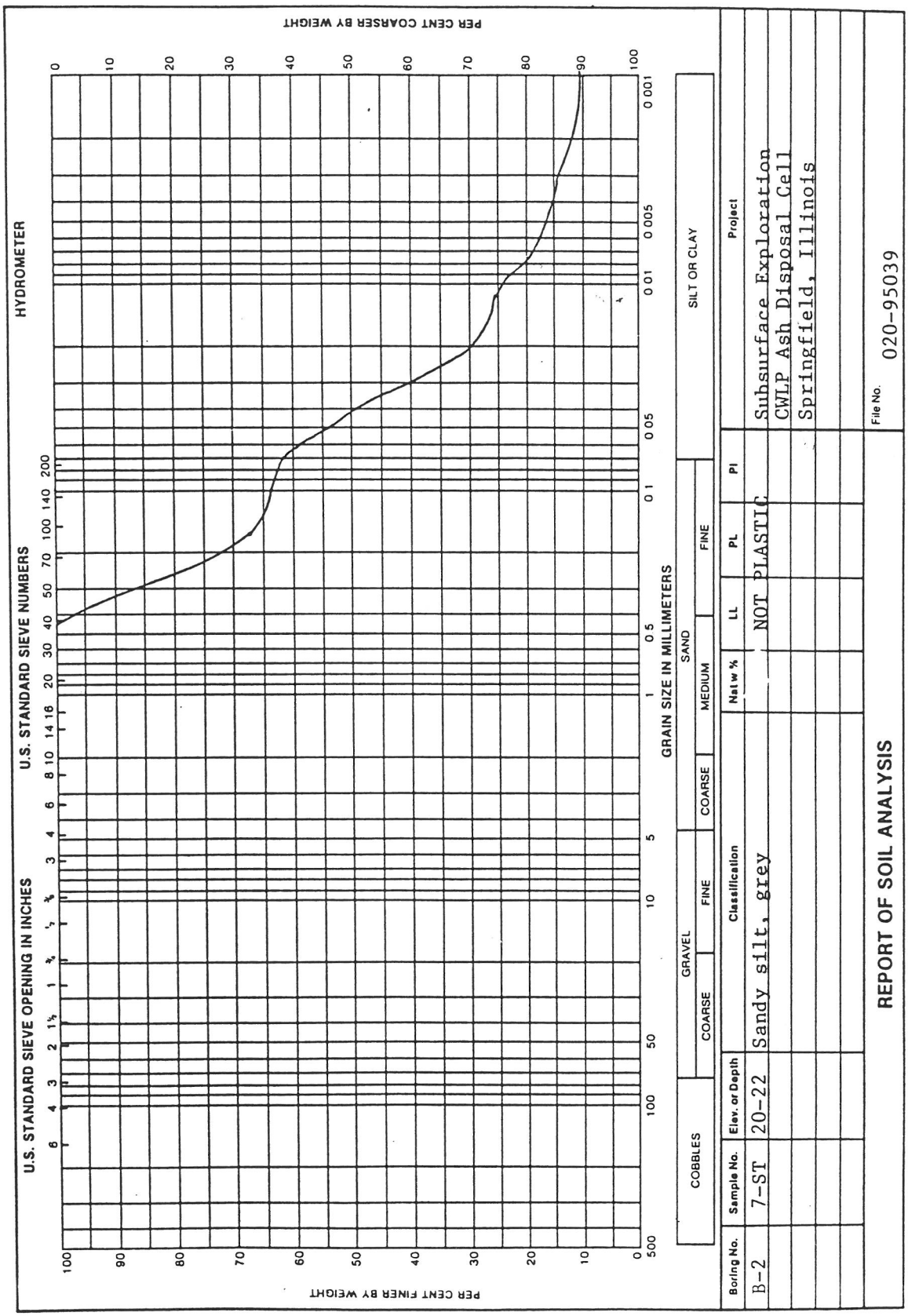


Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project
B-2	5-ST	15'-17'	Clayey silt, trace sand,		30	18	12	Subsurface Exploration
			grey					CWLP Ash Disposal Cell
								Springfield, Illinois

REPORT OF SOIL ANALYSIS

File No. 020-95039

PDF_2510

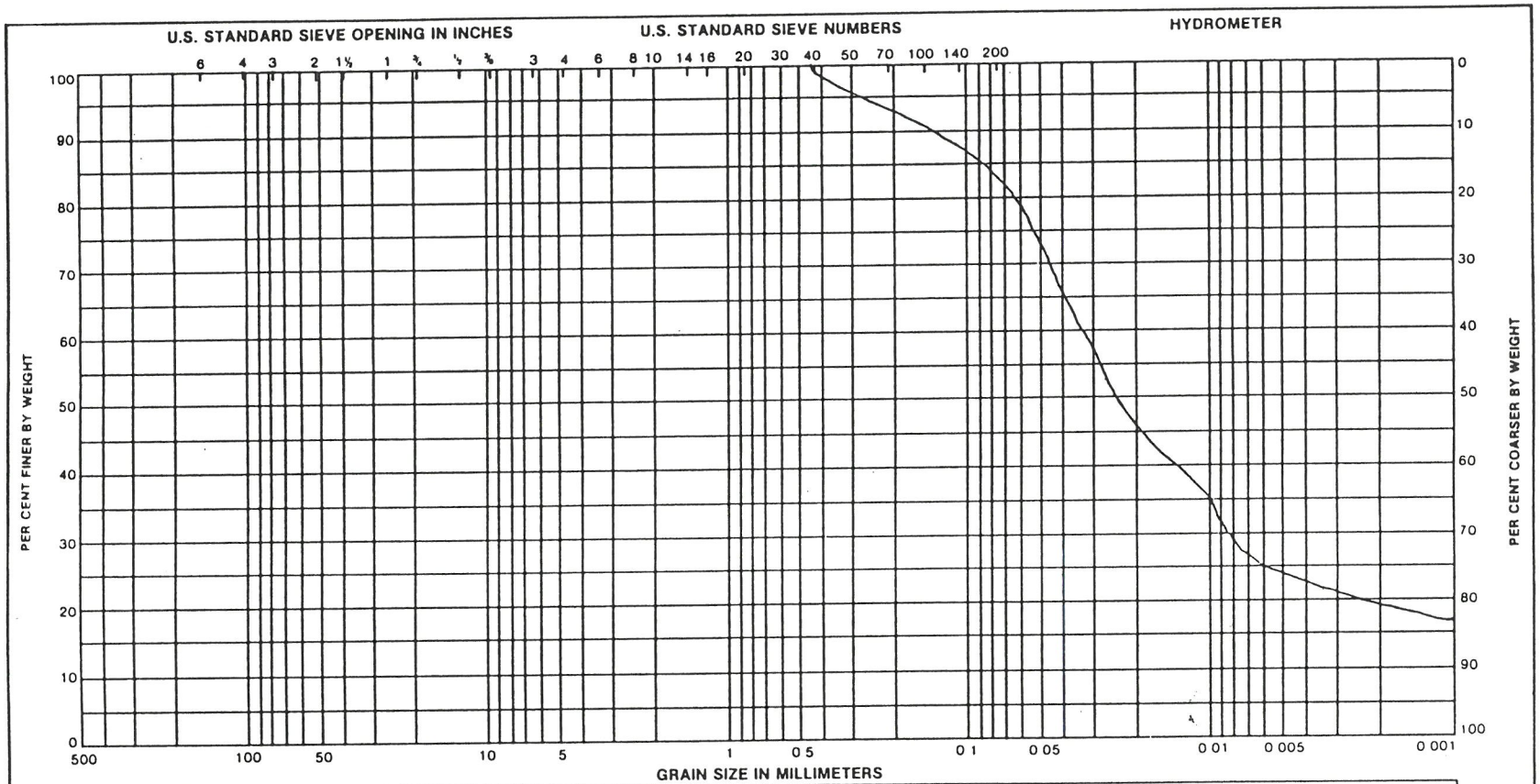


Boring No.	Sample No.	Elev. or Depth	Classification	Nat'l %	LL	PL	PI
B-2	7-ST	20-22	Sandy silt, grey		NOT PLASTIC		

Project
Subsurface Exploration
CWLP Ash Disposal Cell
Springfield, Illinois

File No. 020-95039

REPORT OF SOIL ANALYSIS

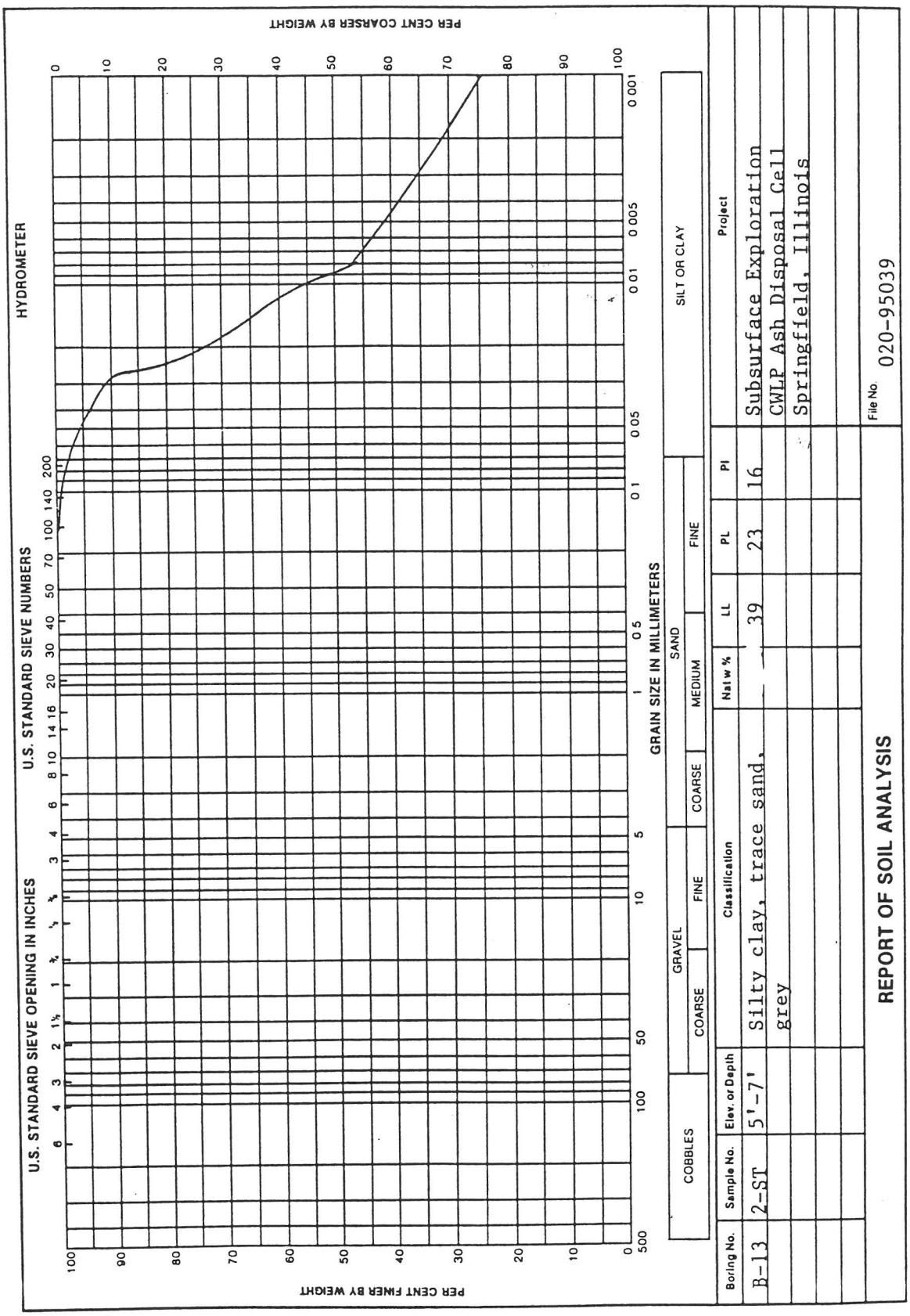


Boring No.	Sample No.	Elev. or Depth	Classification	Nat w %	LL	PL	PI	Project
B-5	2-ST	5'-7'	Clayey silt, some sand, brown, mottled grey	--	23	21	2	Subsurface Exploration CWLP Ash Disposal Cell Springfield, Illinois

REPORT OF SOIL ANALYSIS

File No. 020-95039

PDF_2512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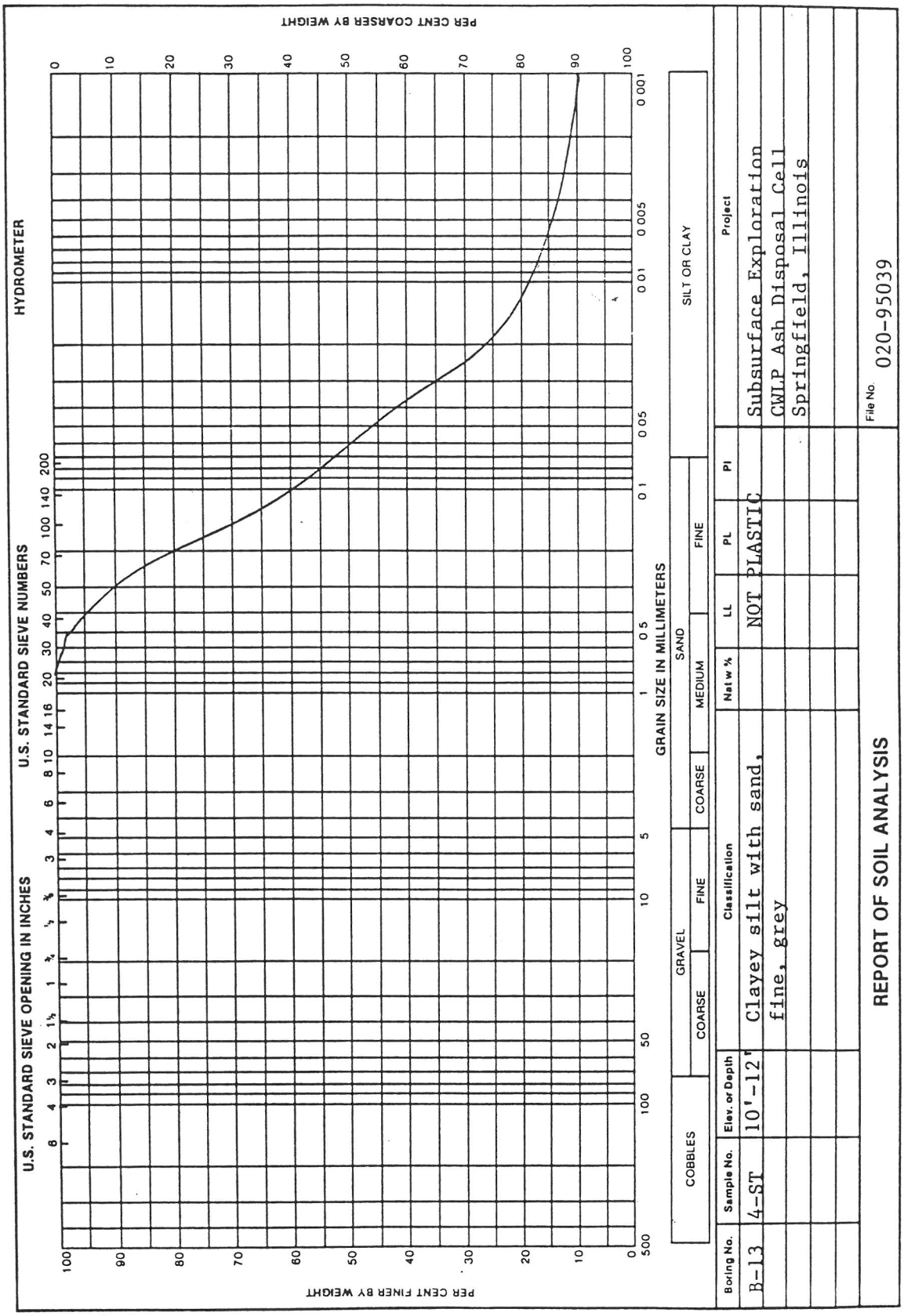
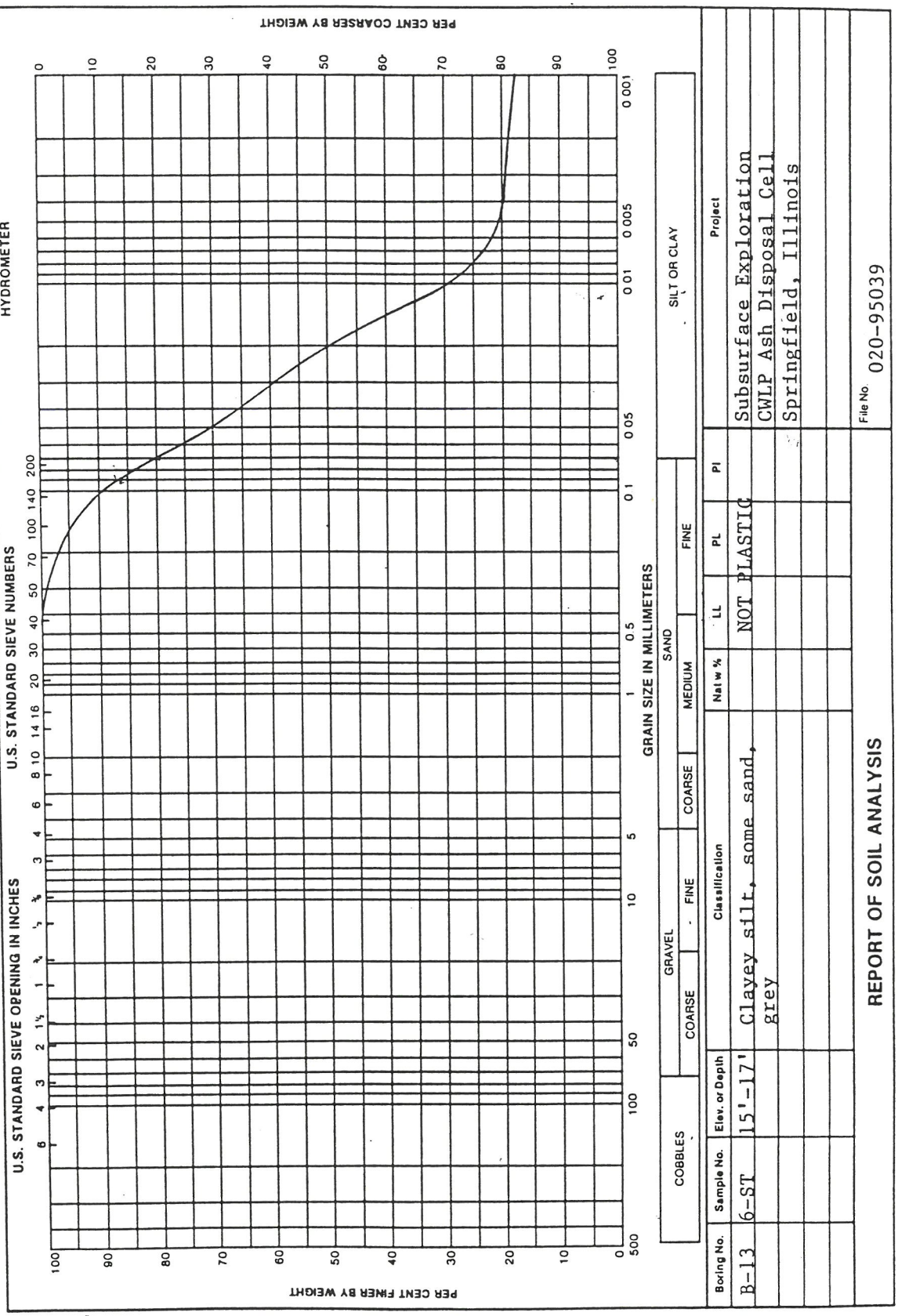
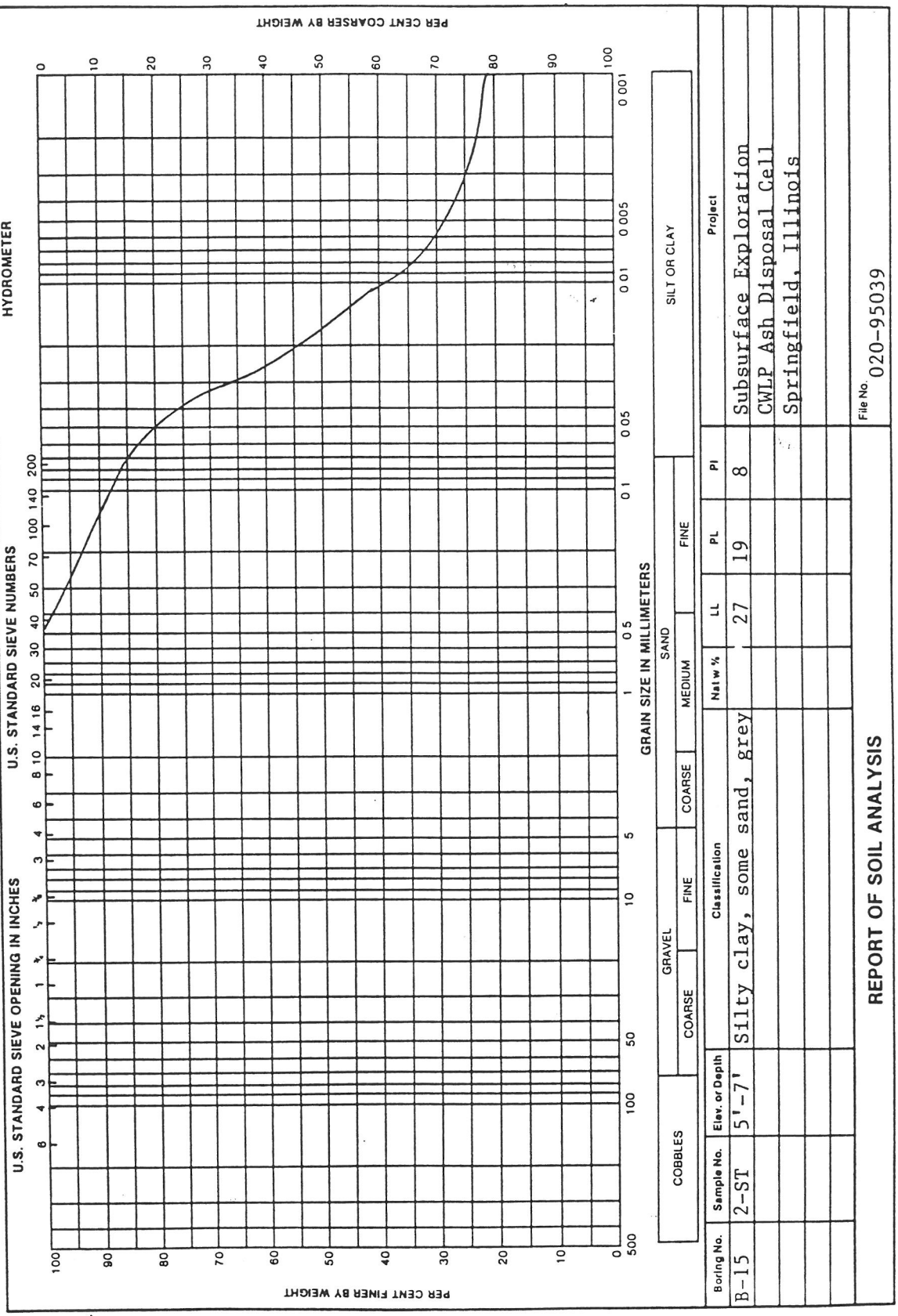
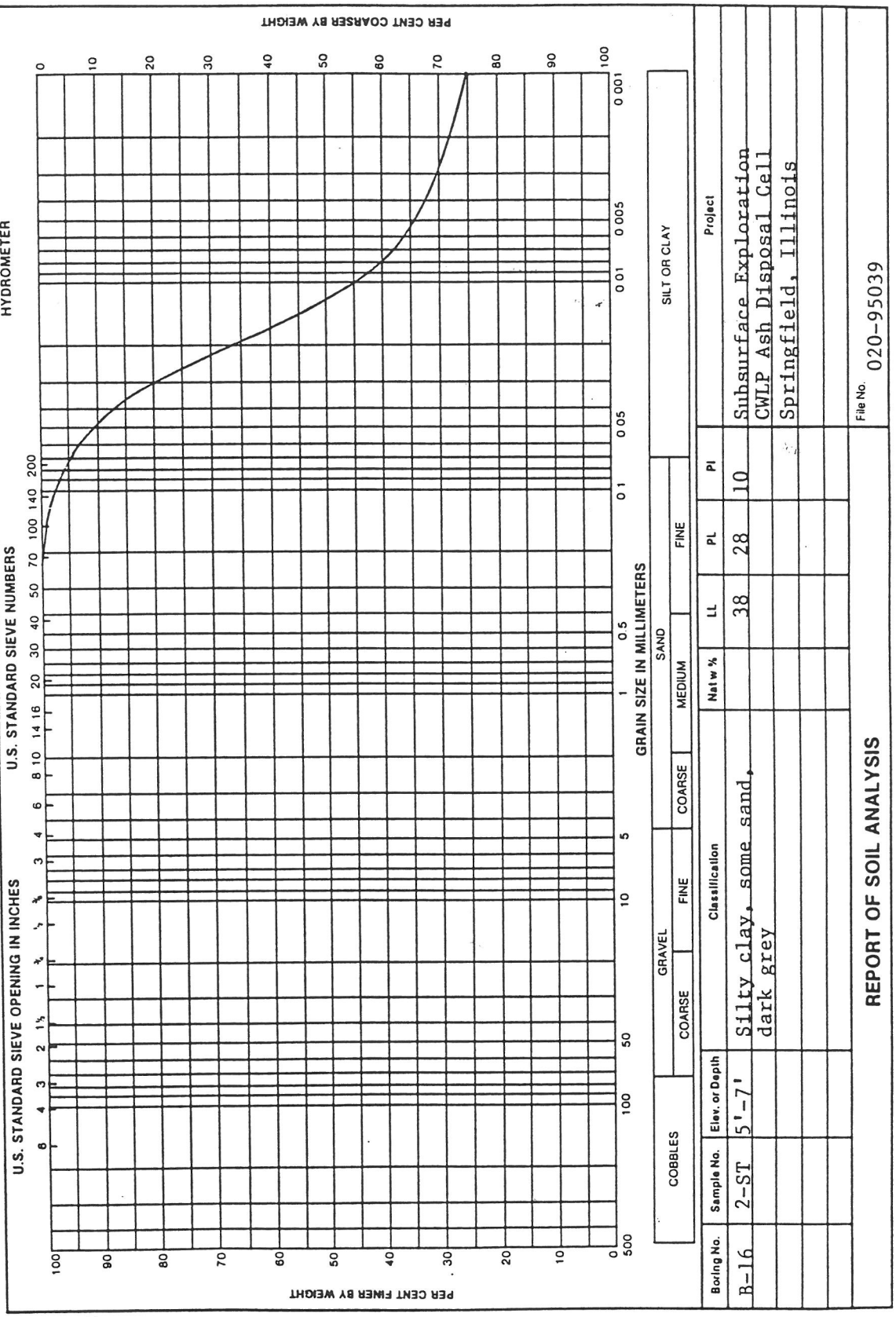
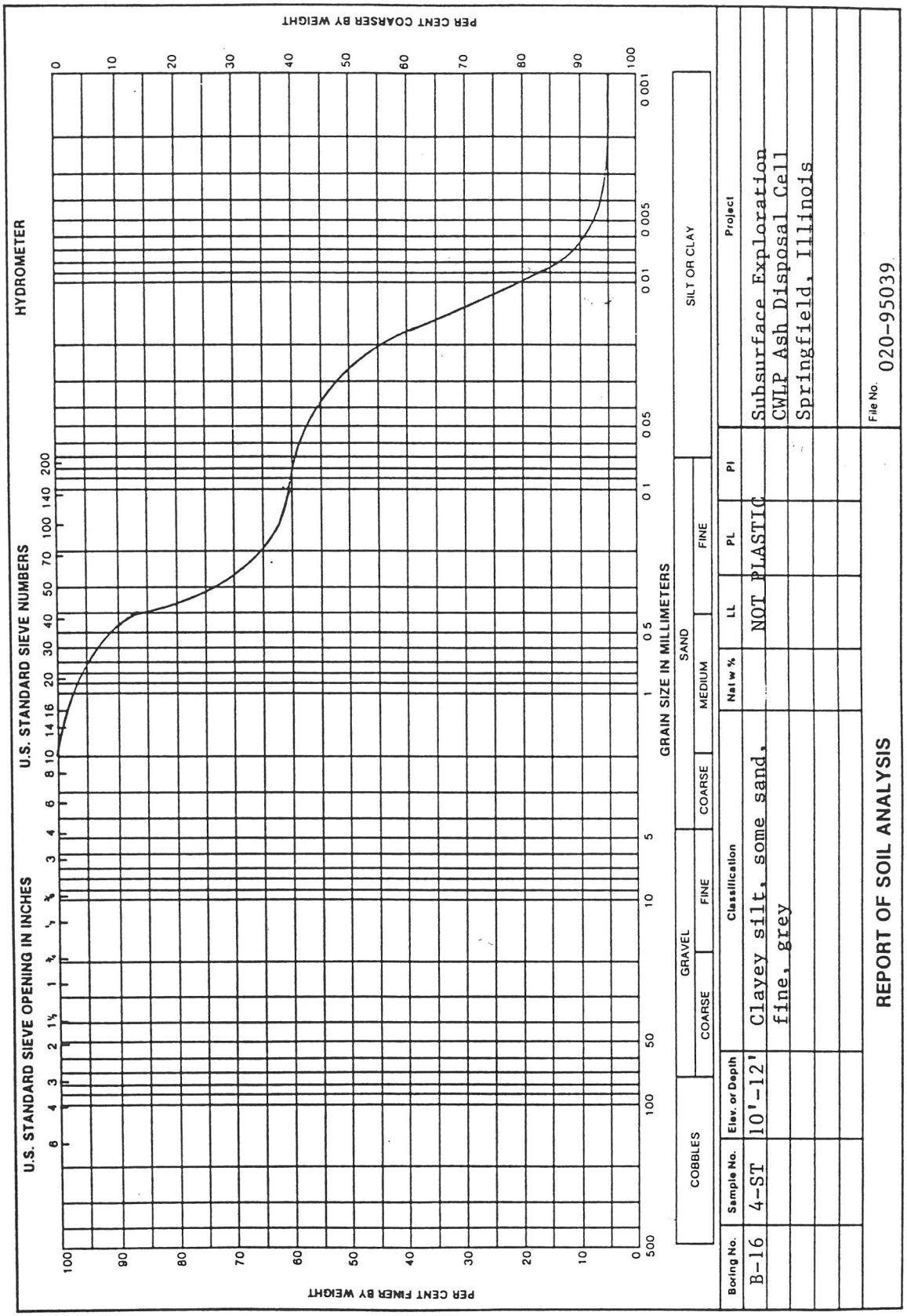
U.S. STANDARD SIEVE NUMBERS
HYDROMETER
PER CENT FINER BY WEIGHT
PER CENT COARSER BY WEIGHT
GRAIN SIZE IN MILLIMETERS
COBBLES
GRAVEL
COARSE
FINE
SAND
COARSE
MEDIUM
FINE
SILT OR CLAY
Boring No.
Sample No.
Elev. or Depth
Classification
Nat w %
LL
PL
PI
Project
B-13
2-ST
5'-7'
Silty clay, trace sand,
grey
39
23
16
Subsurface Exploration
CWLP Ash Disposal Cell
Springfield, Illinois
REPORT OF SOIL ANALYSIS
File No. 020-95039


HYDROMETER
U.S. STANDARD SIEVE OPENING IN INCHES
U.S. STANDARD SIEVE NUMBERS
PER CENT FINER BY WEIGHT
PER CENT COARSER BY WEIGHT
GRAIN SIZE IN MILLIMETERS
COBBLES
GRAVEL
COARSE
FINE
SAND
COARSE
MEDIUM
FINE
SILT OR CLAY
Boring No.
Sample No.
Elev. or Depth
Classification
Nat w %
LL
PL
PI
Project
B-13
4-ST
10'-12'
Clayey silt with sand, fine, grey
NOT PLASTIC
Subsurface Exploration
CWLP Ash Disposal Cell
Springfield, Illinois
File No. 020-95039
REPORT OF SOIL ANALYSIS


U.S. STANDARD SIEVE OPENING IN INCHES
U.S. STANDARD SIEVE NUMBERS
HYDROMETER
PER CENT FINER BY WEIGHT
PER CENT COARSER BY WEIGHT
GRAIN SIZE IN MILLIMETERS
COBBLES
GRAVEL
COARSE
FINE
SAND
COARSE
MEDIUM
FINE
SILT OR CLAY
Boring No.
Sample No.
Elev. or Depth
Classification
Nat w %
LL
PL
PI
Project
B-13
6-ST
15'-17'
Clayey silt, some sand, grey
NOT PLASTIC
Subsurface Exploration
CWLP Ash Disposal Cell
Springfield, Illinois
REPORT OF SOIL ANALYSIS
File No 020-95039


HYDROMETER
U.S. STANDARD SIEVE OPENING IN INCHES
U.S. STANDARD SIEVE NUMBERS
PER CENT FINER BY WEIGHT
PER CENT COARSER BY WEIGHT
GRAIN SIZE IN MILLIMETERS
COBBLES
GRAVEL
COARSE
FINE
SAND
COARSE
MEDIUM
FINE
SILT OR CLAY
Boring No.
Sample No.
Elev. or Depth
Classification
Nat w %
LL
PL
PI
Project
B-15
2-ST
5'-7'
Silty clay, some sand, grey
27
19
8
Subsurface Exploration
CWLP Ash Disposal Cell
Springfield, Illinois
REPORT OF SOIL ANALYSIS
File No. 020-95039


HYDROMETER
U.S. STANDARD SIEVE NUMBERS
U.S. STANDARD SIEVE OPENING IN INCHES
PER CENT FINER BY WEIGHT
PER CENT COARSER BY WEIGHT
GRAIN SIZE IN MILLIMETERS
COBBLES
GRAVEL
COARSE
FINE
SAND
COARSE
MEDIUM
FINE
SILT OR CLAY
Boring No.
Sample No.
Elev. or Depth
Classification
Nat w %
LL
PL
PI
Project
B-16
2-ST
5'-7'
Silty clay, some sand, dark grey
38
28
10
Subsurface Exploration
CWLP Ash Disposal Cell
Springfield, Illinois
File No. 020-95039
REPORT OF SOIL ANALYSIS


HYDROMETER
U.S. STANDARD SIEVE NUMBERS
U.S. STANDARD SIEVE OPENING IN INCHES
PER CENT FINER BY WEIGHT
PER CENT COARSER BY WEIGHT
GRAIN SIZE IN MILLIMETERS
COBBLES
GRAVEL
COARSE
FINE
SAND
COARSE
MEDIUM
FINE
SILT OR CLAY
Boring No.
Sample No.
Elev. or Depth
Classification
Nat w %
LL
PL
PI
Project
B-16
4-ST
10'-12'
Clayey silt, some sand, fine, grey
NOT PLASTIC
Subsurface Exploration
CWLP Ash Disposal Cell
Springfield, Illinois
REPORT OF SOIL ANALYSIS
File No. 020-95039

APPENDIX E2:
GEOTECHNICAL INVESTIGATION – 2023/2024

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Moisture Content (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
1	2.5-3	14.5								Sandy Lean Clay (CL), Yellow Brown mottled Brown, Silty, With Coal
1	5-5.5	10.1								Sandy Lean Clay (CL), Yellow Brown mottled Brown, Silty, With Coal
1	7.5-8	19.8								Sandy Lean Clay (CL), Light Brown mottled Yellow Brown, Silty
1	10-10.5	21.7								Sandy Lean Clay (CL), Light Brown/Yellow Brown mottled Gray, Silty
1	13-13.5	21.3								Sandy Lean Clay (CL), Light Brown/Yellow Brown mottled Gray, Silty
1	15.5-16	24.8								Sandy Lean Clay (CL), Light Brown mottled Gray, Silty
1	17.5-18	47.7								Sandy Lean Clay (CL), Light Gray mottled Yellow Brown, Silty
1	20.5-21	25.6								Lean Clay (CL), Gray mottled Greenish Gray, Black Oxidation, Silty
1	22.5-23	27.1								Lean Clay (CL), Gray mottled Light Gray, Silty
1 ST	24.5-26.5	27.9	127.7	99.8	0.49	85.70	65.7/20.0	30 / 17	1.23×10^{-6}	Lean Clay (CL), Gray, Silty, Trace Sand, Medium, Moist
1	28-28.5	25.5								Fat Clay (CL), Gray, Silty
1	32.5-33	26.0								Sandy Lean Clay (CL), Light Gray/Gray mottled Yellow Brown, Silty
1L	2-3.5	18.5								Fat Clay (CH), Yellow Brown mottled Brown
1L	4.5-6	21.4								Fat Clay (CH), Yellow Brown mottled Brown
1L	7-8.5	21.4								Lean Clay (CL), Yellow Brown mottled Brown, Silty
1L	9.5-11	17.7								Sandy Lean Clay (CL), Yellow Brown, Silty
1L	12-13.5	23.4								Poorly Graded Sand (SP), Dark Brown, Fine to Coarse
1L	14.5-16	19.7								Poorly Graded Sand (SP), Dark Brown, Fine to Coarse
1L	17-18.5	n/a								
1L	19.5-21	30.7								Sandy Lean Clay (CL), Light Gray mottled Yellow Brown, Silty
1L ST-18	22-24	30.7	118.9	91.0	0.57	97.60	63.0/34.6	43/21	5.84×10^{-6}	Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Stiff, Moist
1LL	2-3.5	11.7								Sandy Lean Clay with Gravel (CL), Yellow Brown mottled Brown, Silty
1LL	4.5-6	13.4								Fat Clay (CH), Yellow Brown mottled Light Gray
1LL	7-8.5	20.1								Fat Clay (CH), Yellow Brown mottled Light Gray
1LL	9.5-11	17.8								Poorly Graded Sand (SP), Yellow Brown, Fine to Medium
1LL	12-13.5	22.1								Fat Clay (CH), Gray mottled Light Gray
1LL ST-12	14.5-16.5	24.7	125.2	100.4	0.26	84.40	64.5/19.9	39/21	6.02×10^{-6}	Lean Clay with Sand (CL), Gray, Silty, Medium, Moist
1LL	17-18.5	26.2								Fat Clay (CH), Light Brown, Silty
1U	2-3.5	14.6								Lean Clay (CL), Brown mottled Light Gray/Reddish Brown, Silty, With Coal
1U	4.5-6	21.0								Lean Clay (CL), Brown mottled Light Brown/Light Gray, Silty, Trace Gravel
1U	7-8.5	36.5								Silt (ML), Black, Clayey, With Coal
1U	9.5-11	6.1								Coal, Black, With Silt
1U	12-13.5	32.2								Coal, Black
1U	14.5-16	59.2								Silt (ML), Black, Clayey, With Coal
1U	17-18.5	68.6								Silt (ML), Black, With Coal and Ash
1CCR	2-3.5	10.7								Cinders, Black
1CCR	4.5-6	11.3								Cinders, Black
1CCR	7-8.5	22.2								Cinders/Ash Black
1CCR	9.5-11	21.5								Cinders/Ash Black
1CCR	12-13.5	20.1								Cinders. Black
1CCR	14.5-16	53.5								Cinders, Black, With Clayey Silt
1CCR	17-18.5	22.2								Cinders, Black

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
2	2-3.5	18.5								Fat Clay (CH), Brown mottled Light Gray
2	4.5-6	22.0								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation
2	7-8.5	27.0								Fat Clay (CH), Dark Brown mottled Brown
2	9.5-11	24.9								Fat Clay (CH), Yellow Brown mottled Brown
2	12-13.5	28.4								Fat Clay (CH), Light Gray mottled yellow Brown
2	14.5-16	25.7								Fat Clay (CH), Yellow Brown mottled Light Gray, Trace Sand
2	17-18.5	27.2								Fat Clay (CH), Light Gray mottled Yellow Brown
2	19.5-21	27.2								Fat Clay (CH), Yellow Brown mottled Light Gray
2 ST	22-24	26.8	123.1	97.1	0.50	91.70	57.8/33.9	57/21	$6.87x10^{-8}$	Fat Clay (CH), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist
2	24.5-26	24.3								Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation
2	27-27.5	21.2								Sandy Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty
2	27.5-28.5	22.4								Sandy Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty
2L	2-3.5	21.8								Fat Clay (CH), Yellow Brown mottled Light Gray/Brown
2L	4.5-6	28.9								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation
2L ST 6	7-9'	25.5	126.5	100.8	0.33	87.70	74.3/13.4	27/21	$8.24x10^{-6}$	Silty Clay (CL-ML), Yellow Brown mottled Light Gray, Trace Sand, Medium, Moist
2L	9.5-11	22.5								Sandy Lean Clay (CL), Yellow Brown mottled Light Gray, Silty
2L	12-13.5	22.0								Sandy Lean Clay (CL), Yellow Brown mottled Brown, Silty
2L	14.5-16	23.6						20/16		Sandy Silty Clay (CL), Yellow Brown mottled Light Gray
2L	17-18.5	21.1								Sandy Lean Clay (CL), Light Brown mottled Yellow Brown/Brown, Silty
2L	19.5-21	21.4								Poorly Graded Sand (SP), Yellow Brown, Fine, With Clay Seams
2L	22-23.5	29.0								Lean Clay (CL), Light Gray, Silty
2U	2-3.5	8.1								Cinders, Dark Brown
2U	4.5-6	8.3								Cinders, Dark Brown
2U	7-8.5	20.2								Fat Clay (CH), Yellow Brown mottled Light Gray
2U	9.5-11	11.0								Cinders/Silt, Dark Brown
2U	12-13.5	65.7								Sandy Silt (ML), Dark Brown
2U	14.5-16	46.3								Sandy Silt (ML), Dark Brown
2U	17-18.5	24.6								Poorly Graded Sand (SP), Dark Brown, Fine to Coarse
2U	19.5-21	53.1								Coal, Dark Gray
2U	22-23.5	31.7								Poorly Graded Sand (SP), Dark Gray, Fine to Coarse
2U	24.5-26	27.4								Fat Clay (CH), Yellow Brown mottled Light Gray
2CCR	2-3.5	58.6								Lean Clay (CL), Light Gray mottled Yellow Brown/Brown, Silty, Trace Coal
2CCR	4.5-6	23.5								Coal, Black over Silt (ML), Light Gray, Clayey
2CCR	7-8.5	238.7								Ash, Light Gray
2CCR	9.5-11	107.7								Coal/Ash, Black
2CCR	12-13.5	86.4								Coal, Black over Silt (ML), Light Gray, Clayey
2CCR	14.5-16	54.5								Coal, Black, Clayey, With Organics
2CCR	17-18.5	86.8								Coal, Black

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
3	2-3.5	25.9								Fat Clay (CH), Brown mottled reddish Brown
3	4.5-6	20.6								Poorly Graded Sand (SP), Brown, Fine to Medium
3	7-8.5	22.2								Lean Clay (CL), Light Brown mottled Brown
3 ST 8	9.5-11.5	25.8	122.9	97.7	0.67	98.10	67.6/30.5	60/24	$8.50x10^{-9}$	Fat Clay (CH), Light Gray mottled Yellow Brown, Black Oxidation, Silty, Stiff, Moist
3	12-13.5	26.6								Fat Clay (CH), Brown mottled Light Gray/Reddish Brown
3	14.5-16	24.8								Fat Clay (CH), Brown, Reddish Oxidation
3	17-18.5	27.1								Fat Clay (CH), Light Gray mottled Yellow Brown/Brown
3 ST16	19.5-21.5	25.8	121.6	96.7	0.62	95.00	65.7/29.3	43/20	$4.27x10^{-7}$	Lean Clay (CL), Gray mottled Yellow Brown, Silty, Stiff, Moist
3	22-23.5	29.0								Fat Clay (CH), Light Gray mottled Yellow Brown, Silty
3	24.5-26	25.8								Lean Clay (CL), Light Brown mottled Yellow Brown, Black Oxidation, Silty
3	27-28.5	28.9								Fat Clay (CH), Light Brown mottled Light Gray
3U	2-3.5	16.0								Lean Clay (CL), Brown mottled Yellow Brown/Light Brown, Silty, Trace Sand
3U	4.5-6	27.7								Ash, Yellow Brown
3U	7-8.5	20.7								Lean Clay (CL), Brown mottled Light gray, With Coal
3U ST 8	9.5-11.5	21.3	122.6	101.0	0.55	81.10	65.5/15.6	38/22	$1.52x10^{-8}$	Lean Clay with Sand (CL), Yellow Brown mottled Light Gray/Gray, Silty, Stiff, Moist
3U	12-13.5	37.2								Coal, Black
3U	14.5-16	32.0								Silt (ML), Brown, Clayey
3U	17-18.5	62.6								Silt (ML), Brown, Clayey
3CCR	2-3.5	22.7								Lean Clay (CL), Brown, Silty, Trace Coal
3CCR	4.5-6	91.2								Ash, Light Gray, With Clay Seams
3CCR	7-8.5	51.6								Ash, Light Gray, With Clay Seams
3CCR	9.5-11	113.5								Coal, Black
3CCR	12-13.5	86.9								Coal, Black, With Organics/Clay Seams
3CCR	14.5-16	61.1								Coal, Black, With Clay Seams
3CCR	17-18.5	65.8								Coal, Black, With Clay Seams
4	3-3.5	16.5								Lean Clay (CL), Light Gray mottled Yellow Brown
4	5.5-6	18.2								Lean Clay (CL), Yellow Brown mottled Brown
4	7.5-8	23.6								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation
4	10.5-11	26.9								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation
4	12.5-13	26.6								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation
4	14.5-16	26.1								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation, Trace Sand
4	17.5-18	27.4								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation
4 ST	19.5-21.5	28.3	124.0	96.7	0.95	97.20	64.8/32.4	49/22	$6.53x10^{-8}$	Lean Clay (CL/CH), Yellow Brown mottled Light Gray, Silty, Stiff, Moist
4	22-22.5	30.1								Fat Clay (CH), Yellow Brown/Light Brown mottled Brown, Silty
4	25-25.5	33.4								Fat Clay (CH), Yellow Brown mottled Light Gray, Silty
4	27-27.5	22.7								Sandy Lean Clay (CL), Light Gray mottled Yellow Brown, Silty
4	30-30.5	23.5								Sandy Lean Clay (CL), Yellow Brown mottled Light Gray, Silty

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
4L	2-3.5	31.7								Lean Clay (CL), Dark Brown, Silty over Fat Clay (CH), Yellow Brown mottled Light Gray, Trace Gravel
4L	4.5-6	27.7								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation
4L	7-8.5	27.3								Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation
4L	9.5-11	29.8								Fat Clay (CH), Yellow Brown mottled Light Gray, Trace Sand
4L ST10	12-14'	27.4	124.2	97.5	0.42	87.90	71.7/16.2	32/20	$9.53x10^{-7}$	Lean Clay (CL), Brown mottled Yellow Brown/Light Gray, Silty, Trace Sand, Medium, Moist
4L	14.5-16	25.7								Lean Clay with Sand (CL), Yellow Brown mottled Light gray
4L	17-18.5	27.4						31/23		Lean Clay (CL/ML), Light Gray, Silty
4U	2-3.5	6.5								Cinders, Black
4U	4.5-6	30.8								Fat Clay (CH), Yellow Brown mottled Gray, Silty
4U	7-8.5	23.0								Fat Clay (CH), Yellow Brown mottled Gray, Silty, With Cinders
4U	9.5-11	36.4								Silt (ML), Black, With Cinders
4U	12-13.5	24.5								Cinders, Black
4U	14.5-16	38.0								Cinders, Black, Silty
4U	17-18.5	24.8								Cinders, Black
4U	19.5-21	18.0								Coal, Black
4U	22-23.5	59.2								Ash, Light Gray
4U	24.5-26	28.0								Fat Clay (CH), Yellow Brown mottled Light Gray
4U ST22	27-29	26.9	125.3	98.7	0.53	97.10	69.6/27.5	62/24	$9.17x10^{-9}$	Fat Clay (CH), Yellow Brown mottled Light Gray, Silty, Stiff, Moist
4CCR	2-3.5	21.0								Lean Clay (CL), Yellow Brown, With Brick
4CCR	4.5-6	23.0								Silt (ML), Brown, Clayey, With Clay Seams
4CCR	7-8.5	56.0								Ash, Light Gray
4CCR	9.5-11	91.3								Cinder/Ash, Black
4CCR	12-13.5	83.6								Cinder/Ash, Black
4CCR	14.5-16	59.3								Cinders/Silt, Black
4CCR	17-18.5	33.0								Cinders, Black
4CCR	19.5-21	59.5								Ash/Cinders, Black
5	2-3.5	14.8								Fat Clay (CH), Yellow Brown mottled Brown, Trace Coal
5	4.5-6	16.7								Fat Clay (CH), Yellow Brown mottled Brown, Trace Coal
5	7-8.5	13.6								Lean Clay with Sand (CL), Yellow Brown mottled Light Gray,
5	9.5-11	22.1								Fat Clay (CH), Yellow Brown mottled Light Gray, Silty
5	12-13.5	21.0								Fat Clay (CH), Yellow Brown mottled Light Gray
5	14.5-16	22.8								Fat Clay (CH), Brown mottled Yellow Brown
5	17-18.5	21.2								Lean Clay (CL), Brown mottled Light Brown
5	19.5-21	21.8								Fat Clay (CH), Brown, Silty
5	22-23.5	19.4								Sandy Lean Clay (CL), Light Gray mottled Gray/Yellow Brown
5 ST	24.5-26.5	24.3	124.0	99.8	0.25	90.20	67.3/22.9	43/22	$2.67x10^{-7}$	Lean Clay (CL), Light Gray mottled Gray/Yellow Brown, Silty, Trace Sand, Medium, Moist
5	27-28.5	25.6								Lean Clay (CL), Yellow Brown mottled Light Gray
5	29.5-31	24.5								Lean Clay (CL), Yellow Brown mottled Light Gray, Silty
5	32-33.5	24.7								Lean Clay (CL), Yellow Brown mottled Light Gray, Silty
5	34.5-36	24.6								Lean Clay (CL), Yellow Brown mottled Light Gray, Silty
5	37-38.5	23.6								Sandy Lean Clay (CL), Gray, Silty

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
5L	3-3.5	18.9								Fat Clay (CH), Brown mottled Light Brown
5L	5-6'	23.1								Fat Clay (CH), Brown mottled Yellow Brown
5L	8-8.5	22.5								Fat Clay (CH), Brown mottled Light Gray
5L ST	9.5-11	28.8	119.9	93.1	0.51	94.60	73.2/21.4	46/24	$5.18x10^{-7}$	Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist
5L	13-13.5	30.1								Fat Clay (CH), Brown mottled Light Gray, Silty
5L	15.5-16	30.9								Fat Clay (CH), Brown mottled Light Gray, Silty
5L	17-17.5	28.3						39/22		Lean Clay (CL), Light Gray mottled Yellow Brown, Silty
5CCR	3-3.5	24.6								Silt with Sand (ML), Light Gray
5CCR	5.5-6	24.2								Sandy Lean Clay (CL), Gray, Silty
5CCR	7-7.5	27.8								Sandy Silt (ML), Gray
5CCR	9.5-10	13.5								Silty Sand (SM), Dark Brown, Trace Gravel
5CCR	15-15.5	9.8								Coal, Black
5CCR	17.5-18	13.9								Coal, Black
6	0-2	7.3								Clayey Sand with Gravel (SC), Brown
6	2-4'	21.3								Lean Clay (CL), Brown mottled Light Brown, Trace Sand, Fat Seams
6	5-7.5	24.0								Lean Clay (CL), Brown mottled Gray, Trace Sand, Fat Seams
6	7.5-9	20.5								Lean Clay (CL), Gray mottled Light Brown, Trace Sand/Coal
6	10-11.5	20.5								Fat Clay (CH/CL), Light Gray mottled Gray/Light Brown,
6	12.5-14	20.9								Lean Clay (CL), Brown, Silty
6	15-16.5	19.9								Lean Clay (CL), Light Gray mottled Light Brown, Silty
6 ST	17-19	21.9	128.6	105.5	0.95	90.20	61.9/28.3	34/19	$4.25x10^{-8}$	Lean Clay (CL), Gray/Greenish Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist
6	19-21	n/a								Lean Clay (CL), Brown, Silty, With Organics
6	21-23	22.0								Lean Clay (CL), Brown/Gray, Silty
6	23-25	20.6								Lean Clay with Sand (CL), Gray mottled Brown, With Coal
6	25-27	31.3								Lean Clay (CL), Gray, Silty
6	27-29	27.1								Sandy Silt (ML), Gray, Clayey
6	29-31	29.9								Silt (ML), Gray, Clayey
6	31-33	n/a								
6	33-35	28.2								Lean Clay (CL), Gray mottled Yellow Brown, Silty
6	35-37	27.1								Lean Clay (CL), Brown mottled Light Brown, Trace Sand, Fat Seams
6	37-39	21.0								Sandy Silt (ML), Light Gray mottled Yellow Brown, Clayey
6L	2.5-4	17.8								Lean Clay (CL), Brown mottled Yellow Brown, Silty
6L	5-6.5	21.5								Lean Clay (CL), Brown mottled Reddish Brown, Silty
6L ST1	7.5-9	26.6	121.9	96.3	0.44	91.60	74.1/17.5	41/23	$5.47x10^{-7}$	Lean Clay (CL), Light Gray mottled Reddish Brown, Silty, Trace Sand, Medium, Moist
6L	10-11.5	27.5								Lean Clay with Sand (CL), Brown, Silty
6L	12.5-14	23.5								Silty Clayey Sand (SC-SM), Light Gray mottled Yellow Brown
6L	15-16.5	24.9								Clayey Sand (SC), Yellow Brown mottled Light Gray
6L	17.5-19	35.9						31/19		Lean Clay (CL), Gray, Trace Organics
6L	20-21.5	21.1								Silty Clayey Sand (SC-SM), Gray
6L	22.5-24	24.0								Silty Clayey Sand (SC-SM), Light Gray mottled Light Brown

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
6CCR	2-3.5	15.5								Ash/Cinders, Black, Clayey
6CCR	4.5-6	13.3								Ash/Cinders/Coal, Black, Clayey
6CCR	7-8.5	29.4								Ash, Gray
6CCR	9.5-11	39.1								Silt (ML), Brown mottled Light Gray
6CCR	12-13.5	44.4								Silt (ML), Light gray
6CCR	14.5-16	51.6								Silt (ML), Light Gray mottled Brown
6CCR	17-18.5	87.7								Silt (ML), Dark Brown mottled Light Brown
6CCR	19.5-21	106.5								Silt (ML), Dark Brown
6CCR	22-23.5	97.4								Silt (ML), Dark Brown mottled Brown
7	2.5-3	15.1								Sandy Lean Clay (CL), Yellow Brown mottled Light Gray
7	4.5-5	21.8								Lean Clay (CL), Light Brown/Brown mottled Yellow Brown, With Fat Clay Seams
7	7.5-8	21.1								Fat Clay (CH), Light Brown mottled Light Gray, Silty, With Lean Clay Seams
7	10-10.5	21.3								Lean Clay (CL), Light Brown mottled Brown/Light Gray, Silty
7	12-12.5	24.7								Lean Clay (CL), Brown mottled Light Brown, Silty
7	15-15.5	21.1								Lean Clay (CL), Brown mottled Yellow Brown/Light Gray, With Organics
7	17.5-18	19.5								Sandy Lean Clay (CL), Brown mottled Light Gray
7 ST	19.5-21.5	25.8	120.2	95.5	0.55	97.70	62.2/35.5	63/20	$1.71x10^{-8}$	Fat Clay (CH), Brown/ Yellow Brown mottled Light Gray, Silty, Stiff, Moist
7	23-23.5	24.4								Fat Clay (CH), Yellow Brown mottled Light Gray, Black Oxidation
7	25-25.5	26.1								Fat Clay (CH/CL), Light Gray mottled Yellow Brown
7	27.5-28	28.6								Silty Clayey Sand (SC-SM), Brown mottled Yellow Brown
7	30-30.5	30.7								Sandy Silt (ML), Light Brown, With Fat Clay Seams
7	32.5-33	38.1								Fat Clay (CH), Light Gray, With Silty Sand Seams
7	35-36.5	32.4								Silt (ML), Gray, Clayey
7	37-37.5	39.2								Silt (ML), Brown, Clayey
7CCR	2-3.5	26.5								Silt (ML), Brown, Clayey
7CCR	4.5-6	46.8								Silt (ML), Brown, Clayey, With Cinders
7CCR	7-8.5	54.9								Silt (ML), Brown, Clayey
7CCR	9.5-11	55.5								Sandy Silt (ML), Light Gray
7CCR	12-13.5	42.7								Silt (ML), Light Gray
7CCR	14.5-16	49.5								Silt (ML), Light Gray mottled Dark Brown
7CCR	17-18.5	45.8								Silty Sand (SM), Light Gray
7L	2-3.5	16.8								Fat Clay (CH), Yellow Brown mottled Light Gray
7L	4.5-6	14.6								Fat Clay (CH), Light Gray mottled Brown over Sandy Lean Clay (CL), Yellow Brown mottled Light Brown
7L	7-8.5	24.1								Sandy Lean Clay (CL), Yellow Brown mottled Brown over Poorly Graded Sand (SP), Yellow Brown, Fine, Silty
7L	9.5-11	27.3								Fat Clay (CH), Light Brown mottled Brown, Silty, Trace Sand
7L	12-13.5	37.7								Silt (ML), Brown
7L	15-16.5	29.2						33/25		Silt (ML), Brown, Trace Sand
7L	17-18.5	26.0								Fat Clay (CH/CL), Brown, Silty, Trace Sand

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
8L	3-3.5	15.5								Fat Clay (CH), Yellow Brown mottled Light Brown
8L	5.5-6	14.1								Lean Clay (CL), Yellow Brown mottled Brown
8L	7.5-8	27.2								Lean Clay (CL), Yellow Brown mottled Light Brown/Light Gray, Silty
8L	10.5-11	27.8								Lean Clay (CL), Yellow Brown mottled Light Brown/Light Gray, Silty
8L ST5	12-14'	23.8	126.4	102.1	0.33	69.80	56.6/13.2	26/19	$3.41x10^{-6}$	Sandy Silty Clay (CL-ML), Yellow Brown mottled Reddish Brown/Light Gray, Medium, Moist
8L	15.5-16	29.8								Sandy Lean Clay (CL), Light Gray, Silty
8L	17.5-18	33.5								Sandy Lean Clay (CL), Light Gray, Silty, With Organics
8L	20.5-21	32.3						39/26		Silt (ML), Gray, With Lean Clay (CL) Seams
8L	22.5-23	26.7						31/21		Lean Clay (CL), Gray, Silty
8U	2-3.5	24.8								Lean Clay (CL), Brown mottled Yellow Brown, Silty
8U	4.5-6	22.4								Lean Clay (CL), Brown mottled Yellow Brown, Silty
8U	7-8.5	23.8								Lean Clay (CL), Brown mottled Yellow Brown/Light Gray, Silty
8U ST8	9.5-11.5	24.0	125.7	101.4	0.55	90.60	68.1/22.5	48/21	$2.25x10^{-8}$	Lean Clay (CL), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist
8U	12-13.5	22.5								Fat Clay (CH), Light Gray mottled Yellow Brown
8U	14.5-16	23.9								Lean Clay (CL), Brown mottled Yellow Brown/Light Gray
8U	17-18.5	21.9								Lean Clay (CL), Brown mottled Yellow Brown Light Gray, Silty
8U ST16	19.5-21.5	25.7	127.1	101.1	0.80	95.50	79.7/15.8	45/19	$9.40x10^{-9}$	Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Stiff, Moist
8U	22-23.5	27.8								Lean Clay (CL), Brown, Silty
8U	24.5-26	31.0								Lean Clay (CL), Brown mottled Reddish Brown, Silty
8U	27-28.5	31.7								Lean Clay (CL), Brown mottled Reddish Brown, Silty
8U	29.5-31	29.5								Lean Clay (CL), Brown mottled Reddish Brown, Silty
8U	32-33.5	29.5								Lean Clay (CL), Brown mottled Reddish Brown, Silty
9L	2-2.5	23.6								Sandy Lean Clay (CL), Light Brown mottled Light Gray
9L	4.5-5	24.6								Lean Clay with Sand (CL), Light Brown mottled Light Gray/Yellow Brown, Silty
9L ST	7-9'	28.0	126.5	98.8	0.15	79.90	65.0/14.9	26/17	$2.55x10^{-6}$	Lean Clay with Sand (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Soft, Moist
9L	10.5-11	55.9								Silty Clayey Sand (SC-SM), Gray, With Organics
9L	13-13.5	27.2								Sandy Silt (ML), Gray, Clayey
9L	15.5-16	28.1						33/22		Lean Clay (CL), Gray, Silty
9L	18-18.5	28.6						46/21		Lean Clay (CL), Gray, Silty

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
9U	2-3.5	19.8								Fat Clay (CH), Yellow Brown mottled Light Gray/Brown
9U	4.5-5	20.3								Fat Clay (CH), Brown mottled Light GrayYellow Brown
9U	7-8.5	19.9								Fat Clay (CH), Yellow Brown mottled Light Gray/Gray
9U	9.5-11	n/a								
9U	12-13.5	25.5								Fat Clay (CH), Yellow Brown mottled Light Gray/Gray
9U	14.5-16	22.2								Fat Clay (CH), Gray mottled Yellow Brown
9U	17-18.5	23.6								Lean Clay with Sand (CL), Brown mottled Light Brown/Light Gray
9U ST 16	19.5-21.5	22.4	125.2	102.3	0.95	96.00	78.6/17.4	46/22	$2.63x10^{-8}$	Lean Clay (CL), Gray mottled Light Gray, Silty, Stiff, Moist
9U	22-23.5	21.3								Lean Clay (CL), Brown mottled Light Gray/Yellow Brown
9U	24.5-26	25.2								Fat Clay (CH), Gray mottled Yellow Brown, Trace Coal
9U	26-28	23.3								Fat Clay (CH), Yellow Brown mottled Light Brown/Light Gray
9U	28-30	28.7								Fat Clay (CH), Yellow Brown mottled Light Gray
9U	30-32	29.4								Fat Clay (CH), Yellow Brown mottled Light Gray/Gray
9U	32-34	29.5								Fat Clay (CH/CL), Gray mottled Light Gray, Silty
9U	34-36	29.7								Sandy Lean Clay (CL), Gray mottled Yellow Brown, Silty
9U	36-38	29.5								Sandy Lean Clay (CL), Gray mottled Light Gray
9U	38-40	24.6								Sandy Lean Clay (CL), Gray mottled Yellow Brown, Silty
9CCR	2-3.5	15.0								Sandy Lean Clay (CL), Gray mottled Light Brown
9CCR	4.5-5	42.3								Silt (ML), Gray mottled Light Gray
9CCR	7-8.5	64.2								Silt (ML), Gray mottled Light Gray
9CCR ST8	9.5-11.5	23.2	126.9	103.0	0.72	94.50	66.6/27.9	46/21	$9.55x10^{-9}$	Lean Clay (CL), Yellow Brown mottled Light Gray/Gray, Silty, Trace Sand, Stiff, Moist
9CCR	12-13.5	46.9								Silt (ML), Gray mottled Light Gray
9CCR	14.5-16	41.4								Silt (ML), Gray mottled Light Gray
9CCR	17-18.5	41.0								Silt (ML), Gray mottled Light Gray
10CCR	2-3.5	25.9								Ash/Cinders, Gray
10CCR	4.5-5	13.8								Ash/Cinders, Gray
10CCR	7-8.5	28.7								Ash, Brown/Light Gray
10CCR	9.5-11	38.2								Ash, Brown/Light Gray
10CCR	12-13.5	58.1								Ash, Brown/Light Brown
10CCR	14.5-16	27.2								Ash/Cinders, Dark Gray mottled Light Brown
10CCR	17-18.5	52.9								Ash, Brown/Gray
10CCR	19.5-21	59.5								Ash/Cinders, Gray mottled Brown
10CCR	22-23.5	58.0								Ash/Cinders, Gray mottled Brown

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
11U	2-3.5	18.0								Sandy Lean Clay (CL), Dark Brown
11U	4.5-5	20.4								Lean Clay with Sand (CL), Yellow Brown mottled Brown
11U	7-8.5	23.5								Fat Clay (CH), Light Gray mottled Yellow Brown, Trace Sand
11U ST8	9.5-11.5	21.8	129.9	106.7	0.80	92.50	52.4/40.1	36/20	$1.38x10^{-8}$	Lean Clay (CL), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist
11U	12-13.5	23.2								Fat Clay (CH), Yellow Brown mottled Light Gray/Gray, Trace Sand
11U	14.5-16	20.7								Lean Clay (CL), Brown mottled Yellow Brown
11U	17-18.5	28.6								Lean Clay (CL), Brown mottled Light Brown
11U ST16	19.5-21.5	25.7	123.1	97.9	0.50	95.90	66.8/29.1	48/21	$3.04x10^{-7}$	Lean Clay (CL), Brown mottled Yellow Brown, Silty, Stiff, Moist
11U	22-23.5	25.8								Fat Clay (CH), Yellow Brown mottled Brown
11U	24.5-26	28.3						34/21		Lean Clay (CL), Yellow Brown mottled Brown, Silty
11U	27-28.5	25.9								Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty
12L	3.5-4	14.5								Fat Clay (CH), Brown mottled Light Brown
12L	5.5-6	17.4								Fat Clay (CH), Brown mottled Light Brown/Yellow Brown
12L	8.5-9	23.2								Fat Clay (CH/CL), Yellow Brown mottled Light Gray
12L	11.5-12	24.5								Fat Clay (CH), Brown mottled Light Gray/Yellow Brown
12L	14-14.5	24.5								Lean Clay (CL), Light Gray mottled Yellow Brown/Gray
12L ST	14.5-16	23.2	127.7	103.6	0.55	87.10	71.6/15.5	30/19	$9.69x10^{-7}$	Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist
12L	19-19.5	22.9								Lean Clay (CL), Light Gray mottled Yellow Brown
12L	20-20.5	10.0								Sandy Lean Clay (CL), Light Gray mottled Yellow Brown
12L	23-23.5	13.0								Lean Clay (CL), Light Gray mottled Yellow Brown, Silty
12U	2-3.5	19.0								Lean Clay (CL), Brown, Silty
12U	4.5-5	17.1								Lean Clay (CL), Brown mottled Light Brown/Reddish Brown, Black Oxidation, Silty
12U	7-8.5	20.0								Lean Clay (CL), Light Brown mottled Yellow Brown, Silty
12U ST8	9.5-11.5	21.8	129.5	106.2	0.75	95.20	69.6/25.6	45/22	$3.13x10^{-9}$	Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Stiff, Moist
12U	12-13.5	17.3								Lean Clay (CL), Brown mottled Yellow Brown/Light Gray, Silty
12U	14.5-16	15.2								Lean Clay (CL), Brown, With Lime Fines, Trace Gravel
12U	17-18.5	18.9								Lean Clay (CL), Brown, With Ash/Coal
12U ST16	19.5-21.5	21.6	123.3	101.4	0.95	96.10	73.0/23.1	42/22	$1.03x10^{-8}$	Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Stiff, Moist
12U	22-23.5	25.6								Lean Clay (CL), Brown mottled Reddish Brown, Silty
12U	24.5-26	25.8								Lean Clay (CL), Light Brown mottled Yellow Brown, Reddish Oxidation, Silty
12U	27-28.5	25.2								Lean Clay (CL), Light Gray mottled Yellow Brown/Light Brown, Reddish Oxidation, Silty
13L	2-3.5	15.9								Lean Clay (CL), Brown
13L	4.5-5	17.4								Lean Clay (CL), Brown
13L	7-8.5	19.3								Lean Clay (CL), Brown mottled Yellow Brown
13L	9.5-11	19.6								Lean Clay (CL), Brown mottled Yellow Brown, Silty
13L	12-13.5	23.5								Lean Clay (CL), Brown mottled Reddish Brown
13L	14.5-16	27.4								Fat Clay (CH), Light Gray mottled Yellow Brown/Brown, Black Oxidation

GEOTECHNICS
Soil & Material Testing

Lab Data Summary

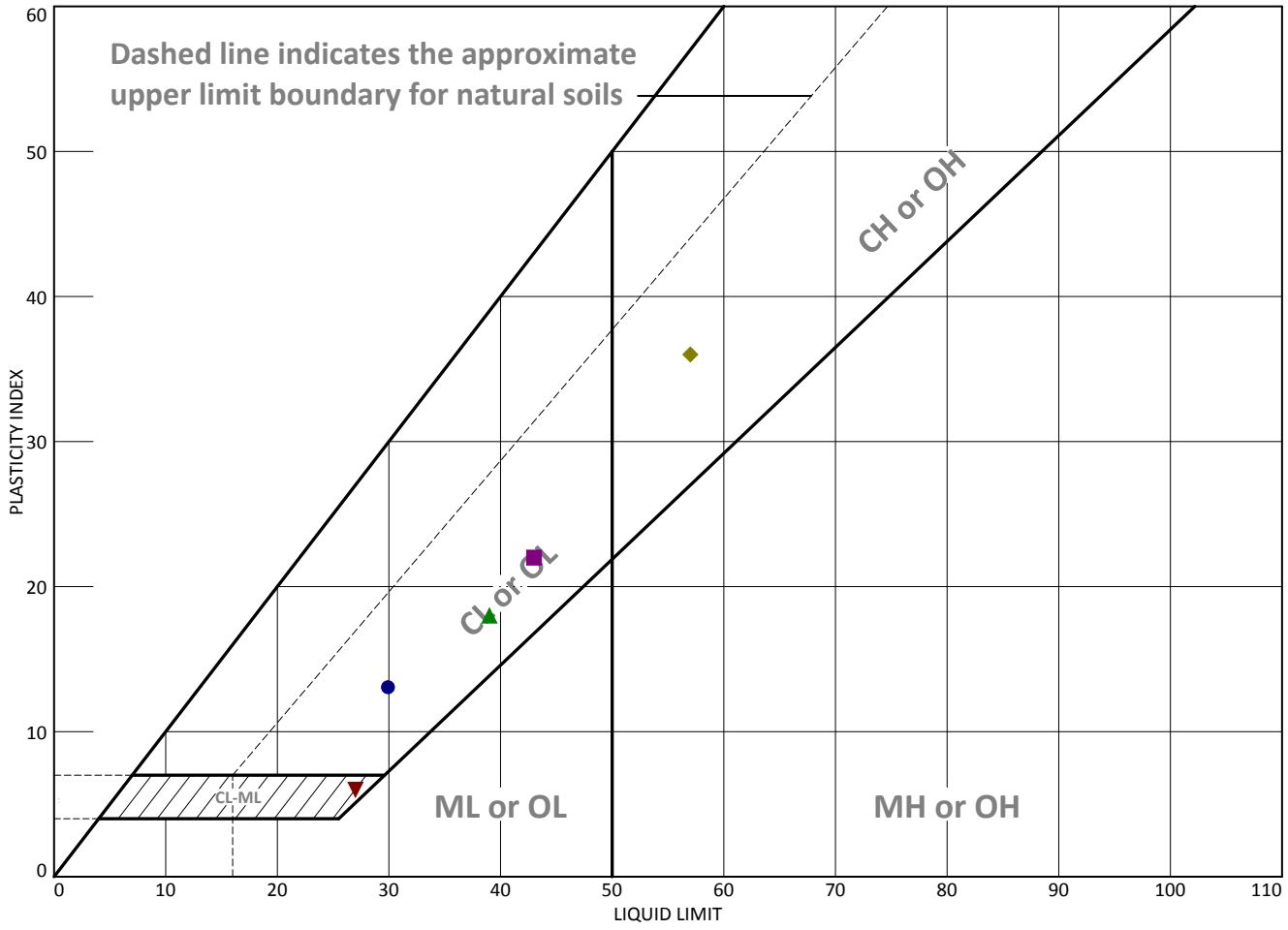
* Shelby Tube Samples Colored in Yellow
* Additional Atterberg Testing Requested Colored in Red

Job #:
23-1071

Andrews Engineering
Springfield, IL Ash Ponds

Sample No.	Depth (ft.)	Nat. Moist. (%)	Wet Density (PCF)	Dry Density (PCF)	Torvane (TSF)	Grad. -200 (%)	Silt/Clay (%)	Atterberg % (LL/PL)	Hydraulic Cond. (cm/sec)	USCS Visual Description
13BN	2-3.5	18.6								Lean Clay (CL), Light Brown mottled Reddish Brown/Light Gray, Silty
13BN	4.5-5	21.1								Lean Clay (CL), Light Brown mottled Reddish Brown
13BN	7-8.5	15.5								Lean Clay (CL), Light Brown mottled Reddish Brown, Silty
13BN ST7	8.5-10.5	18.4	132.2	111.6	0.95	90.90	74.9/16.0	34/20	$8.84x10^{-9}$	Lean Clay (CL), Yellow Brown, Silty, Trace Sand, Stiff, Moist
13BS	2-3.5	16.0								Lean Clay (CL), Brown mottled Reddish Brown, Silty
13BS	4.5-5	15.5								Lean Clay (CL), Brown mottled Reddish Brown, Silty
13BS	7-8.5	19.1								Lean Clay (CL), Brown mottled Light Brown/Light Gray
13BS ST7	8.5-10.5	21.1	127.5	105.3	0.95	94.90	78.6/16.3	52/25	$2.32x10^{-8}$	Fat Clay (CH), Gray mottled Light Gray, Silty, Trace Sand, Stiff, Moist
13LF	2-3.5	12.4								Lean Clay (CL), Brown mottled Yellow Brown, Silty
13LF	4.5-5	22.3								Lean Clay (CL), Light Brown mottled Yellow Brown/Light Gray, With Fat Seams
13LF	7-8.5	21.0								Lean Clay (CL), Light Brown mottled Yellow Brown/Light Gray, With Fat Seams, Over Light Gray Ash
13LF	9.5-11	21.4								Ash, Light Gray
13LF	12-13.5	21.1								Ash, Light Gray
13LF	14.5-16	19.1								Ash, Light Gray
13LF	17-18.5	20.9								Lean Clay (CL), Light Brown mottled Reddish Brown/Light Gray, Over Light Gray Ash
13LF	19.5-21	21.6								Ash, Yellow Brown mottled Light Gray
13LF	22-23.5	24.8								Ash, Yellow Brown
13LF	24.5-26	28.3								Ash, Yellow Brown

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Lean Clay (CL), Gray, Silty, Trace Sand, Medium, Moist	30	17	13	98.2	85.7	CL
■	Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Stiff, Moist	43	21	22	99.8	97.6	CL
▲	Lean Clay with Sand (CL), Gray, Silty, Medium, Moist	39	21	18	99.6	84.4	CL
◆	Fat Clay (CH), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist	57	21	36	98.1	91.7	CH
▼	Silty Clay (CL-ML), Yellow Brown mottled Light Gray, Trace Sand, Medium, Moist	27	21	6	98.3	87.7	CL-ML

Project No. 23-1071 **Client:** Andrews Engineering

Project: Springfield, IL Ash Ponds

●	**Location:** Boring 1	**Depth:** 24½-26½ ft.	**Sample Number:**
■	**Location:** Boring 1L	**Depth:** 22-24 ft.	**Sample Number:** 18
▲	**Location:** Boring 1 LL	**Depth:** 14½-16½ ft.	**Sample Number:** 12
◆	**Location:** Boring 2	**Depth:** 22-24 ft.	**Sample Number:** 8
▼	**Location:** Boring 2L	**Depth:** 7-9 ft.	**Sample Number:** 6

Remarks:

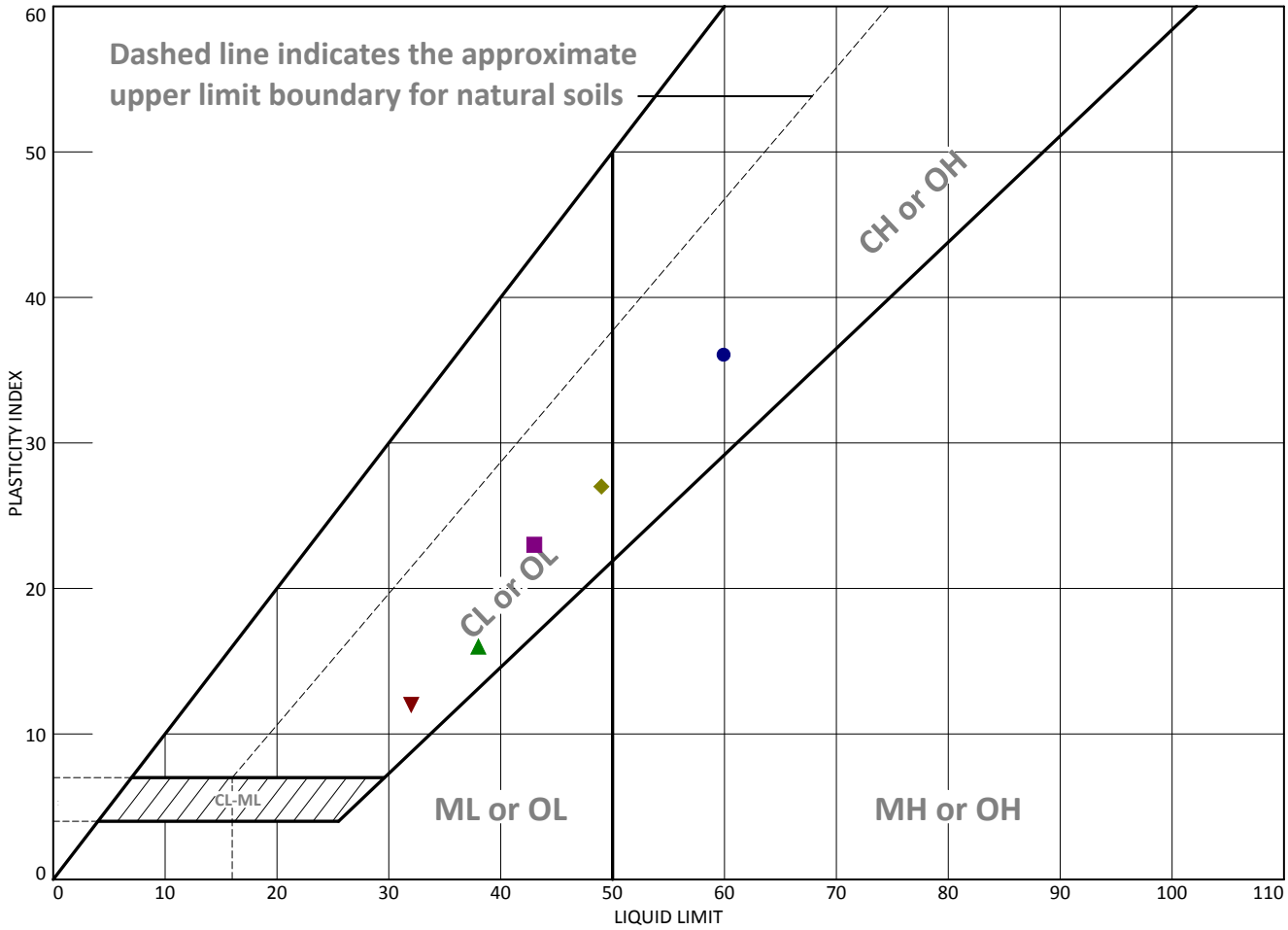
- ● Natural Moisture = 27.9%
- ■ Natural Moisture = 30.7%
- ▲ Natural Moisture = 24.7%
- ◆ Natural Moisture = 26.8%
- ▼ Natural Moisture = 25.5%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure A-1

Tested By: ○ DAW □ MAS △ DAW ◇ BRH ▽ DAW

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Fat Clay (CH), Light Gray mottled Yellow Brown, Black Oxidation, Silty, Stiff, Moist	60	24	36	99.3	98.1	CH
■	Lean Clay (CL), Gray mottled Yellow Brown, Silty, Stiff, Moist	43	20	23	98.5	95.0	CL
▲	Lean Clay with Sand (CL), Yellow Brown mottled Light Gray/Gray, Silty, Stiff, Moist	38	22	16	90.3	81.1	CL
◆	Lean Clay (CL/CH), Yellow Brown mottled Light Gray, Silty, Stiff, Moist	49	22	27	99.5	97.2	CL
▼	Lean Clay (CL), Brown mottled Yellow Brown/Light Gray, Silty, Trace Sand, Medium, Moist	32	20	12	97.4	87.9	CL

Project No. 23-1071 **Client:** Andrews Engineering

Project: Springfield, IL Ash Ponds

●	**Location:** Boring 3 ST8	**Depth:** 9½-11½ ft.	**Sample Number:** 8
■	**Location:** Boring 3 ST16	**Depth:** 19½-21½ ft.	**Sample Number:** 16
▲	**Location:** Boring 3U ST8	**Depth:** 9½-11 ft.	**Sample Number:** 8
◆	**Location:** Boring 4	**Depth:** 19½-21½ ft.	**Sample Number:**
▼	**Location:** Boring 4L	**Depth:** 12-14 ft.	**Sample Number:** 10

Remarks:

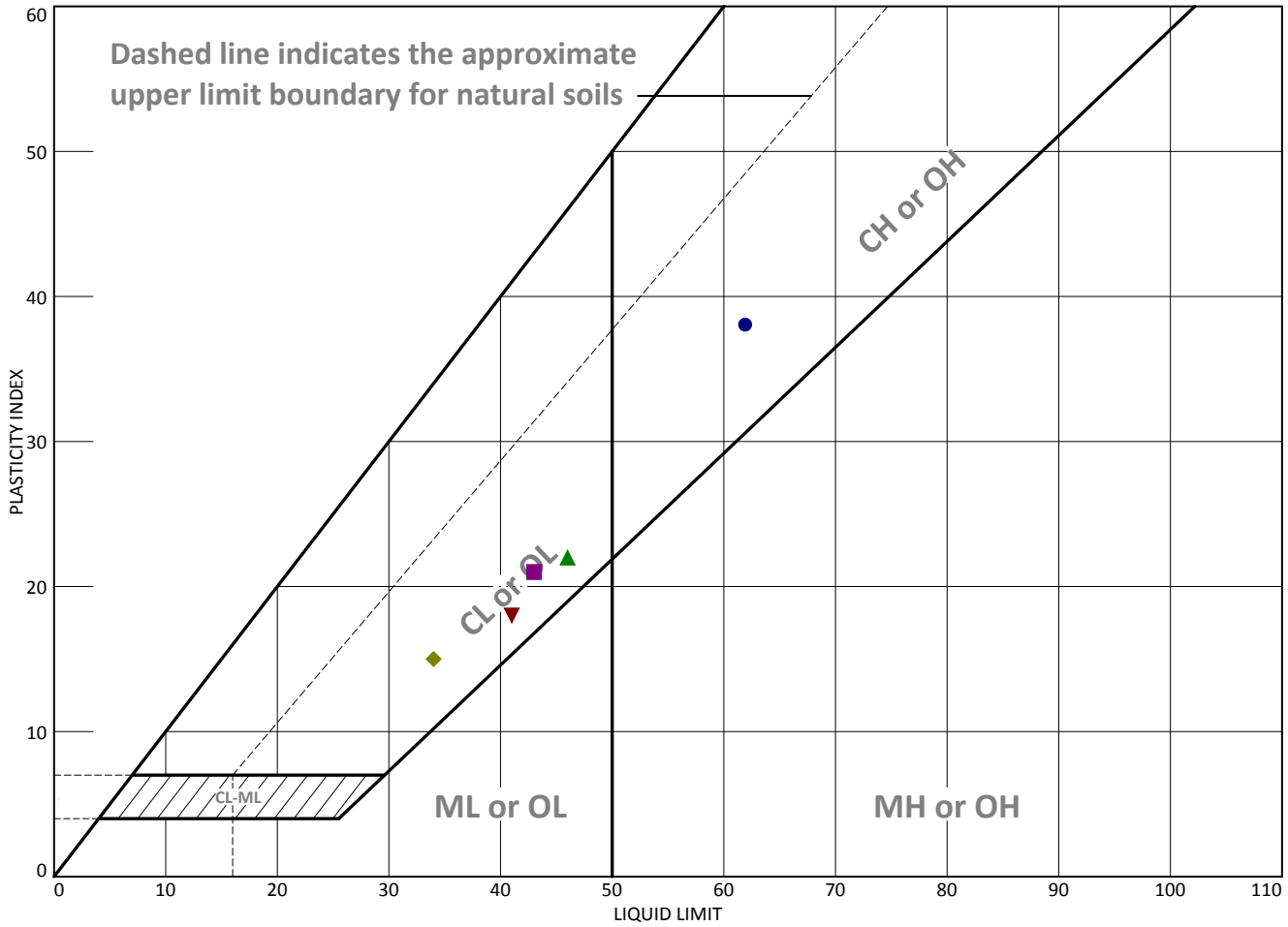
- ● Natural Moisture = 25.8%
- ■ Natural Moisture = 25.8%
- ▲ Natural Moisture = 21.3%
- ◆ Natural Moisture = 28.3%
- ▼ Natural Moisture = 27.4%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure A-2

Tested By: ○ DAW □ BRH △ DAW ◇ DAW ▽ MAS

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Fat Clay (CH), Yellow Brown mottled Light Gray, Silty, Stiff, Moist	62	24	38	99.4	97.1	CH
■	Lean Clay (CL), Light Gray mottled Gray/Yellow Brown, Silty, Trace Sand, Medium, Moist	43	22	21	98.7	90.2	CL
▲	Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist	46	24	22	98.3	94.6	CL
◆	Lean Clay (CL), Gray/Greenish Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist	34	19	15	99.0	90.2	CL
▼	Lean Clay (CL), Light Gray mottled Reddish Brown, Silty, Trace Sand, Medium, Moist	41	23	18	99.6	91.6	CL

Project No. 23-1071 **Client:** Andrews Engineering

Project: Springfield, IL Ash Ponds

●	**Location:** Boring 4U	**Depth:** 27-29 ft.	**Sample Number:** 22
■	**Location:** Boring 5	**Depth:** 24½-26½ ft.	**Sample Number:** 10
▲	**Location:** Boring 5L	**Depth:** 9½-11 ft.	**Sample Number:**
◆	**Location:** Boring 6	**Depth:** 17-19 ft.	**Sample Number:** 8
▼	**Location:** Boring 6L	**Depth:** 7½-9 ft.	**Sample Number:** ST1

Remarks:

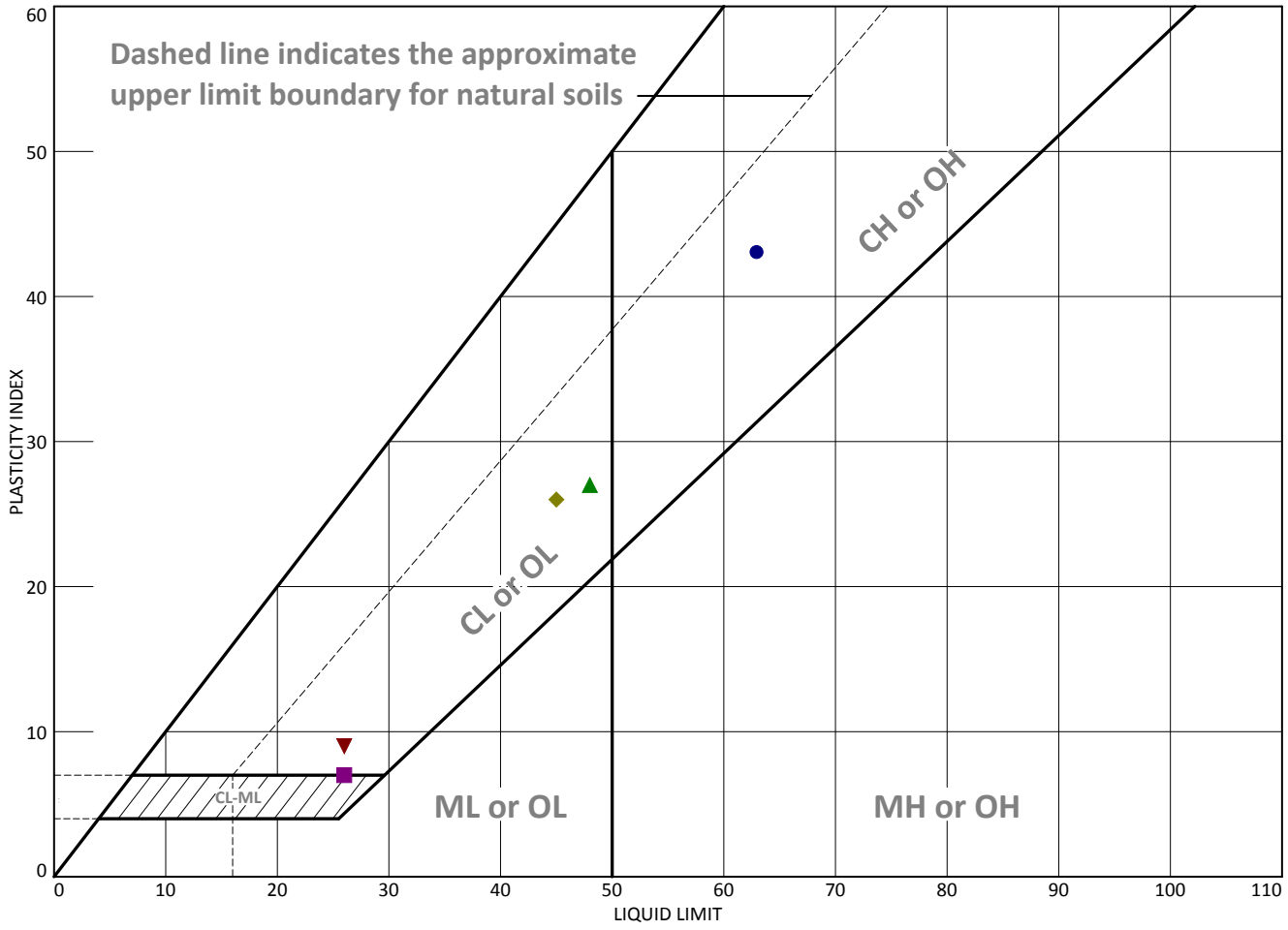
- ● Natural Moisture = 26.9%
- ■ Natural Moisture = 24.3%
- ▲ Natural Moisture = 28.8%
- ◆ Natural Moisture = 21.9%
- ▼ Natural Moisture = 26.6%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure A-3

Tested By: ○ MAS □ DAW △ DAW ◇ DAW ▽ BRH

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Fat Clay (CH), Brown/Yellow Brown mottled Light Gray, Silty, Stiff, Moist	63	20	43	98.8	97.7	CH
■	Sandy Silty Clay (CL-ML), Yellow Brown mottled Reddish Brown/Light Gray, Medium, Moist	26	19	7	99.8	69.8	CL-ML
▲	Lean Clay (CL), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist	48	21	27	96.6	90.6	CL
◆	Lean Clay (CL), Light Gray Mottled Yellow Brown, Silty, Stiff, Moist	45	19	26	99.3	95.5	CL
▼	Lean Clay with Sand (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Soft, Moist	26	17	9	98.4	79.9	CL

Project No. 23-1071 **Client:** Andrews Engineering

Project: Springfield, IL Ash Ponds

●	**Location:** Boring 7	**Depth:** 19½-21½ ft.	**Sample Number:** 7
■	**Location:** Boring 8L	**Depth:** 12-14 ft.	**Sample Number:** 5
▲	**Location:** Boring 8U ST8	**Depth:** 9½-11½ ft.	**Sample Number:** 8
◆	**Location:** Boring 8U ST16	**Depth:** 19½-21½ ft.	**Sample Number:** 16
▼	**Location:** Boring 9L	**Depth:** 7½-9 ft.	**Sample Number:**

Remarks:

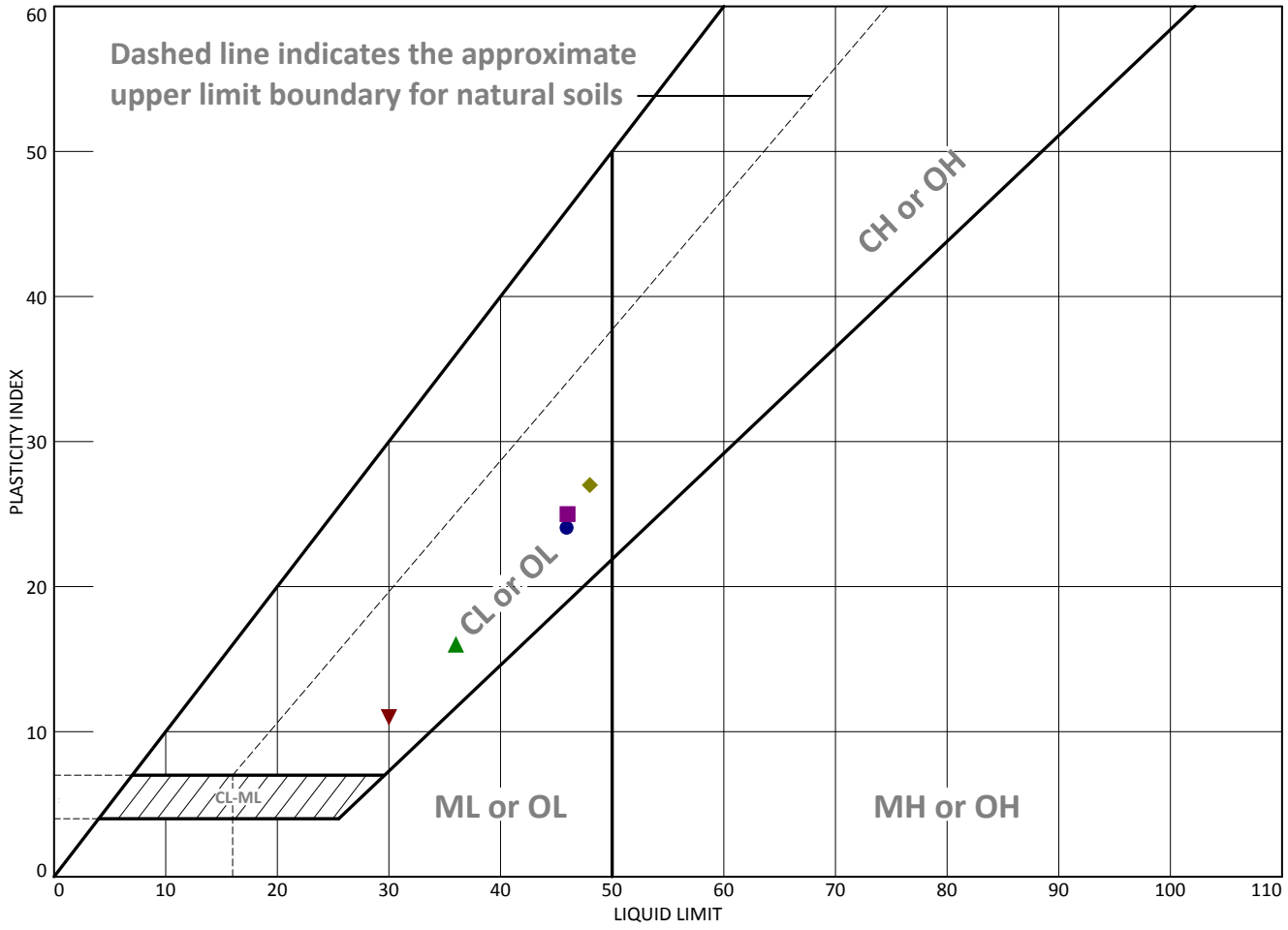
- ● Natural Moisture = 25.8%
- ■ Natural Moisture = 23.8%
- ▲ Natural Moisture = 24.0%
- ◆ Natural Moisture = 25.7%
- ▼ Natural Moisture = 28.0%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure A-4

Tested By: ○ DJS □ DAW △ BRH ◇ BRH ▽ DAW

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Lean Clay (CL), Gray mottled Light Gray, Silty, Stiff, Moist	46	22	24	99.7	96.0	CL
■	Lean Clay (CL), Yellow Brown mottled Light Gray/Gray, Silty, Trace Sand, Stiff, Moist	46	21	25	99.2	94.5	CL
▲	Lean Clay (CL), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist	36	20	16	98.2	92.5	CL
◆	Lean Clay (CL), Brown mottled Yellow Brown, Silty, Stiff, Moist	48	21	27	99.2	95.9	CL
▼	Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist	30	19	11	99.8	87.1	CL

Project No. 23-1071 **Client:** Andrews Engineering

Project: Springfield, IL Ash Ponds

●	**Location:** Boring 9U ST16	**Depth:** 19½-21½ ft.	**Sample Number:** 16
■	**Location:** Boring 9 CCR ST8	**Depth:** 9½-11½ ft.	**Sample Number:** 8
▲	**Location:** Boring 11U ST8	**Depth:** 9½-11½ ft.	**Sample Number:**
◆	**Location:** Boring 11U ST16	**Depth:** 19½-21½ ft.	**Sample Number:**
▼	**Location:** Boring 12L	**Depth:** 14½-16 ft.	**Sample Number:**

Remarks:

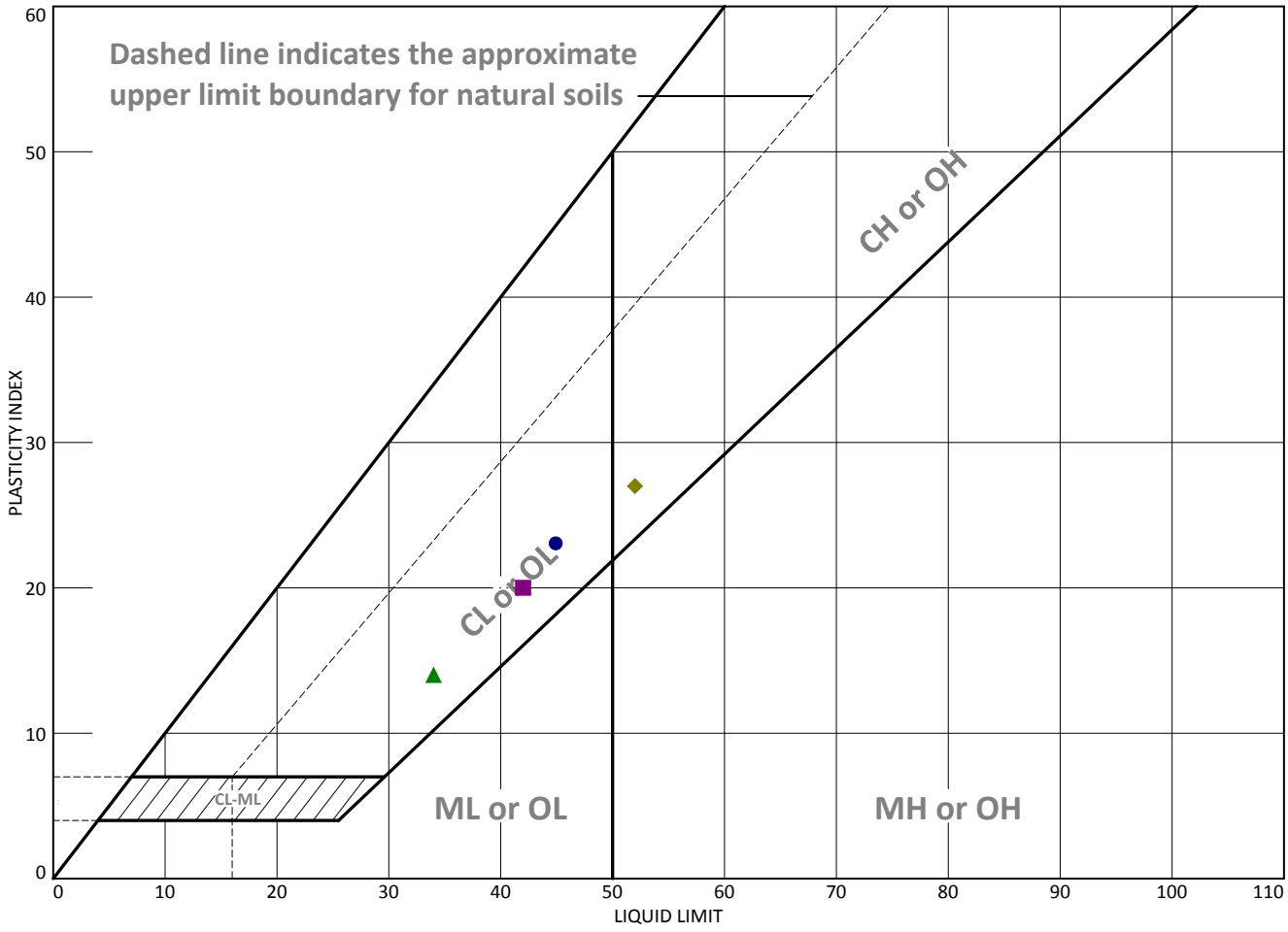
- ● Natural Moisture = 22.4%
- ■ Natural Moisture = 23.2%
- ▲ Natural Moisture = 21.8%
- ◆ Natural Moisture = 25.7%
- ▼ Natural Moisture = 23.2%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure A-5

Tested By: ○ NPP □ NPP △ MAS ◇ BRH ▽ DAW

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Stiff, Moist	45	22	23	99.6	95.2	CL
■	Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Stiff, Moist	42	22	20	99.3	96.1	CL
▲	Lean Clay (CL), Yellow Brown, Silty, Trace Sand, Stiff, Moist	34	20	14	99.9	90.9	CL
◆	Fat Clay (CH), Gray mottled Light Gray, Silty, Trace Sand, Stiff, Moist	52	25	27	99.3	94.9	CH

Project No. 23-1071 **Client:** Andrews Engineering

Project: Springfield, IL Ash Ponds

● **Location:** Boring 12U ST8 **Depth:** 9½-11½ ft. **Sample Number:** 8

■ **Location:** Boring 12U ST16 **Depth:** 19½-21½ ft. **Sample Number:** 16

▲ **Location:** Boring 13 BN ST7 **Depth:** 8½-10½ ft. **Sample Number:** 7

◆ **Location:** Boring 13 BS ST7 **Depth:** 8½-10½ ft. **Sample Number:** 7

Remarks:

● Natural Moisture = 21.8%

■ Natural Moisture = 21.6%

▲ Natural Moisture = 18.4%

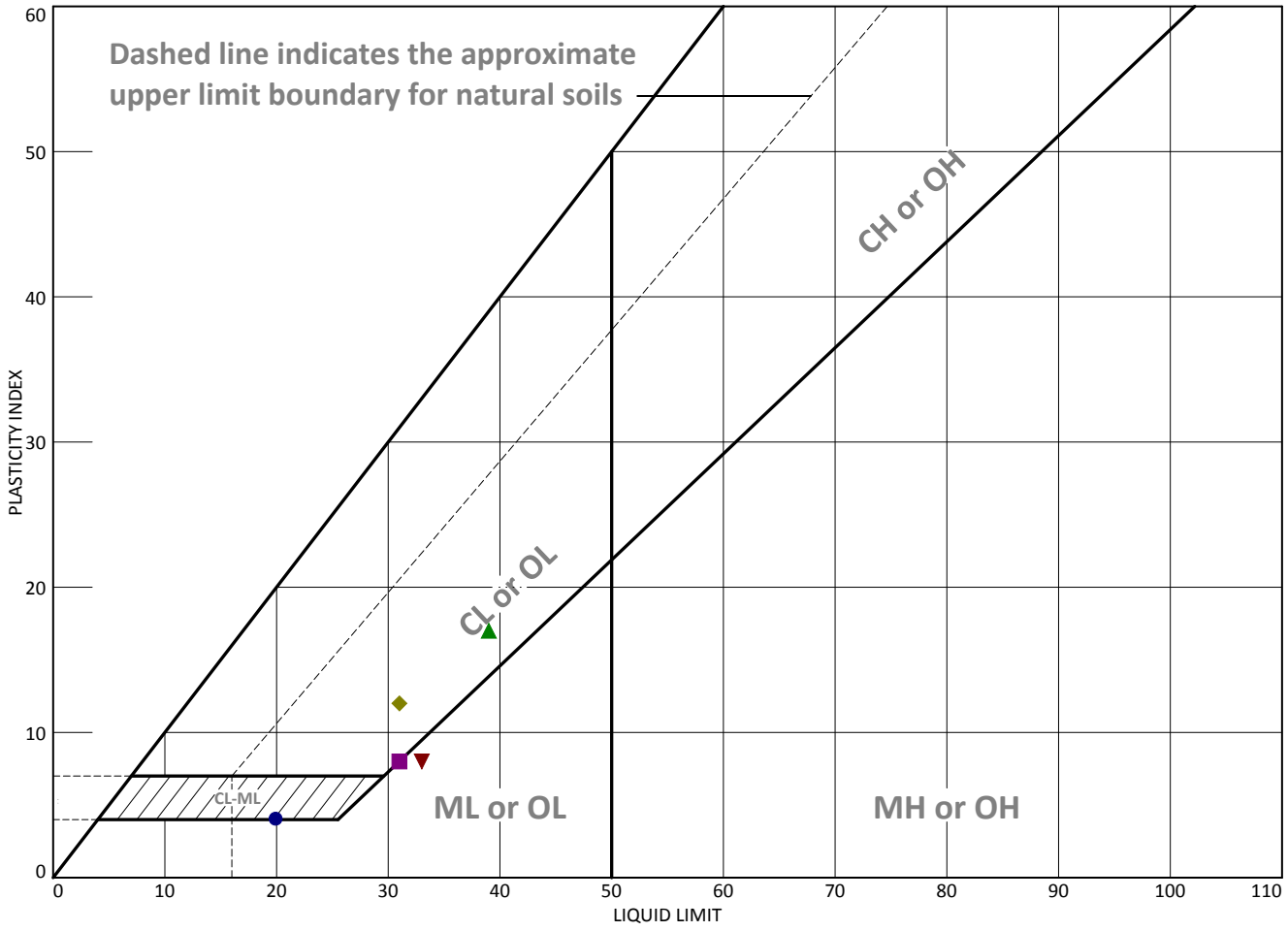
◆ Natural Moisture = 21.1%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure A-6

Tested By: ○ DAW □ DAW △ MAS ◇ MAS

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Sandy Silty Clay (CL-ML), Yellow Brown mottled Light Gray, Moist	20	16	4			CL-ML
■	Lean Clay (CL/ML), Yellow Brown mottled Light Gray, Black Oxidation	31	23	8			CL
▲	Lean Clay (CL), Light Gray mottled Yellow Brown, Silty	39	22	17			CL
◆	Lean Clay (CL), Gray, Trace Organics	31	19	12			CL
▼	Silt (ML), Brown, Trace Sand	33	25	8			ML

Project No. 23-1071 **Client:** Andrews Engineering

Project: Springfield, IL Ash Ponds

● **Location:** Boring 2L **Depth:** 14½-16 **Sample Number:**

■ **Location:** Boring 4L **Depth:** 17-18½ ft. **Sample Number:**

▲ **Location:** Boring 5L **Depth:** 17-17½ ft. **Sample Number:**

◆ **Location:** Boring 6L **Depth:** 17½-19 ft. **Sample Number:** 7

▼ **Location:** Boring 7L **Depth:** 15-16½ ft. **Sample Number:** 6

Remarks:

● Natural Moisture = 23.6%

■ Natural Moisture = 27.4%

▲ Natural Moisture = 28.3%

◆ Natural Moisture = 35.9%

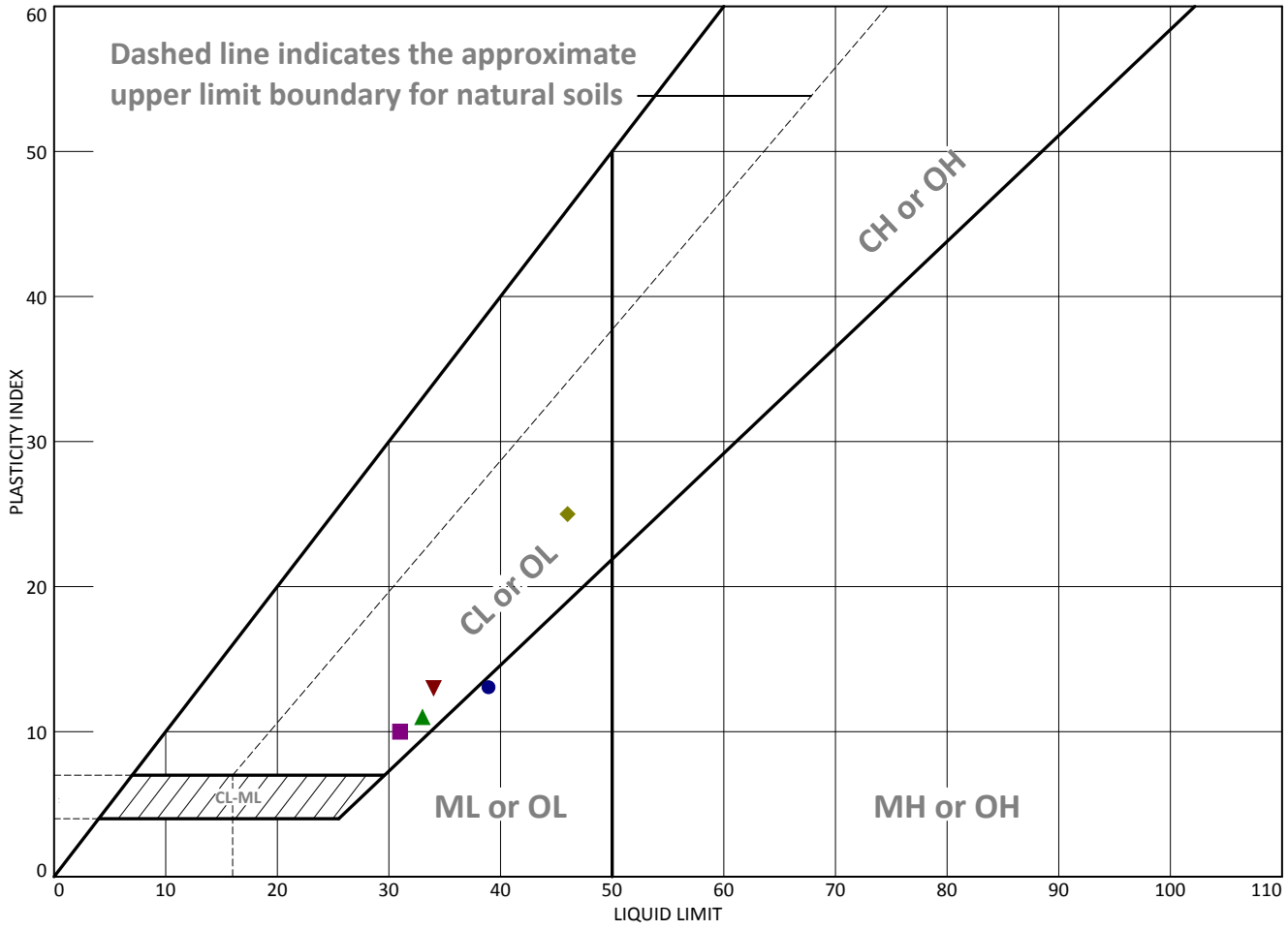
▼ Natural Moisture = 29.2%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure A-7

Tested By: DAW **Checked By:** NAS

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Silt (ML), Gray, With Lean Clay (CL) Seams	39	26	13			ML
■	Lean Clay (CL), Gray, Silty	31	21	10			CL
▲	Lean Clay (CL), Gray, Silty	33	22	11			CL
◆	Lean Clay (CL), Gray, Silty	46	21	25			CL
▼	Lean Clay (CL), Yellow Brown mottled Brown, Silty	34	21	13			CL

Project No. 23-1071 **Client:** Andrews Engineering

Project: Springfield, IL Ash Ponds

● **Location:** Boring 8L **Depth:** 20½-21 ft.
■ **Location:** Boring 8L **Depth:** 22½-23 ft.
▲ **Location:** Boring 9L **Depth:** 15½-16 ft.
◆ **Location:** Boring 9L **Depth:** 18-18½ ft.
▼ **Location:** Boring 11U **Depth:** 24½-26 ft.

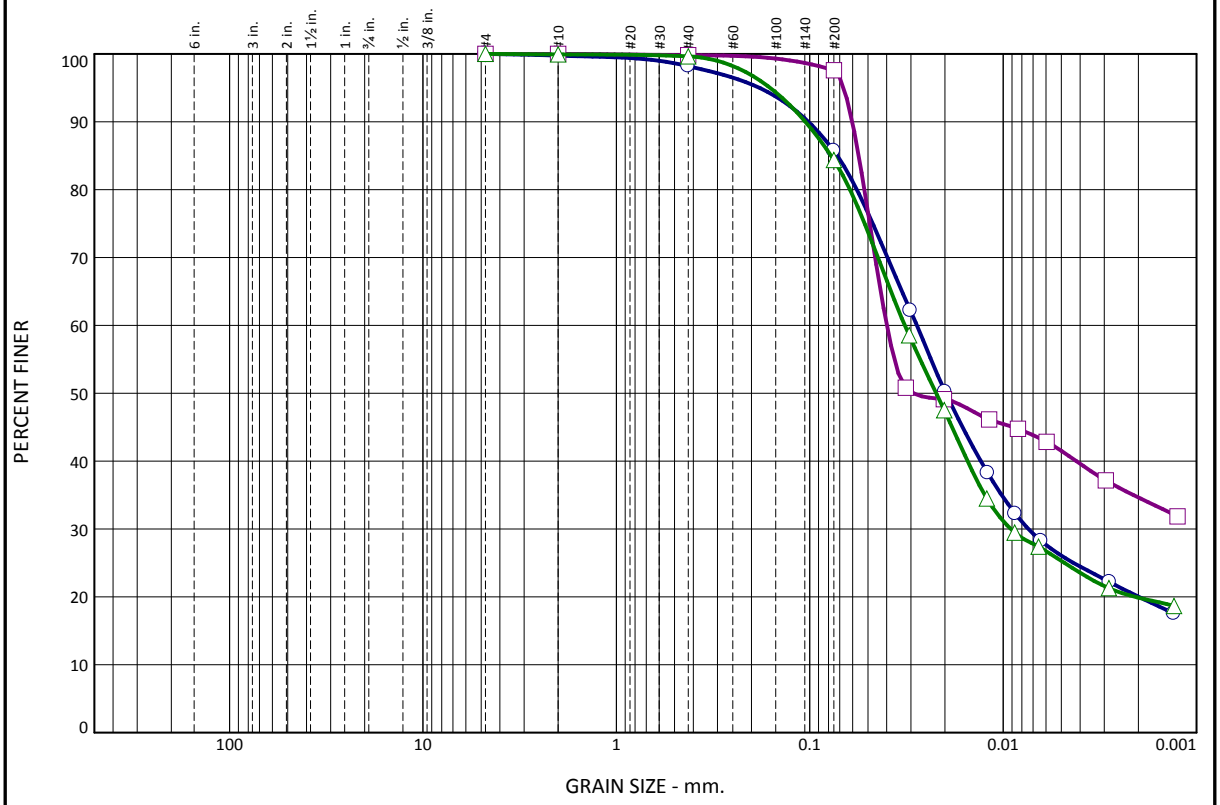
Remarks:
● Natural Moisture = 32.3%
■ Natural Moisture = 26.7%
▲ Natural Moisture = 28.1%
◆ Natural Moisture = 28.6%
▼ Natural Moisture = 28.3%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure A-8

Tested By: DAW **Checked By:** NAS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	14.3	65.7	20.0	CL	30	17	13
□	0.0	0.0	2.4	63.0	34.6	CL	43	21	22
△	0.0	0.0	15.6	64.5	19.9	CL	39	21	18

SIEVE inches size	PERCENT FINER ○	□	△
	GRAIN SIZE		
D_{60}	0.0279	0.0399	0.0322
D_{30}	0.0074		0.0091
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	100.0	100.0
#10	99.7	100.0	99.9
#40	98.2	99.8	99.6
#200	85.7	97.6	84.4

Material Description

○ Lean Clay (CL), Gray, Silty, Trace Sand, Medium, Moist

□ Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Stiff, Moist

△ Lean Clay with Sand (CL), Gray, Silty, Medium, Moist

REMARKS:

○ Natural Moisture = 27.9%

□ Natural Moisture = 30.7%

△ Natural Moisture = 24.7%

○ Location: Boring 1 Depth: 24½-26½ ft. Sample Number:

□ Location: Boring 1L Depth: 22-24 ft. Sample Number: 18

△ Location: Boring 1 LL Depth: 14½-16½ ft. Sample Number: 12

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

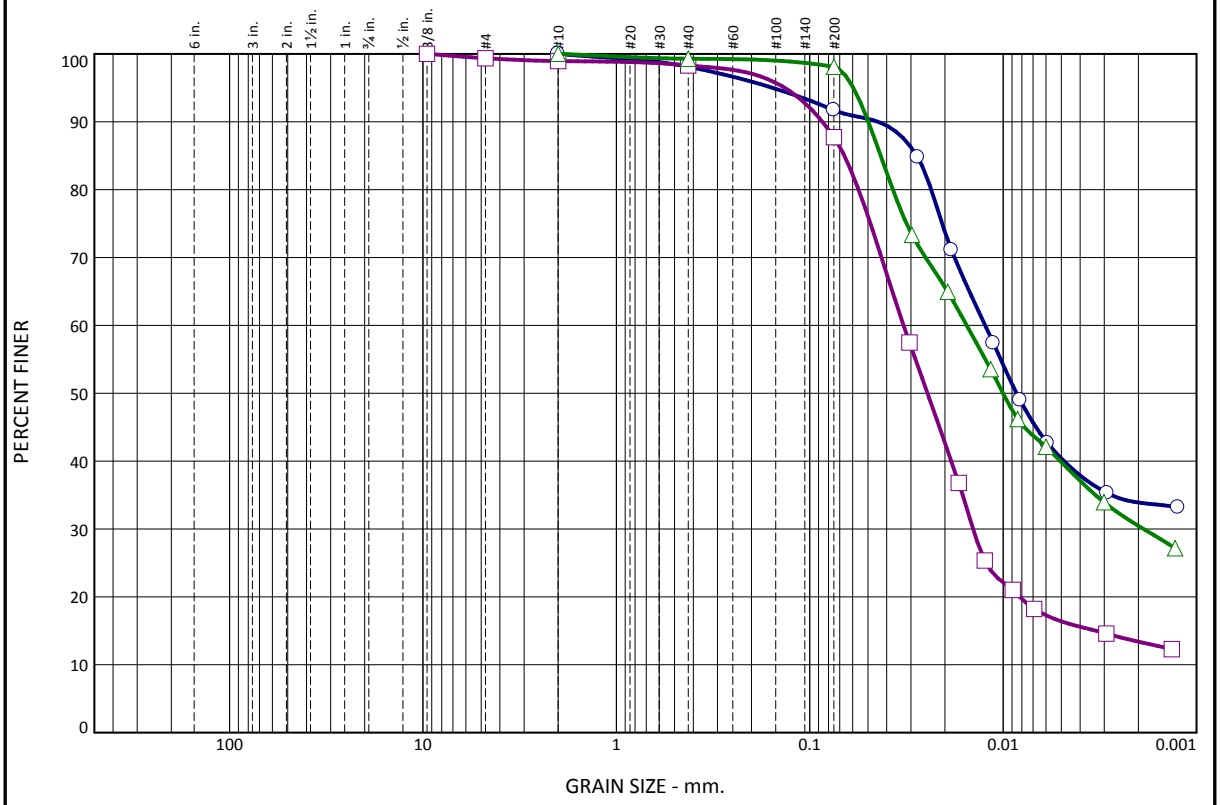
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-1

Tested By: DAW / DJS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	8.3	57.8	33.9	CH	57	21	36
□	0.0	0.6	11.7	74.3	13.4	CL-ML	27	21	6
△	0.0	0.0	1.9	67.6	30.5	CH	60	24	36

SIEVE inches size	PERCENT FINER ○	□	△
3/8"		100.0	
GRAIN SIZE			
D_{60}	0.0124	0.0328	0.0154
D_{30}		0.0143	0.0019
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4		99.4	
#10	100.0	98.9	100.0
#40	98.1	98.3	99.3
#200	91.7	87.7	98.1

Material Description

○ Fat Clay (CH), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist

□ Silty Clay (CL-ML), Yellow Brown mottled Light Gray, Trace Sand, Medium, Moist

△ Fat Clay (CH), Light Gray mottled Yellow Brown, Black Oxidation, Silty, Stiff, Moist

REMARKS:

○ Natural Moisture = 26.8%

□ Natural Moisture = 25.5%

△ Natural Moisture = 25.8%

○ Location: Boring 2 Depth: 22-24 ft. Sample Number: 8

□ Location: Boring 2L Depth: 7-9 ft. Sample Number: 6

△ Location: Boring 3 ST8 Depth: 9½-11½ ft. Sample Number: 8

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

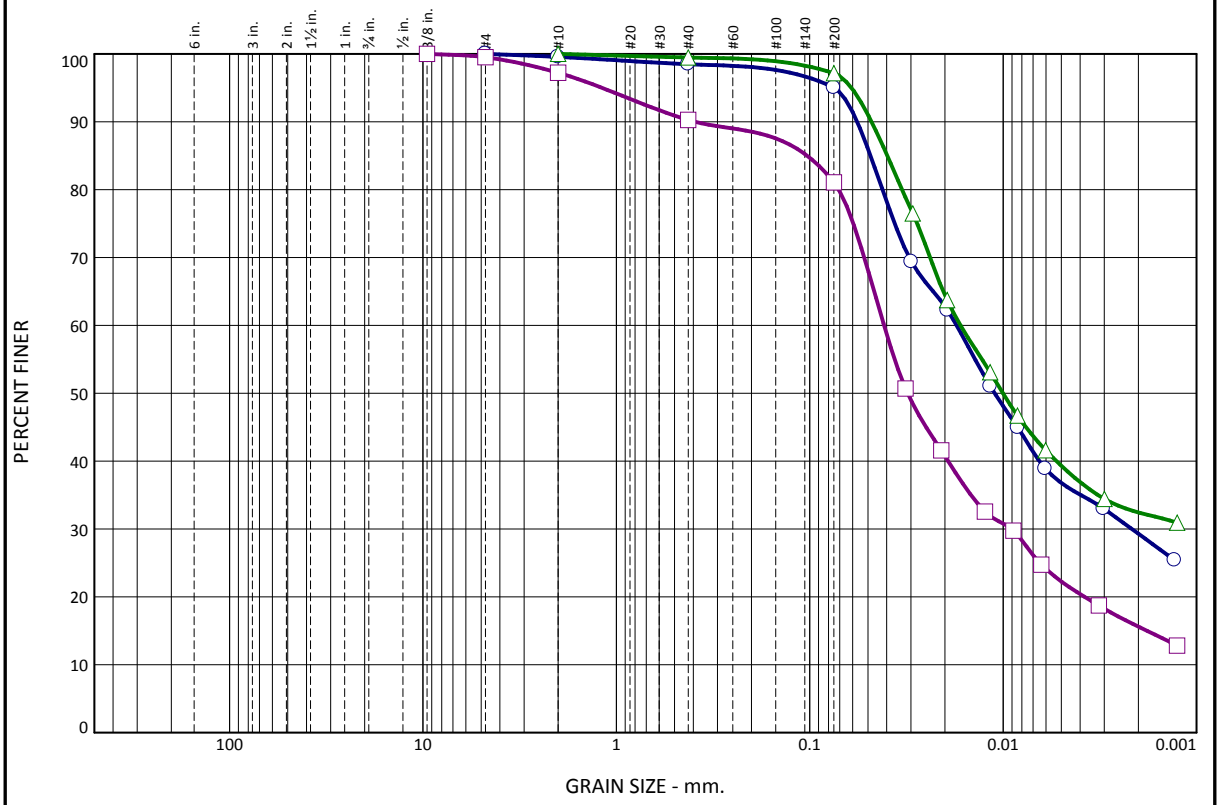
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-2

Tested By: ○ DAW □ DAW / DJS △ DAW

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	5.0	65.7	29.3	CL	43	20	23
□	0.0	0.5	18.4	65.5	15.6	CL	38	22	16
△	0.0	0.0	2.8	64.8	32.4	CL	49	22	27

SIEVE inches size	PERCENT FINER ○	□	△
3/8"		100.0	
GRAIN SIZE			
D_{60}	0.0174	0.0413	0.0166
D_{30}	0.0022	0.0090	
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0	99.5	
#10	99.6	97.2	100.0
#40	98.5	90.3	99.5
#200	95.0	81.1	97.2

Material Description

○ Lean Clay (CL), Gray mottled Yellow Brown, Silty, Stiff, Moist

□ Lean Clay with Sand (CL), Yellow Brown mottled Light Gray/Gray, Silty, Stiff, Moist

△ Lean Clay (CL/CH), Yellow Brown mottled Light Gray, Silty, Stiff, Moist

REMARKS:

○ Natural Moisture = 25.8%

□ Natural Moisture = 21.3%

△ Natural Moisture = 28.3%

○ Location: Boring 3 ST16 Depth: 19½-21½ ft. Sample Number: 16

□ Location: Boring 3U ST8 Depth: 9½-11 ft. Sample Number: 8

△ Location: Boring 4 Depth: 19½-21½ ft. Sample Number:

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

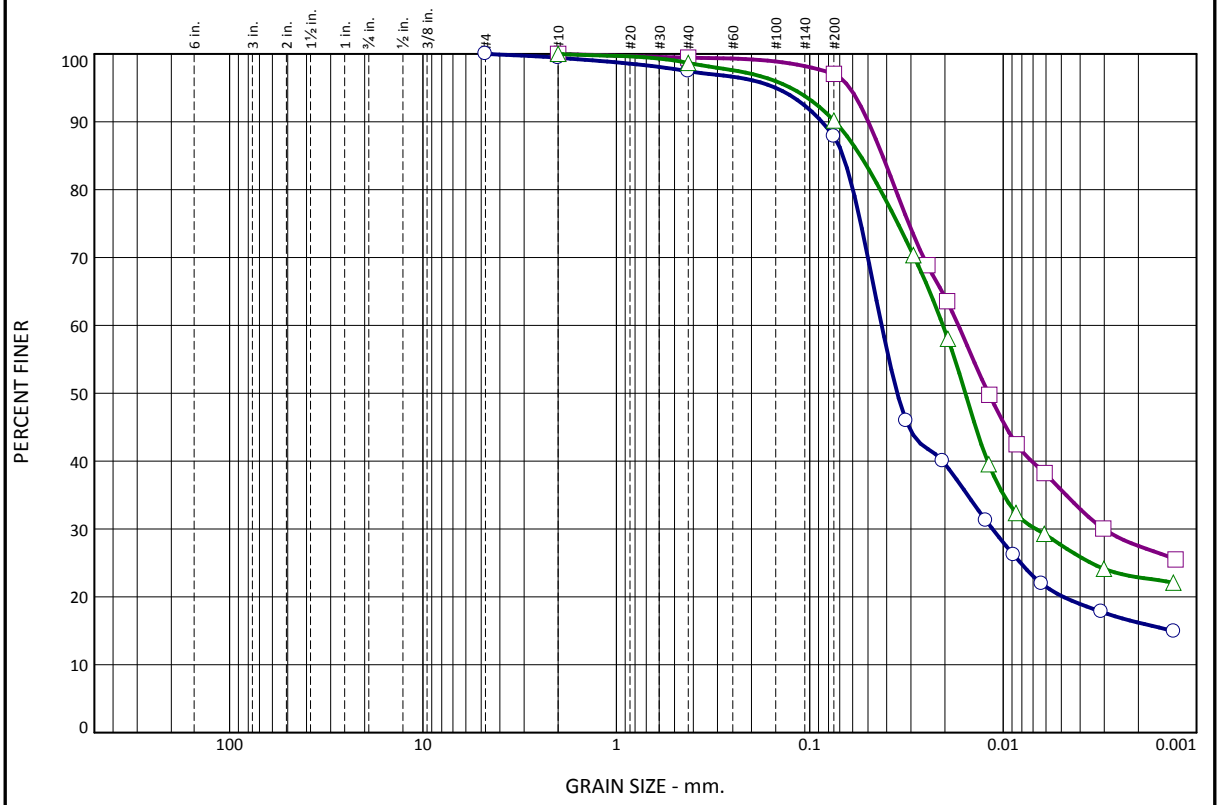
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-3

Tested By: ○ DAW □ DAW △ DAW / MAS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	12.1	71.7	16.2	CL	32	20	12
□	0.0	0.0	2.9	69.6	27.5	CH	62	24	38
△	0.0	0.0	9.8	67.3	22.9	CL	43	22	21

SIEVE inches size	PERCENT FINER ○	□	△
GRAIN SIZE			
D_{60}	0.0425	0.0170	0.0205
D_{30}	0.0114	0.0030	0.0068
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0		
#10	99.4	100.0	100.0
#40	97.4	99.4	98.7
#200	87.9	97.1	90.2

Material Description

○ Lean Clay (CL), Brown mottled Yellow Brown/Light Gray, Silty, Trace Sand, Medium, Moist

□ Fat Clay (CH), Yellow Brown mottled Light Gray, Silty, Stiff, Moist

△ Lean Clay (CL), Light Gray mottled Gray/ Yellow Brown, Silty, Trace Sand, Medium, Moist

REMARKS:

○ Natural Moisture = 27.4%

□ Natural Moisture = 26.9%

△ Natural Moisture = 24.3%

○ Location: Boring 4L Depth: 12-14 ft. Sample Number: 10

□ Location: Boring 4U Depth: 27-29 ft. Sample Number: 22

△ Location: Boring 5 Depth: 24½-26½ ft. Sample Number: 10

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

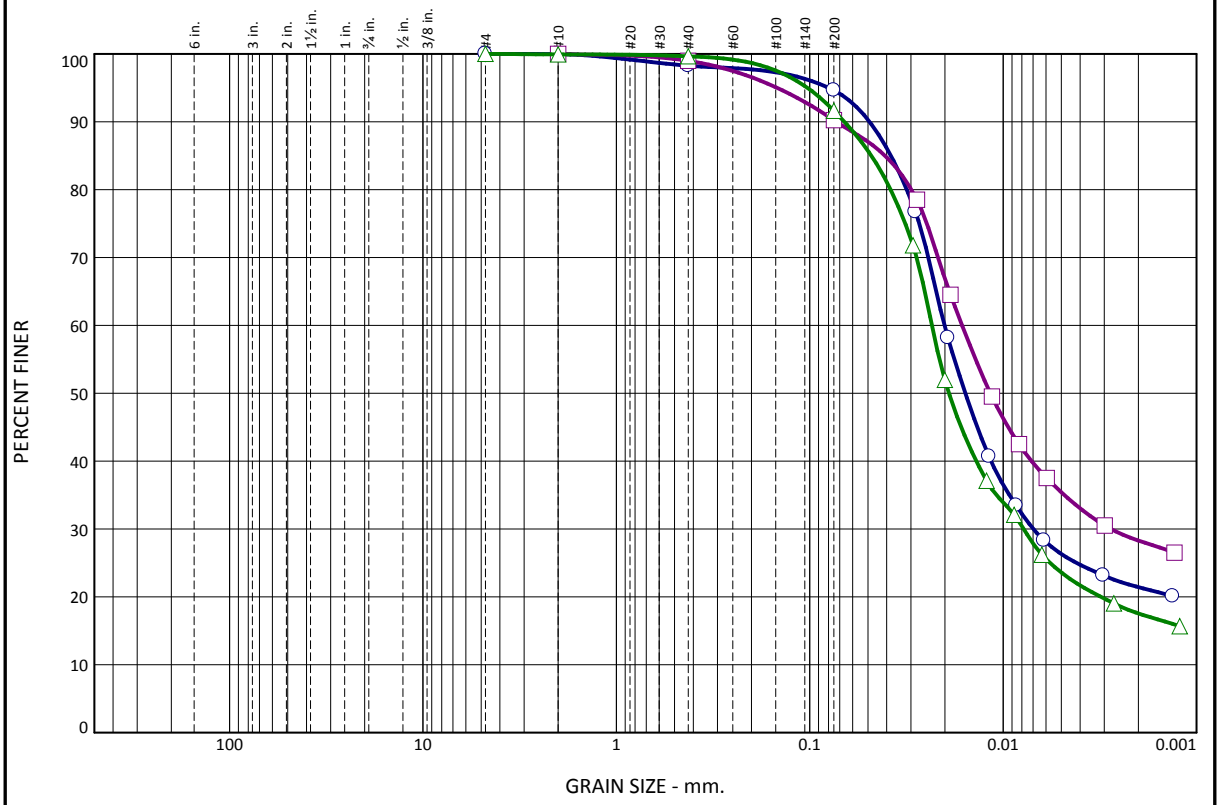
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-4

Tested By: ○ DAW / DJS □ DAW / DJS △ DAW

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	5.4	73.2	21.4	CL	46	24	22
□	0.0	0.0	9.8	61.9	28.3	CL	34	19	15
△	0.0	0.0	8.4	74.1	17.5	CL	41	23	18

SIEVE inches size	PERCENT FINER ○	□	△
	GRAIN SIZE		
D_{60}	0.0201	0.0163	0.0234
D_{30}	0.0070	0.0028	0.0078
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0		100.0
#10	100.0	100.0	99.9
#40	98.3	99.0	99.6
#200	94.6	90.2	91.6

Material Description

○ Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist

□ Lean Clay (CL), Gray/Greenish Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist

△ Lean Clay (CL), Light Gray mottled Reddish Brown, Silty, Trace Sand, Medium, Moist

REMARKS:

○ Natural Moisture = 28.8%

□ Natural Moisture = 21.9%

△ Natural Moisture = 26.6%

○ Location: Boring 5L Depth: 9½-11 ft. Sample Number:

□ Location: Boring 6 Depth: 17-19 ft. Sample Number: 8

△ Location: Boring 6L Depth: 7½-9 ft. Sample Number: ST1

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

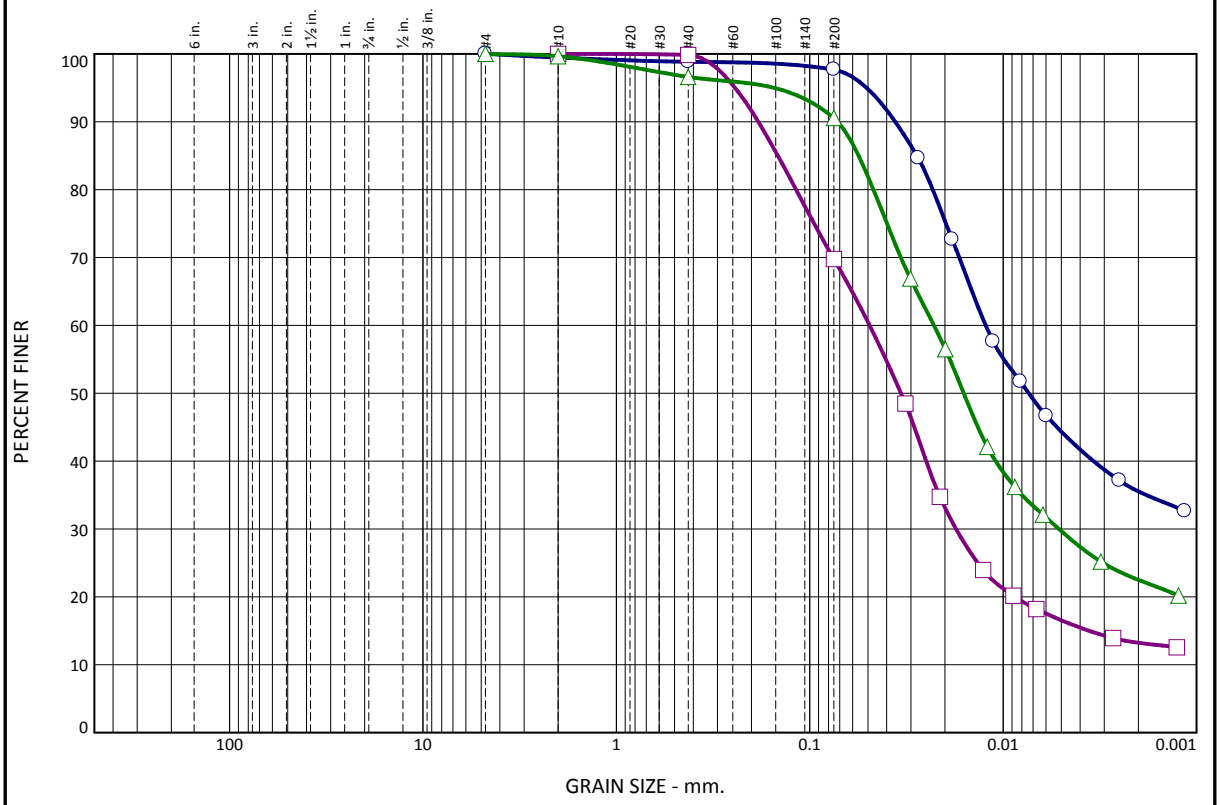
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-5

Tested By: DAW **Checked By:** NAS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	2.3	62.2	35.5	CH	63	20	43
□	0.0	0.0	30.2	56.6	13.2	CL-ML	26	19	7
△	0.0	0.0	9.4	68.1	22.5	CL	48	21	27

SIEVE inches size	PERCENT FINER ○	□	△
	GRAIN SIZE		
D_{60}	0.0123	0.0491	0.0228
D_{30}		0.0175	0.0052
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0		100.0
#10	99.5	100.0	99.6
#40	98.8	99.8	96.6
#200	97.7	69.8	90.6

Material Description

○ Fat Clay (CH), Brown/Yellow Brown mottled Light Gray, Silty, Stiff, Moist

□ Sandy Silty Clay (CL-ML), Yellow Brown mottled Reddish Brown/Light Gray, Medium, Moist

△ Lean Clay (CL), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist

REMARKS:

○ Natural Moisture = 25.8%

□ Natural Moisture = 23.8%

△ Natural Moisture = 24.0%

○ Location: Boring 7 Depth: 19½-21½ ft. Sample Number: 7

□ Location: Boring 8L Depth: 12-14 ft. Sample Number: 5

△ Location: Boring 8U ST8 Depth: 9½-11½ ft. Sample Number: 8

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

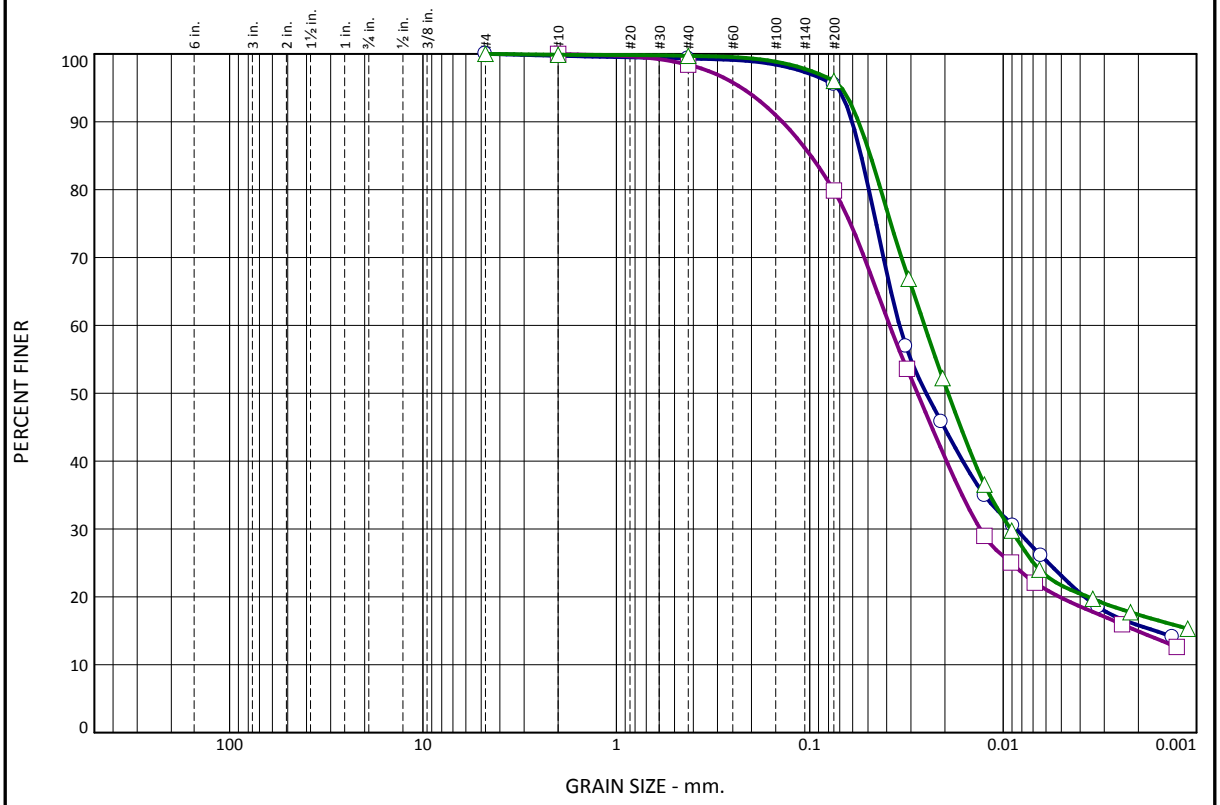
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-6

Tested By: DAW **Checked By:** NAS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	4.5	79.7	15.8	CL	45	19	26
□	0.0	0.0	20.1	65.0	14.9	CL	26	17	9
△	0.0	0.0	4.0	78.6	17.4	CL	46	22	24

SIEVE inches size	PERCENT FINER ○	□	△
	GRAIN SIZE		
D_{60}	0.0343	0.0386	0.0255
D_{30}	0.0086	0.0131	0.0091
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#4	100.0		100.0
#10	99.7	100.0	99.9
#40	99.3	98.4	99.7
#200	95.5	79.9	96.0

Material Description

○ Lean Clay (CL), Light Gray Mottled Yellow Brown, Silty, Stiff, Moist

□ Lean Clay with Sand (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Soft, Moist

△ Lean Clay (CL), Gray mottled Light Gray, Silty, Stiff, Moist

REMARKS:

○ Natural Moisture = 25.7%

□ Natural Moisture = 28.0%

△ Natural Moisture = 22.4%

○ Location: Boring 8U ST16 Depth: 19½-21½ ft. Sample Number: 16

□ Location: Boring 9L Depth: 7½-9 ft. Sample Number:

△ Location: Boring 9U ST16 Depth: 19½-21½ ft. Sample Number: 16

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

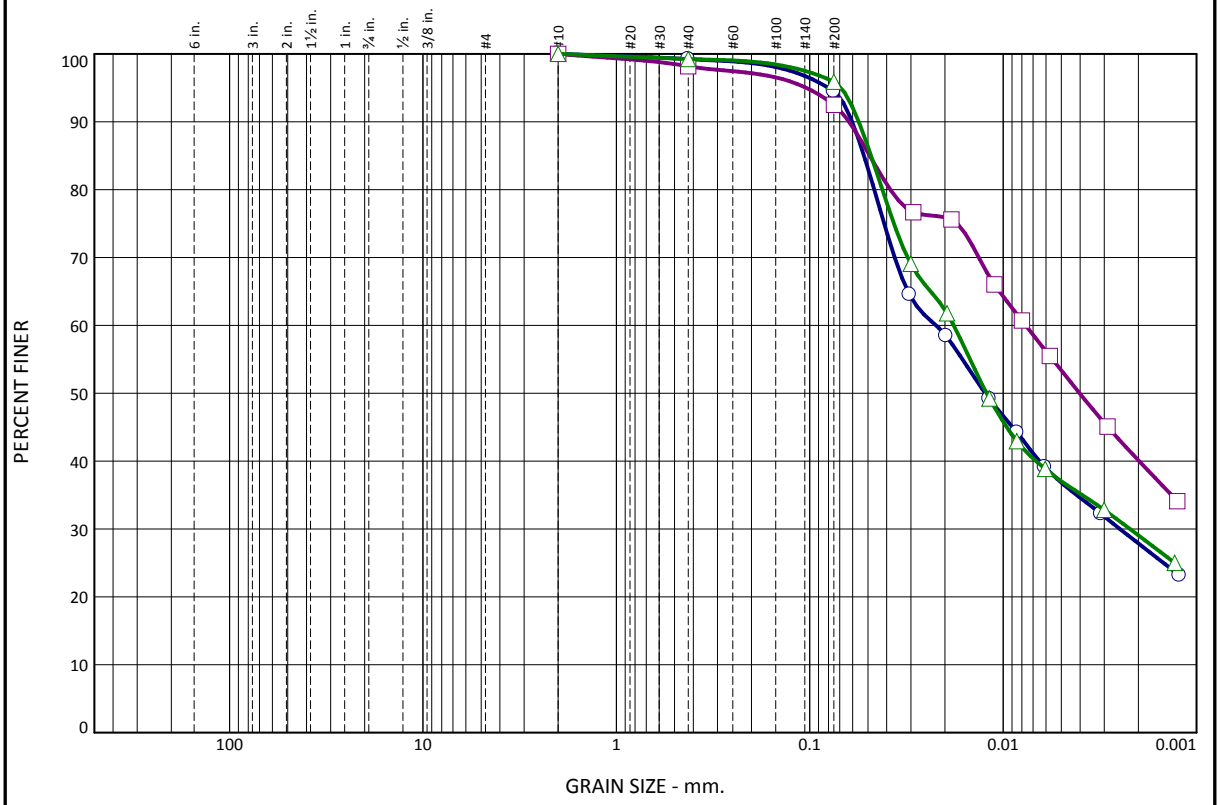
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-7

Tested By: ○ DAW □ DAW △ MAS **Checked By:** NAS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	5.5	66.6	27.9	CL	46	21	25
□	0.0	0.0	7.5	52.4	40.1	CL	36	20	16
△	0.0	0.0	4.1	66.8	29.1	CL	48	21	27

SIEVE inches size	PERCENT FINER ○	□	△
	GRAIN SIZE		
D_{60}	0.0222	0.0077	0.0180
D_{30}	0.0025		0.0022
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□	△
#10	100.0	100.0	100.0
#40	99.2	98.2	99.2
#200	94.5	92.5	95.9

Material Description

○ Lean Clay (CL), Yellow Brown mottled Light Gray/Gray, Silty, Trace Sand, Stiff, Moist

□ Lean Clay (CL), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist

△ Lean Clay (CL), Brown mottled Yellow Brown, Silty, Stiff, Moist

REMARKS:

○ Natural Moisture = 23.2%

□ Natural Moisture = 21.8%

△ Natural Moisture = 25.7%

○ Location: Boring 9 CCR ST8 Depth: 9½-11½ ft. Sample Number: 8

□ Location: Boring 11U ST8 Depth: 9½-11½ ft. Sample Number:

△ Location: Boring 11U ST16 Depth: 19½-21½ ft. Sample Number:

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

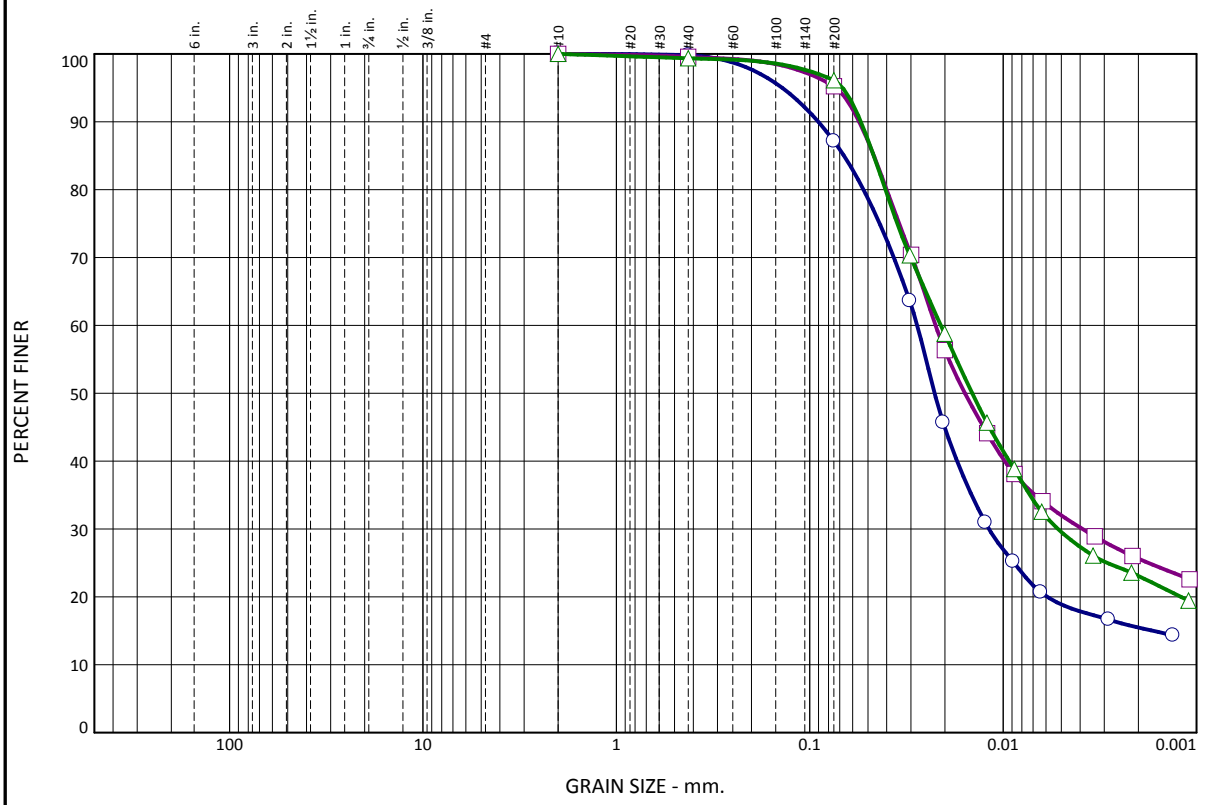
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-8

Tested By: DAW

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	12.9	71.6	15.5	CL	30	19	11
□	0.0	0.0	4.8	69.6	25.6	CL	45	22	23
△	0.0	0.0	3.9	73.0	23.1	CL	42	22	20

SIEVE inches size	○	□	△
	PERCENT FINER		
	GRAIN SIZE		
D_{60}	0.0278	0.0224	0.0210
D_{30}	0.0119	0.0039	0.0052
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	○	□	△
	PERCENT FINER		
#10	100.0	100.0	100.0
#40	99.8	99.6	99.3
#200	87.1	95.2	96.1

Material Description

○ Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist

□ Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Stiff, Moist

△ Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Stiff, Moist

REMARKS:

○ Natural Moisture = 23.2%

□ Natural Moisture = 21.8%

△ Natural Moisture = 21.6%

○ Location: Boring 12L Depth: 14½-16 ft. Sample Number:

□ Location: Boring 12U ST8 Depth: 9½-11½ ft. Sample Number: 8

△ Location: Boring 12U ST16 Depth: 19½-21½ ft. Sample Number: 16

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

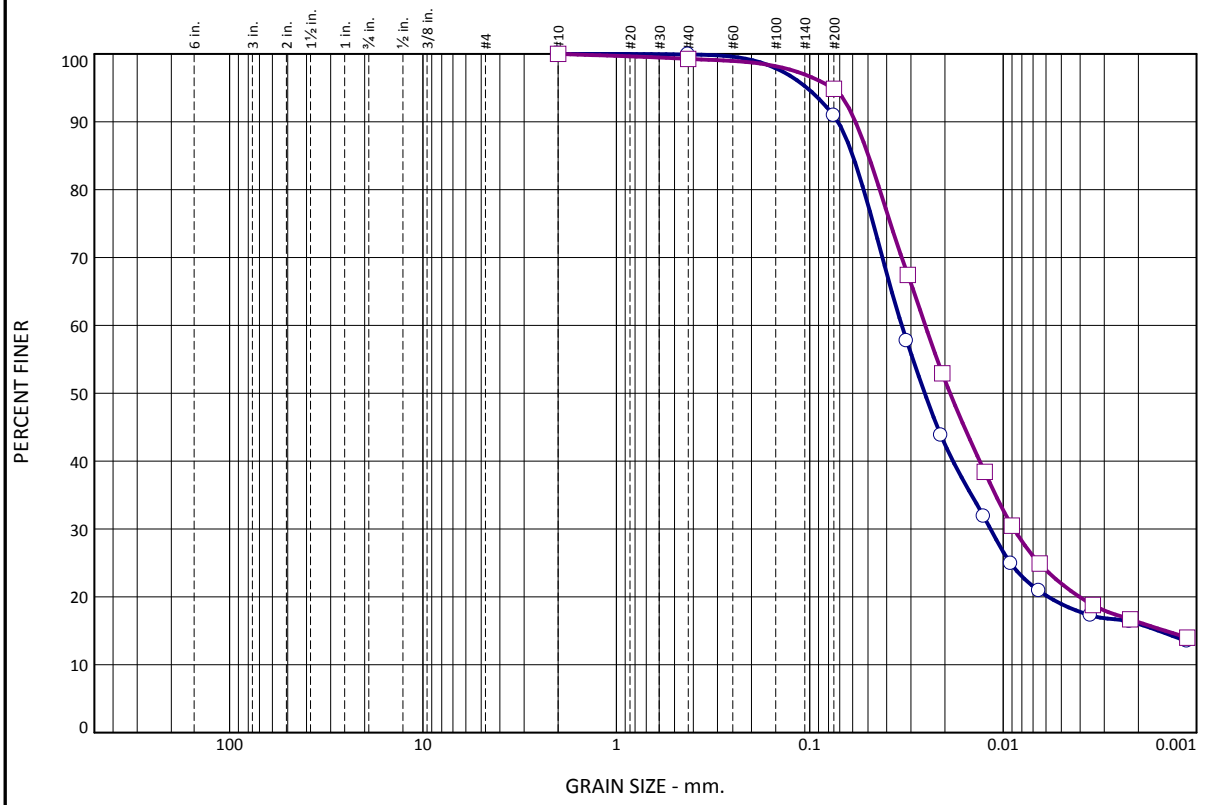
Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-9

Tested By: ○ DAW □ MAS △ MAS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PL	PI
○	0.0	0.0	9.1	74.9	16.0	CL	34	20	14
□	0.0	0.0	5.1	78.6	16.3	CH	52	25	27

SIEVE inches size	○ PERCENT FINER	□ PERCENT FINER
GRAIN SIZE		
D_{60}	0.0335	0.0253
D_{30}	0.0116	0.0088
D_{10}		
COEFFICIENTS		
C_c		
C_u		

SIEVE number size	○ PERCENT FINER	□ PERCENT FINER
#10	100.0	100.0
#40	99.9	99.3
#200	90.9	94.9

Material Description

○ Lean Clay (CL), Yellow Brown, Silty, Trace Sand, Stiff, Moist

□ Fat Clay (CH), Gray mottled Light Gray, Silty, Trace Sand, Stiff, Moist

REMARKS:

○ Natural Moisture = 18.4%

□ Natural Moisture = 21.1%

○ Location: Boring 13 BN ST7 Depth: 8½-10½ ft. Sample Number: 7

□ Location: Boring 13 BS ST7 Depth: 8½-10½ ft. Sample Number: 7

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Client: Andrews Engineering

Project: Springfield, IL Ash Ponds

Project No.: 23-1071 Figure S-10

Tested By: MAS

Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Gray, Silty, Trace Sand, Medium, Moist**

LIQUID LIMIT **30** PLASTIC LIMIT **17** P.I. **13**

BORING NO. **Boring 1** SAMPLE NO.

SAMPLE TYPE **ST** DEPTH **24½-26½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **26.2%** INITIAL DRY DENSITY **100.8 P.C.F.**

FINAL WATER CONTENT **23.1%** FINAL DRY DENSITY **102.6 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
3:12:00 PM		0.200	7.214	40.438		2.89	7.04	20.750	210.9		231.650		
3:12:00 PM	3:33:00 PM	0.200	7.214	40.438	1260	5.00	4.94	-0.300	210.9	1.00	210.600	1.35E-06	1.27E-06
3:33:00 PM	3:53:00 PM	0.200	7.214	40.438	1200	6.77	3.17	-18.000	210.9	1.00	192.900	1.31E-06	1.23E-06
3:53:00 PM	4:34:00 PM	0.200	7.214	40.438	2460	9.89	0.04	-49.250	210.9	1.00	161.650	1.28E-06	1.21E-06
													1.23E-06

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 1.23 E-06 CM/SEC

REMARKS: Testing Completed 11/2/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

GEOTECHNICS
Soil & Material Testing
A Division of Klingner

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Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Stiff, Moist**

LIQUID LIMIT **43** PLASTIC LIMIT **21** P.I. **22**

BORING NO. **Boring 1L** SAMPLE NO. **ST 18**

SAMPLE TYPE **ST** DEPTH **22-24 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **20.4%** INITIAL DRY DENSITY **114.0 P.C.F.**

FINAL WATER CONTENT **16.1%** FINAL DRY DENSITY **117.4 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
12:42:00 PM		0.200	7.330	41.980		4.60	5.36	3.800	70.3		74.100		
12:42:00 PM	12:50:00 PM	0.200	7.330	41.980	480	5.82	4.15	-8.350	70.3	0.99	61.950	6.51E-06	6.14E-06
12:50:00 PM	1:32:00 PM	0.200	7.330	41.980	2520	9.50	0.50	-45.000	70.3	0.99	25.300	6.21E-06	5.85E-06
1:32:00 PM	1:42:30 PM	0.200	7.330	41.980	630	9.99	0.01	-49.900	70.3	1.00	20.400	5.97E-06	5.62E-06
													5.84E-06

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 5.84 E-06 CM/SEC

REMARKS: Testing Completed 11/10/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

GEOTECHNICS
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Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay with Sand (CL), Gray, Silty, Medium, Moist**

LIQUID LIMIT **39** PLASTIC LIMIT **21** P.I. **18**

BORING NO. **Boring 1LL** SAMPLE NO. **ST 12**

SAMPLE TYPE **ST** DEPTH **14½-16½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **23.8%** INITIAL DRY DENSITY **102.1 P.C.F.**

FINAL WATER CONTENT **22.8%** FINAL DRY DENSITY **103.9 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
2:32:00 PM		0.200	7.391	41.543		0.14	10.00	49.300	70.3		119.600		
2:32:00 PM	2:46:00 PM	0.200	7.391	41.543	840	3.35	6.78	17.150	70.3	1.00	87.450	6.63E-06	6.25E-06
2:46:00 PM	2:54:00 PM	0.200	7.391	41.543	480	4.75	5.38	3.150	70.3	1.00	73.450	6.47E-06	6.09E-06
2:54:00 PM	3:10:00 PM	0.200	7.391	41.543	960	6.82	3.31	-17.550	70.3	1.00	52.750	6.14E-06	5.78E-06
													6.02E-06

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 6.02 E-06 CM/SEC

REMARKS: Testing Completed 11/3/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Fat Clay (CH), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **57** PLASTIC LIMIT **21** P.I. **36**

BORING NO. **Boring 2** SAMPLE NO. **8**

SAMPLE TYPE **ST** DEPTH **22-24 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **21.5%** INITIAL DRY DENSITY **101.8 P.C.F.**

FINAL WATER CONTENT **23.0%** FINAL DRY DENSITY **102.1 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
6:39:00 AM		0.200	6.980	41.931		4.53	4.63	0.500	210.9		211.400		
6:39:00 AM	6:52:00 AM	0.200	6.980	41.931	780	4.60	4.56	-0.200	210.9	1.00	210.700	7.08E-08	6.67E-08
6:52:00 AM	7:30:00 AM	0.200	6.980	41.931	2280	4.81	4.34	-2.350	210.9	1.05	208.550	7.49E-08	7.05E-08
7:30:00 AM	7:48:00 AM	0.200	6.980	41.931	1080	4.90	4.24	-3.300	210.9	1.11	207.600	7.04E-08	6.63E-08
													6.87E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 6.87 E-08 CM/SEC

REMARKS: Testing Completed 10/14/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Silty Clay (CL-ML), Yellow Brown mottled Light Gray, Trace Sand, Medium, Moist**

LIQUID LIMIT **27** PLASTIC LIMIT **21** P.I. **6**

BORING NO. **Boring 2L** SAMPLE NO. **6**

SAMPLE TYPE **ST** DEPTH **7.0-9.0 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **24.7%** INITIAL DRY DENSITY **101.9 P.C.F.**

FINAL WATER CONTENT **23.5%** FINAL DRY DENSITY **103.2 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
3:28:00 PM		0.200	7.005	41.254		3.97	6.85	14.400	70.3		84.700		
3:28:00 PM	3:40:00 PM	0.200	7.005	41.254	720	6.71	4.10	-13.050	70.3	1.00	57.250	9.24E-06	8.70E-06
3:40:00 PM	3:50:00 PM	0.200	7.005	41.254	600	8.30	2.50	-29.000	70.3	1.01	41.300	9.24E-06	8.71E-06
3:50:00 PM	4:02:00 PM	0.200	7.005	41.254	720	9.47	1.33	-40.700	70.3	1.00	29.600	7.86E-06	7.40E-06
													8.24E-06

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 8.24 E-06 CM/SEC

REMARKS: Testing Completed 11/5/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Fat Clay (CH), Light Gray mottled Yellow Brown, Black Oxidation, Silty, Stiff, Moist**

LIQUID LIMIT **60** PLASTIC LIMIT **24** P.I. **36**

BORING NO. **Boring 3** SAMPLE NO. **ST 8**

SAMPLE TYPE **ST** DEPTH **9½-11½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **24.7%** INITIAL DRY DENSITY **100.2 P.C.F.**

FINAL WATER CONTENT **26.1%** FINAL DRY DENSITY **99.0 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
5:53:00 AM		0.200	7.163	42.028		1.50	7.88	31.900	210.9		242.800		
5:53:00 AM	7:13:00 AM	0.200	7.163	42.028	4800	1.56	7.82	31.300	210.9	1.00	242.200	8.79E-09	8.28E-09
7:13:00 AM	7:38:00 AM	0.200	7.163	42.028	1500	1.58	7.80	31.100	210.9	1.00	242.000	9.39E-09	8.84E-09
7:38:00 AM	8:29:00 AM	0.200	7.163	42.028	3060	1.62	7.76	30.700	210.9	1.00	241.600	9.21E-09	8.68E-09
													8.50E-09

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 8.50 E-09 CM/SEC

REMARKS: Testing Completed 11/15/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Gray mottled Yellow Brown, Silty, Stiff, Moist**

LIQUID LIMIT **43** PLASTIC LIMIT **20** P.I. **23**

BORING NO. **Boring 3** SAMPLE NO. **ST 16**

SAMPLE TYPE **ST** DEPTH **19½-21½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **25.8%** INITIAL DRY DENSITY **95.1 P.C.F.**

FINAL WATER CONTENT **29.5%** FINAL DRY DENSITY **93.0 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
12:10:00 PM		0.200	7.432	42.077		5.34	4.67	-3.350	210.9		207.550		
12:10:00 PM	12:30:00 PM	0.200	7.432	42.077	1200	6.00	4.01	-9.950	210.9	1.00	200.950	4.76E-07	4.48E-07
12:30:00 PM	12:54:00 PM	0.200	7.432	42.077	1440	6.72	3.29	-17.150	210.9	1.00	193.750	4.48E-07	4.22E-07
12:54:00 PM	1:25:00 PM	0.200	7.432	42.077	1860	7.60	2.40	-26.000	210.9	1.01	184.900	4.44E-07	4.18E-07
													4.27E-07

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 4.27 E-07 CM/SEC

REMARKS: Testing Completed 11/15/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay with Sand (CL), Yellow Brown mottled Light Gray/Gray, Silty, Stiff, Moist**

LIQUID LIMIT **38** PLASTIC LIMIT **22** P.I. **16**

BORING NO. **Boring 3U** SAMPLE NO. **ST 8**

SAMPLE TYPE **ST** DEPTH **9½-11 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **21.4%** INITIAL DRY DENSITY **101.2 P.C.F.**

FINAL WATER CONTENT **21.4%** FINAL DRY DENSITY **102.2 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
8:55:00 PM		0.200	7.483	41.834		2.21	6.92	23.550	351.5		375.050		
8:55:00 PM	7:04:00 AM	0.200	7.483	41.834	42180	3.58	5.53	9.750	351.5	1.01	361.250	1.59E-08	1.50E-08
7:04:00 AM	8:38:00 AM	0.200	7.483	41.834	5640	3.78	5.33	7.750	351.5	1.00	359.250	1.76E-08	1.66E-08
8:38:00 AM	12:03:00 PM	0.200	7.483	41.834	12300	4.18	4.92	3.700	351.5	1.03	355.200	1.65E-08	1.55E-08
													1.52E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 1.52 E-08 CM/SEC

REMARKS: Testing Completed 11/21/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL/CH), Yellow Brown mottled Light Gray, Silty, Stiff, Moist**

LIQUID LIMIT **49** PLASTIC LIMIT **22** P.I. **27**

BORING NO. **Boring 4** SAMPLE NO.

SAMPLE TYPE **ST** DEPTH **19½-21½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **25.5%** INITIAL DRY DENSITY **96.4 P.C.F.**

FINAL WATER CONTENT **23.8%** FINAL DRY DENSITY **100.0 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
7:09:00 PM		0.200	7.437	41.205		3.74	5.94	11.000	210.9		221.900		
7:09:00 PM	8:29:00 PM	0.200	7.437	41.205	4800	4.13	5.51	6.900	210.9	1.10	217.800	7.01E-08	6.61E-08
8:29:00 PM	9:00:00 PM	0.200	7.437	41.205	1860	4.30	5.34	5.200	210.9	1.00	216.100	7.60E-08	7.16E-08
9:00:00 PM	9:28:00 PM	0.200	7.437	41.205	1680	4.42	5.22	4.000	210.9	1.00	214.900	5.98E-08	5.64E-08
													6.53E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 6.53 E-08 CM/SEC

REMARKS: Testing Completed 11/5/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Brown mottled Yellow Brown/Light Gray, Silty, Trace Sand, Medium, Moist**

LIQUID LIMIT **32** PLASTIC LIMIT **20** P.I. **12**

BORING NO. **Boring 4L** SAMPLE NO. **ST 10**

SAMPLE TYPE **ST** DEPTH **12-14 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **25.7%** INITIAL DRY DENSITY **100.7 P.C.F.**

FINAL WATER CONTENT **24.6%** FINAL DRY DENSITY **101.8 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
12:16:00 PM		0.200	7.397	41.013		1.20	8.82	38.100	140.6		178.700		
12:16:00 PM	1:03:00 PM	0.200	7.397	41.013	2820	3.75	6.23	12.400	140.6	1.02	153.000	9.93E-07	9.35E-07
1:03:00 PM	2:23:00 PM	0.200	7.397	41.013	4800	7.39	2.55	-24.200	140.6	1.01	116.400	1.03E-06	9.68E-07
2:23:00 PM	3:26:00 PM	0.200	7.397	41.013	3780	9.59	0.32	-46.350	140.6	1.01	94.250	1.01E-06	9.49E-07
													9.53E-07

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 9.53 E-07 CM/SEC

REMARKS: Testing Completed 11/7/2023

TESTED BY: **BJS**

COMPUTED BY: **BJS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Fat Clay (CH), Yellow Brown mottled Light Gray, Silty, Stiff, Moist**

LIQUID LIMIT **62** PLASTIC LIMIT **24** P.I. **38**

BORING NO. **Boring 4U** SAMPLE NO. **ST 22**

SAMPLE TYPE **ST** DEPTH **27-29 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **28.8%** INITIAL DRY DENSITY **94.6 P.C.F.**

FINAL WATER CONTENT **28.1%** FINAL DRY DENSITY **95.5 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
12:47:00 PM		0.200	7.706	42.077		2.33	6.84	22.550	210.9		233.450		
12:47:00 PM	1:08:00 PM	0.200	7.706	42.077	1260	2.35	6.82	22.350	210.9	1.00	233.250	1.25E-08	1.17E-08
1:08:00 PM	2:20:00 PM	0.200	7.706	42.077	4320	2.42	6.74	21.600	210.9	1.14	232.500	1.37E-08	1.29E-08
2:20:00 PM	4:43:00 PM	0.200	7.706	42.077	8580	2.50	6.66	20.800	210.9	1.00	231.700	7.36E-09	6.93E-09
													9.17E-09

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 9.17 E-09 CM/SEC

REMARKS: Testing Completed 11/10/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Light Gray mottled Gray/Yellow Brown, Silty, Trace Sand, Medium, Moist**

LIQUID LIMIT **43** PLASTIC LIMIT **22** P.I. **21**

BORING NO. **Boring 5** SAMPLE NO. **10**

SAMPLE TYPE **ST** DEPTH **24½-26½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **24.5%** INITIAL DRY DENSITY **99.8 P.C.F.**

FINAL WATER CONTENT **23.7%** FINAL DRY DENSITY **100.3 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
1:59:00 PM		0.200	6.904	41.883		2.62	6.29	18.350	210.9		229.250		
1:59:00 PM	2:35:00 PM	0.200	6.904	41.883	2160	3.48	5.40	9.600	210.9	1.03	220.500	2.97E-07	2.80E-07
2:35:00 PM	3:06:00 PM	0.200	6.904	41.883	1860	4.16	4.69	2.650	210.9	1.04	213.550	2.84E-07	2.67E-07
3:06:00 PM	3:47:00 PM	0.200	6.904	41.883	2460	5.00	3.84	-5.800	210.9	1.01	205.100	2.71E-07	2.55E-07
													2.67E-07

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 2.67 E-07 CM/SEC

REMARKS: Testing Completed 10/17/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **46** PLASTIC LIMIT **24** P.I. **22**

BORING NO. **Boring 5L** SAMPLE NO.

SAMPLE TYPE **ST** DEPTH **9½-11 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **29.0%** INITIAL DRY DENSITY **94.4 P.C.F.**

FINAL WATER CONTENT **28.4%** FINAL DRY DENSITY **94.3 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
12:33:00 PM		0.200	7.696	40.869		0.08	9.97	49.450	210.9		260.350		
12:33:00 PM	2:12:00 PM	0.200	7.696	40.869	5940	4.13	5.77	8.200	210.9	1.04	219.100	5.47E-07	5.15E-07
2:12:00 PM	2:38:00 PM	0.200	7.696	40.869	1560	5.12	4.77	-1.750	210.9	1.01	209.150	5.61E-07	5.28E-07
2:38:00 PM	3:21:00 PM	0.200	7.696	40.869	2580	6.62	3.24	-16.900	210.9	1.02	194.000	5.49E-07	5.17E-07
													5.18E-07

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 5.18 E-07 CM/SEC

REMARKS: Testing Completed 10/16/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Gray/Greenish Gray mottled Yellow Brown, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **34** PLASTIC LIMIT **19** P.I. **15**

BORING NO. **Boring 6** SAMPLE NO. **8**

SAMPLE TYPE **ST** DEPTH **17-19 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **19.5%** INITIAL DRY DENSITY **106.8 P.C.F.**

FINAL WATER CONTENT **20.7%** FINAL DRY DENSITY **106.4 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
7:10:00 AM		0.200	8.199	42.418		3.33	6.20	14.350	210.9		225.250		
7:10:00 AM	8:01:00 AM	0.200	8.199	42.418	3060	3.49	6.04	12.750	210.9	1.00	223.650	4.50E-08	4.24E-08
8:01:00 AM	9:31:00 AM	0.200	8.199	42.418	5400	3.76	5.76	10.000	210.9	1.04	220.900	4.43E-08	4.17E-08
9:31:00 AM	10:31:00 AM	0.200	8.199	42.418	3600	3.95	5.57	8.100	210.9	1.00	219.000	4.64E-08	4.37E-08
													4.25E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 4.25 E-08 CM/SEC

REMARKS: Testing Completed 10/23/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Light Gray mottled Reddish Brown, Silty, Trace Sand, Medium, Moist**

LIQUID LIMIT **41** PLASTIC LIMIT **23** P.I. **18**

BORING NO. **Boring 6L-ST1** SAMPLE NO. **ST1**

SAMPLE TYPE **ST** DEPTH **7½-9ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **27.5%** INITIAL DRY DENSITY **95.2 P.C.F.**

FINAL WATER CONTENT **26.0%** FINAL DRY DENSITY **96.2 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
10:42:00 AM		0.200	7.625	39.301		1.80	7.77	29.850	210.9		240.750		
10:42:00 AM	11:10:00 AM	0.200	7.625	39.301	1680	2.98	6.56	17.900	210.9	1.03	228.800	5.88E-07	5.54E-07
11:10:00 AM	11:59:00 AM	0.200	7.625	39.301	2940	4.88	4.61	-1.350	210.9	1.03	209.550	5.80E-07	5.46E-07
11:59:00 AM	12:16:00 PM	0.200	7.625	39.301	1020	5.49	3.98	-7.550	210.9	1.03	203.350	5.71E-07	5.38E-07
													5.47E-07

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 5.47 E-07 CM/SEC

REMARKS: Testing Completed 10/20/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Fat Clay (CH), Brown/Yellow Brown mottled Light Gray, Silty, Stiff, Moist**

LIQUID LIMIT **63** PLASTIC LIMIT **20** P.I. **43**

BORING NO. **Boring 7** SAMPLE NO. **7**

SAMPLE TYPE **ST** DEPTH **19½-21½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **28.4%** INITIAL DRY DENSITY **95.5 P.C.F.**

FINAL WATER CONTENT **27.4%** FINAL DRY DENSITY **94.6 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
1:32:00 PM		0.200	7.478	40.869		0.20	9.40	46.000	210.9		256.900		
1:32:00 PM	3:08:00 PM	0.200	7.478	40.869	5760	0.35	9.25	44.500	210.9	1.00	255.400	1.86E-08	1.75E-08
3:08:00 PM	3:45:00 PM	0.200	7.478	40.869	2220	0.40	9.20	44.000	210.9	1.00	254.900	1.62E-08	1.52E-08
3:45:00 PM	4:16:00 PM	0.200	7.478	40.869	1860	0.45	9.15	43.500	210.9	1.00	254.400	1.93E-08	1.82E-08
													1.71E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 1.71 E-08 CM/SEC

REMARKS: Testing Completed 10/26/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Sandy Silty Clay (CL-ML), Yellow Brown mottled Reddish Brown/Light Gray, Medium, Moist**

LIQUID LIMIT **26** PLASTIC LIMIT **19** P.I. **7**

BORING NO. **Boring 8L** SAMPLE NO. **5**

SAMPLE TYPE **ST** DEPTH **12-14 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **24.0%** INITIAL DRY DENSITY **101.1 P.C.F.**

FINAL WATER CONTENT **24.7%** FINAL DRY DENSITY **101.0 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
2:24:00 PM		0.200	7.620	41.302		4.90	5.01	0.550	70.3		70.850		
2:24:00 PM	3:27:00 PM	0.200	7.620	41.302	3780	8.66	1.24	-37.100	70.3	1.00	33.200	3.70E-06	3.49E-06
3:27:00 PM	3:48:00 PM	0.200	7.620	41.302	1260	9.36	0.54	-44.100	70.3	1.00	26.200	3.47E-06	3.27E-06
3:48:00 PM	4:08:00 PM	0.200	7.620	41.302	1200	9.90	0.00	-49.500	70.3	1.00	20.800	3.55E-06	3.34E-06
													3.41E-06

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 3.41 E-06 CM/SEC

REMARKS: Testing Completed 11/7/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Yelllow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **48** PLASTIC LIMIT **21** P.I. **27**

BORING NO. **Boring 8U** SAMPLE NO. **ST 8**

SAMPLE TYPE **ST** DEPTH **9½-11½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **23.0%** INITIAL DRY DENSITY **102.4 P.C.F.**

FINAL WATER CONTENT **23.3%** FINAL DRY DENSITY **102.9 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
10:58:00 AM		0.200	7.280	41.398		5.13	4.40	-3.650	210.9		207.250		
10:58:00 AM	12:10:00 PM	0.200	7.280	41.398	4320	5.25	4.27	-4.900	210.9	1.08	206.000	2.46E-08	2.32E-08
12:10:00 PM	3:07:00 PM	0.200	7.280	41.398	10620	5.54	3.96	-7.900	210.9	1.07	203.000	2.43E-08	2.29E-08
3:07:00 PM	3:54:00 PM	0.200	7.280	41.398	2820	5.61	3.89	-8.600	210.9	1.00	202.300	2.15E-08	2.03E-08
													2.25E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 2.25 E-08 CM/SEC

REMARKS: Testing Completed 11/17/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Light Gray mottled Yellow Brown, Silty, Stiff, Moist**

LIQUID LIMIT **45** PLASTIC LIMIT **19** P.I. **26**

BORING NO. **Boring 8U** SAMPLE NO. **ST16**

SAMPLE TYPE **ST** DEPTH **19½-21½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **23.4%** INITIAL DRY DENSITY **100.9 P.C.F.**

FINAL WATER CONTENT **25.4%** FINAL DRY DENSITY **100.2 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
8:39:00 AM		0.200	7.732	41.398		1.13	7.78	33.250	210.9		244.150		
8:39:00 AM	9:05:00 AM	0.200	7.732	41.398	1560	1.15	7.76	33.050	210.9	1.00	243.950	9.81E-09	9.24E-09
9:05:00 AM	10:02:00 AM	0.200	7.732	41.398	3420	1.19	7.72	32.650	210.9	1.00	243.550	8.96E-09	8.44E-09
10:02:00 AM	12:04:00 PM	0.200	7.732	41.398	7320	1.29	7.62	31.650	210.9	1.00	242.550	1.05E-08	9.89E-09
													9.40E-09

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 9.40 E-09 CM/SEC

REMARKS: Testing Completed 11/21/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Yellow Brown mottled Light Gray/Gray, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **46** PLASTIC LIMIT **21** P.I. **25**

BORING NO. **Boring 9CCR** SAMPLE NO. **ST 8**

SAMPLE TYPE **ST** DEPTH **9½-11½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **22.9%** INITIAL DRY DENSITY **102.9 P.C.F.**

FINAL WATER CONTENT **23.2%** FINAL DRY DENSITY **103.4 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
9:05:00 AM		0.200	7.336	41.350		2.15	7.14	24.950	210.9		235.850		
9:05:00 AM	10:59:00 AM	0.200	7.336	41.350	6840	2.24	7.05	24.050	210.9	1.00	234.950	9.92E-09	9.34E-09
10:59:00 AM	12:10:00 PM	0.200	7.336	41.350	4260	2.30	6.99	23.450	210.9	1.00	234.350	1.06E-08	1.00E-08
12:10:00 PM	3:06:00 PM	0.200	7.336	41.350	10560	2.44	6.85	22.050	210.9	1.00	232.950	1.01E-08	9.48E-09
													9.55E-09

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 9.55 E-09 CM/SEC

REMARKS: Testing Completed 11/17/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay with Sand (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Soft, Moist**

LIQUID LIMIT **26** PLASTIC LIMIT **17** P.I. **9**

BORING NO. **Boring 9L** SAMPLE NO.

SAMPLE TYPE **ST** DEPTH **7½-9 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **24.3%** INITIAL DRY DENSITY **101.3 P.C.F.**

FINAL WATER CONTENT **20.1%** FINAL DRY DENSITY **106.5 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
5:24:00 PM		0.200	7.112	40.391		4.13	5.83	8.500	70.3		78.800		
5:24:00 PM	6:08:00 PM	0.200	7.112	40.391	2640	6.89	3.06	-19.150	70.3	1.00	51.150	2.88E-06	2.72E-06
6:08:00 PM	6:26:00 PM	0.200	7.112	40.391	1080	7.63	2.30	-26.650	70.3	1.03	43.650	2.59E-06	2.44E-06
6:26:00 PM	6:40:00 PM	0.200	7.112	40.391	840	8.09	1.85	-31.200	70.3	0.98	39.100	2.31E-06	2.17E-06
													2.55E-06

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 2.55 E-06 CM/SEC

REMARKS: Testing Completed 11/9/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Gray mottled Light Gray, Silty, Stiff, Moist**

LIQUID LIMIT **46** PLASTIC LIMIT **22** P.I. **24**

BORING NO. **Boring 9U** SAMPLE NO. **ST 16**

SAMPLE TYPE **ST** DEPTH **19½-21½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **23.4%** INITIAL DRY DENSITY **102.5 P.C.F.**

FINAL WATER CONTENT **23.1%** FINAL DRY DENSITY **102.7 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
3:13:00 PM		0.200	7.681	42.077		0.88	8.68	39.000	210.9		249.900		
3:13:00 PM	3:58:00 PM	0.200	7.681	42.077	2700	0.99	8.57	37.900	210.9	1.00	248.800	2.98E-08	2.81E-08
3:58:00 PM	4:25:00 PM	0.200	7.681	42.077	1620	1.06	8.50	37.200	210.9	1.00	248.100	3.17E-08	2.99E-08
4:25:00 PM	4:58:00 PM	0.200	7.681	42.077	1980	1.12	8.44	36.600	210.9	1.00	247.500	2.23E-08	2.10E-08
													2.63E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 2.63 E-08 CM/SEC

REMARKS: Testing Completed 11/22/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Yellow Brown mottled Light Gray, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **36** PLASTIC LIMIT **20** P.I. **16**

BORING NO. **Boring 11U** SAMPLE NO. **ST 8**

SAMPLE TYPE **ST** DEPTH **9½-11½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **23.1%** INITIAL DRY DENSITY **104.4 P.C.F.**

FINAL WATER CONTENT **22.3%** FINAL DRY DENSITY **105.9 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
7:46:00 AM		0.200	7.244	41.834		2.04	7.38	26.700	210.9		237.600		
7:46:00 AM	8:57:00 AM	0.200	7.244	41.834	4260	2.12	7.30	25.900	210.9	1.00	236.800	1.37E-08	1.29E-08
8:57:00 AM	9:30:00 AM	0.200	7.244	41.834	1980	2.16	7.26	25.500	210.9	1.00	236.400	1.48E-08	1.39E-08
9:30:00 AM	10:41:00 AM	0.200	7.244	41.834	4260	2.25	7.17	24.600	210.9	1.00	235.500	1.55E-08	1.46E-08
													1.38E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 1.38 E-08 CM/SEC

REMARKS: Testing Completed 11/13/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Brown mottled Yellow Brown, Silty, Stiff, Moist**

LIQUID LIMIT **48** PLASTIC LIMIT **21** P.I. **27**

BORING NO. **Boring 11U** SAMPLE NO. **ST 16**

SAMPLE TYPE **ST** DEPTH **19½-21½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **25.2%** INITIAL DRY DENSITY **97.4 P.C.F.**

FINAL WATER CONTENT **26.8%** FINAL DRY DENSITY **97.3 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
12:17:00 PM		0.200	7.498	42.028		0.50	9.38	44.400	210.9		255.300		
12:17:00 PM	12:30:00 PM	0.200	7.498	42.028	780	0.84	9.02	40.900	210.9	1.06	251.800	3.16E-07	2.97E-07
12:30:00 PM	12:40:00 PM	0.200	7.498	42.028	600	1.10	8.77	38.350	210.9	0.96	249.250	3.03E-07	2.85E-07
12:40:00 PM	1:03:00 PM	0.200	7.498	42.028	1380	1.73	8.12	31.950	210.9	1.03	242.850	3.36E-07	3.17E-07
													3.04E-07

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 3.04 E-07 CM/SEC

REMARKS: Testing Completed 11/13/2023

TESTED BY: **NAS**

COMPUTED BY: **NAS**

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PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Light Gray mottled Yelllow Brown, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **30** PLASTIC LIMIT **19** P.I. **11**

BORING NO. **Boring 12L** SAMPLE NO.

SAMPLE TYPE **ST** DEPTH **14½-16 ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **22.2%** INITIAL DRY DENSITY **104.3 P.C.F.**

FINAL WATER CONTENT **22.0%** FINAL DRY DENSITY **105.1 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
5:25:00 PM		0.200	7.203	41.447		5.54	3.60	-9.700	70.3		60.600		
5:25:00 PM	5:40:00 PM	0.200	7.203	41.447	900	5.83	3.30	-12.650	70.3	1.03	57.650	9.64E-07	9.08E-07
5:40:00 PM	5:52:00 PM	0.200	7.203	41.447	720	6.09	3.02	-15.350	70.3	1.08	54.950	1.16E-06	1.09E-06
5:52:00 PM	5:58:00 PM	0.200	7.203	41.447	360	6.20	2.92	-16.400	70.3	0.91	53.900	9.31E-07	8.77E-07
													9.69E-07

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 9.69 E-07 CM/SEC

REMARKS: Testing Completed 11/3/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Yellow Brown mottled Light Gray, Black Oxidation, Silty, Stiff, Moist**

LIQUID LIMIT **45** PLASTIC LIMIT **22** P.I. **23**

BORING NO. **Boring 12U** SAMPLE NO. **ST 8**

SAMPLE TYPE **ST** DEPTH **9½-11½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **20.7%** INITIAL DRY DENSITY **107.5 P.C.F.**

FINAL WATER CONTENT **21.6%** FINAL DRY DENSITY **106.3 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
8:14:00 AM		0.200	7.457	41.785		1.48	7.91	32.150	210.9		243.050		
8:14:00 AM	9:34:00 AM	0.200	7.457	41.785	4800	1.50	7.89	31.950	210.9	1.00	242.850	3.06E-09	2.88E-09
9:34:00 AM	11:39:00 AM	0.200	7.457	41.785	7500	1.54	7.85	31.550	210.9	1.00	242.450	3.92E-09	3.70E-09
11:39:00 AM	1:09:00 PM	0.200	7.457	41.785	5400	1.56	7.83	31.350	210.9	1.00	242.250	2.73E-09	2.57E-09
													3.13E-09

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 3.13 E-09 CM/SEC

REMARKS: Testing Completed 11/24/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

GEOTECHNICS
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A Division of Klingner

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Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Yellow Brown mottled Light Gray, Silty, Black Oxidation, Silty, Stiff, Moist**

LIQUID LIMIT **42** PLASTIC LIMIT **22** P.I. **20**

BORING NO. **Boring 12U** SAMPLE NO. **ST 16**

SAMPLE TYPE **ST** DEPTH **19½-21½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **22.2%** INITIAL DRY DENSITY **100.1 P.C.F.**

FINAL WATER CONTENT **26.8%** FINAL DRY DENSITY **97.3 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
6:31:00 AM		0.200	7.366	42.126		1.62	8.07	32.250	210.9		243.150		
6:31:00 AM	8:42:00 AM	0.200	7.366	42.126	7860	1.74	7.96	31.100	210.9	0.92	242.000	1.05E-08	9.93E-09
8:42:00 AM	10:53:00 AM	0.200	7.366	42.126	7860	1.86	7.84	29.900	210.9	1.00	240.800	1.11E-08	1.04E-08
10:53:00 AM	4:03:00 PM	0.200	7.366	42.126	18600	2.13	7.55	27.100	210.9	1.07	238.000	1.10E-08	1.04E-08
													1.03E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 1.03 E-08 CM/SEC

REMARKS: Testing Completed 11/25/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Lean Clay (CL), Yellow Brown, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **34** PLASTIC LIMIT **20** P.I. **14**

BORING NO. **Boring 13BN** SAMPLE NO. **ST 7**

SAMPLE TYPE **ST** DEPTH **8½-9½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **19.0%** INITIAL DRY DENSITY **109.7 P.C.F.**

FINAL WATER CONTENT **18.8%** FINAL DRY DENSITY **110.9 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
9:06:00 AM		0.200	7.219	41.785		5.27	4.64	-3.150	210.9		207.750		
9:06:00 AM	10:18:00 AM	0.200	7.219	41.785	4320	5.32	4.59	-3.650	210.9	1.00	207.250	9.64E-09	9.08E-09
10:18:00 AM	12:22:00 PM	0.200	7.219	41.785	7440	5.40	4.51	-4.450	210.9	1.00	206.450	8.98E-09	8.46E-09
12:22:00 PM	1:18:00 PM	0.200	7.219	41.785	3360	5.44	4.47	-4.850	210.9	1.00	206.050	9.97E-09	9.39E-09
													8.84E-09

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 8.84 E-09 CM/SEC

REMARKS: Testing Completed 11/27/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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Geotechnics Form No. 17-FW

PERMEABILITY TEST REPORT
ASTM D 5084-10

PROJECT No. **23-1071**

PROJECT **Andrews - Springfield, IL Ash Ponds** LOCATION **Springfield, IL**
CLIENT **Andrews Engineering** SAMPLING DATE

SAMPLE DESCRIPTION **Fat Clay (CH), Gray mottled Light Gray, Silty, Trace Sand, Stiff, Moist**

LIQUID LIMIT **52** PLASTIC LIMIT **25** P.I. **27**

BORING NO. **Boring 13BS** SAMPLE NO. **ST 7**

SAMPLE TYPE **ST** DEPTH **8½-9½ ft.**

SPECIFIC GRAVITY, Gs TEST METHOD **ASTM D 5084-10**

INITIAL WATER CONTENT **19.1%** INITIAL DRY DENSITY **109.6 P.C.F.**

FINAL WATER CONTENT **18.2%** FINAL DRY DENSITY **110.6 P.C.F.**

t_1	t_2	a	L	A	t	head	tail	h_w	h_a	dt/dh	h_a+h_w	k	k_{20}
12:54:00 PM		0.200	5.476	41.013		1.24	8.79	37.750	210.9		248.650		
12:54:00 PM	2:26:00 PM	0.200	5.476	41.013	5520	1.51	8.52	35.050	210.9	1.00	245.950	2.64E-08	2.49E-08
2:26:00 PM	4:58:00 PM	0.200	5.476	41.013	9120	1.90	8.12	31.100	210.9	1.03	242.000	2.37E-08	2.23E-08
4:58:00 PM	6:40:00 PM	0.200	5.476	41.013	6120	2.18	7.86	28.400	210.9	0.93	239.300	2.45E-08	2.31E-08
													2.32E-08

COEFFICIENT OF VERTICAL PERMEABILITY
K_{20} = 2.32 E-08 CM/SEC

REMARKS: Testing Completed 11/27/2023

TESTED BY: **BJS/NAS**

COMPUTED BY: **NAS**

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217-877-2100 • FAX 217-877-4816
www.sksengineers.com

Report of Lab Test

PROJECT:	CWLP	**PROJECT NO:**	418834
		DATE OF TEST	June 03, 2024
CLIENT:	Andrews Engineering	**REPORT NUMBER:**	418834-01
ATTN:	Mr. Brad Hunsberger	**PAGE NO.**	1/1

ITEM: **PERMEABILITY TEST RESULTS**

Sample	Moisture Content (%)		Dry Unit Weight (PCF)	Permeability (Cm./Sec.)
	Before Test	After Test		
L4 (17'-19')	37.6	31.5	89.2	1.7 x 10-8
D3 (29.5'-31.5')	27.0	26.6	98.4	2.1 x 10-6
D1 (38.5'-40.5')	23.1	22.9	105.6	5.1 x 10-8
L5 (37.5'-39.5')	23.2	22.4	103.6	6.8 x 10-6
D2 (35.5'-37.5')	25.2	25.0	98.8	2.8 x 10-7
L3 (34.5'-36.5')	24.3	30.4	94.1	8.5 x 10-8
L1 (36'-38')	26.5	25.9	98.2	4.5 x 10-7
D4 (34.5'-36.5')	27.8	23.0	99.4	1.4 x 10-6

NOTES: Test ran according to ASTM D-5084

BY: Stephen Jacobs

APPENDIX F:
POTENTIOMETRIC SURFACE MAPS

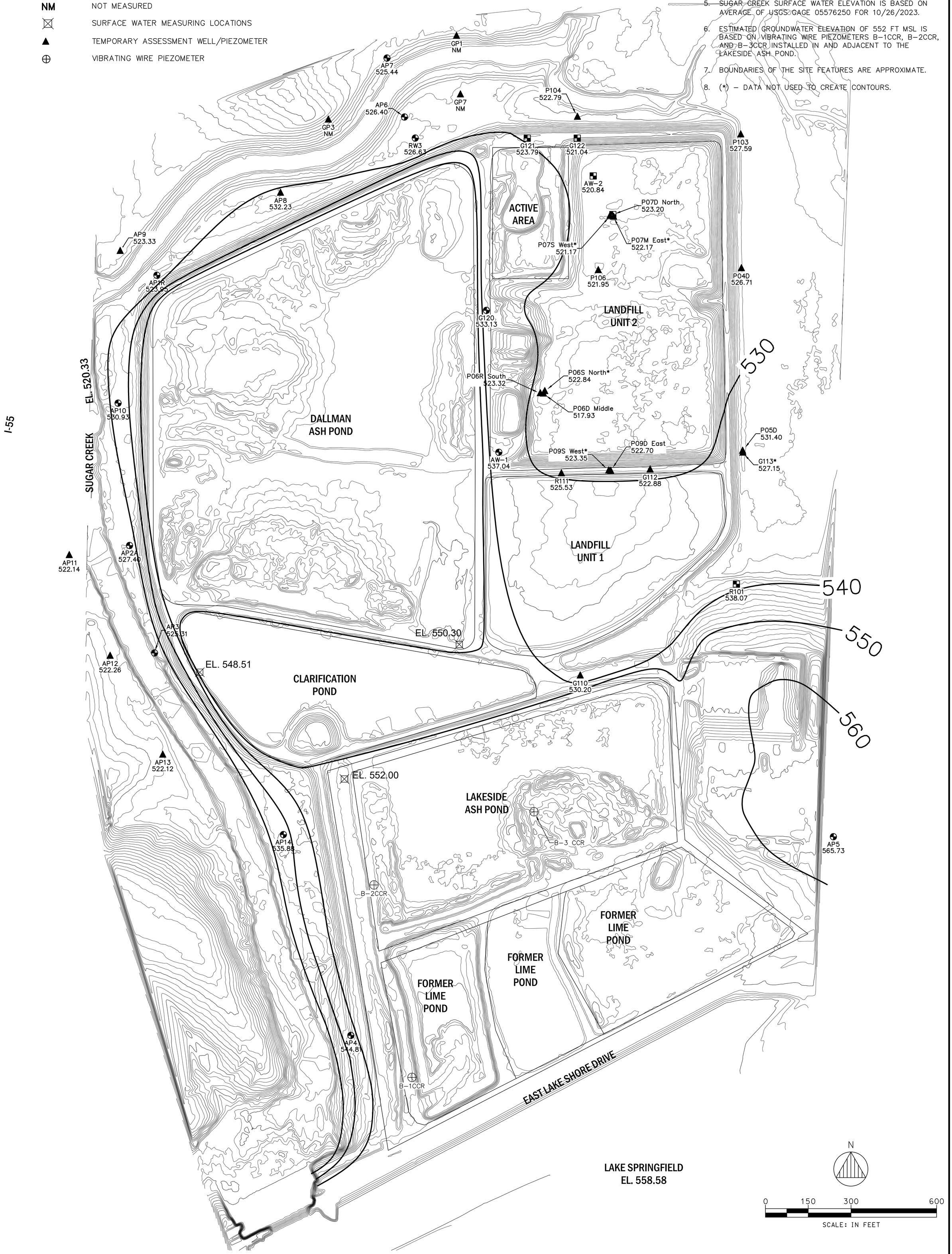
Tab: Layout1 Last Saved: April 28, 2025, by Ben Karpus Plotted: Monday, April 28, 2025 4:12:09 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\MTH\4Q23 MTH.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- 540 — GROUNDWATER CONTOURS
- CCR SURFACE IMPOUNDMENT WELL
- FGDS LANDFILL WELL
- NM — NOT MEASURED
- SURFACE WATER MEASURING LOCATIONS
- TEMPORARY ASSESSMENT WELL/PIEZOMETER
- VIBRATING WIRE PIEZOMETER

NOTES

1. FLIGHT DATE: APRIL 2023.
2. POTENTIOMETRIC CONTOUR INTERVAL SHOWN IS 10 FEET.
3. TOPOGRAPHIC CONTOUR INTERVAL SHOWN IS 2 FEET.
4. SAMPLING DATE: 10/26/2023.
5. SUGAR CREEK SURFACE WATER ELEVATION IS BASED ON AVERAGE OF USGS GAGE 05576250 FOR 10/26/2023.
6. ESTIMATED GROUNDWATER ELEVATION OF 552 FT MSL IS BASED ON VIBRATING WIRE PIEZOMETERS B-1CCR, B-2CCR, AND B-3CCR INSTALLED IN AND ADJACENT TO THE LAKESIDE ASH POND.
7. BOUNDARIES OF THE SITE FEATURES ARE APPROXIMATE.
8. (*) – DATA NOT USED TO CREATE CONTOURS.



8

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: APRIL 2025

POTENTIOMETRIC SURFACE MAP
4TH QUARTER 2023

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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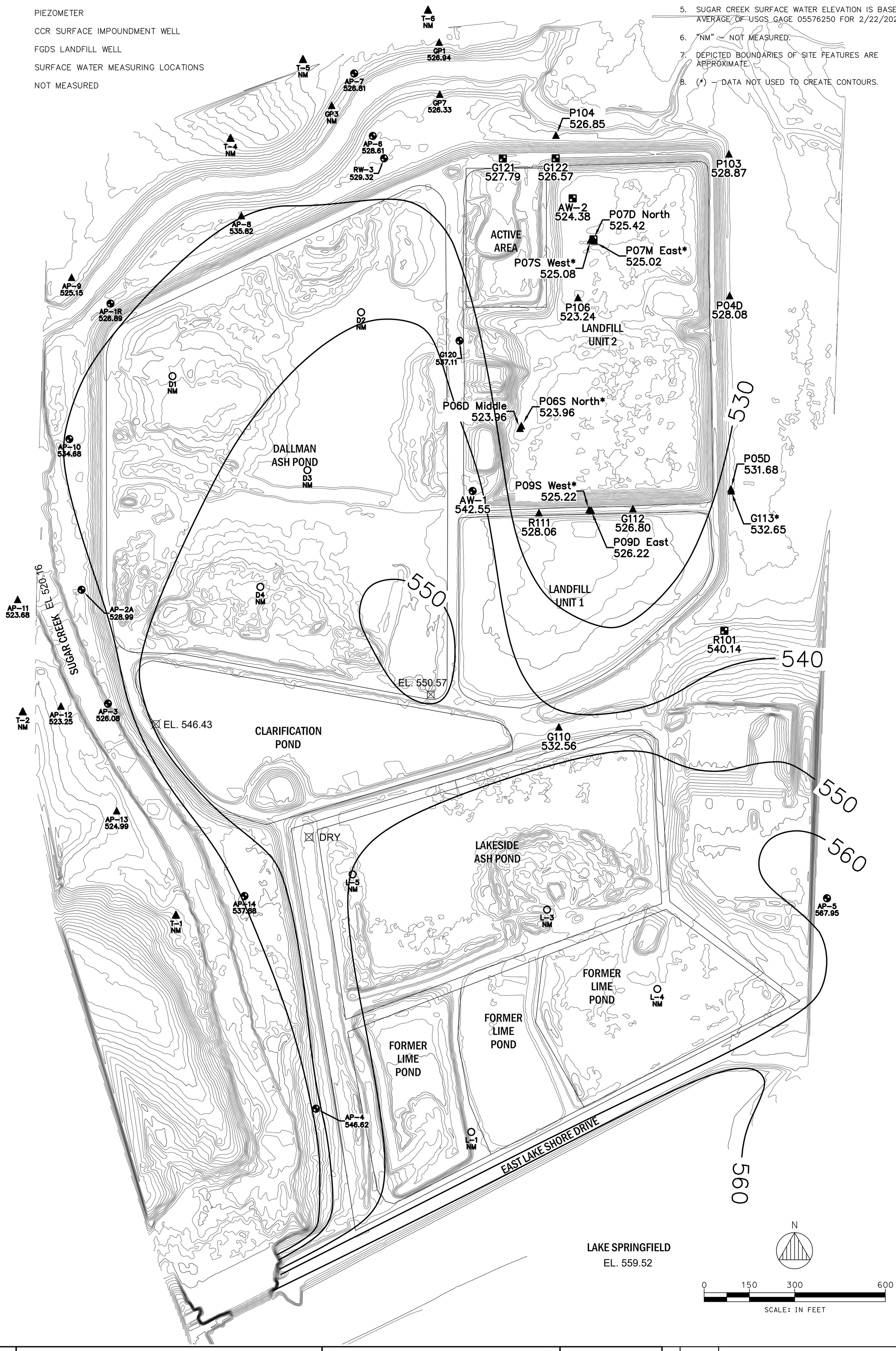
Tab: 2-22-2024 Last Saved: April 28, 2025, by Ben Karpus Plotted: Monday, April 28, 2025 4:22:45 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\MTH\1Q24-4Q24 MTH.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL/PIEZOMETER
- ○ PIEZOMETER
- ◔ CCR SURFACE IMPOUNDMENT WELL
- ◪ FGDS LANDFILL WELL
- ⊠ SURFACE WATER MEASURING LOCATIONS
- NM NOT MEASURED

NOTES

1. FLIGHT DATE: APRIL 2023.
2. POTENTIOMETRIC CONTOUR INTERVAL SHOWN IS 5 FEET.
3. TOPOGRAPHIC CONTOUR INTERVAL SHOWN IS 2 FEET.
4. SAMPLING DATE: 2/22/2024.
5. SUGAR CREEK SURFACE WATER ELEVATION IS BASED ON AVERAGE OF USGS GAGE 05576250 FOR 2/22/2024.
6. "NM" – NOT MEASURED.
7. DEPICTED BOUNDARIES OF SITE FEATURES ARE APPROXIMATE.
8. (*) – DATA NOT USED TO CREATE CONTOURS.



SHEET NUMBER: 6	POTENTIOMETRIC SURFACE MAP 1ST QUARTER 2024	ANDREWS ENGINEERING	
PROJECT ID: 240338/0014	PREPARED FOR	3300 GINGER CREEK DRIVE	
DATE: APRIL 2025	CITY WATER, LIGHT, AND POWER	SPRINGFIELD, ILLINOIS 62711-7233	
	SPRINGFIELD, SANGAMON COUNTY, ILLINOIS	PH (217) 787-2334 WWW.ANDREWS-ENG.COM	
		PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO	
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NO.	DATE	REVISION DESCRIPTION	BY

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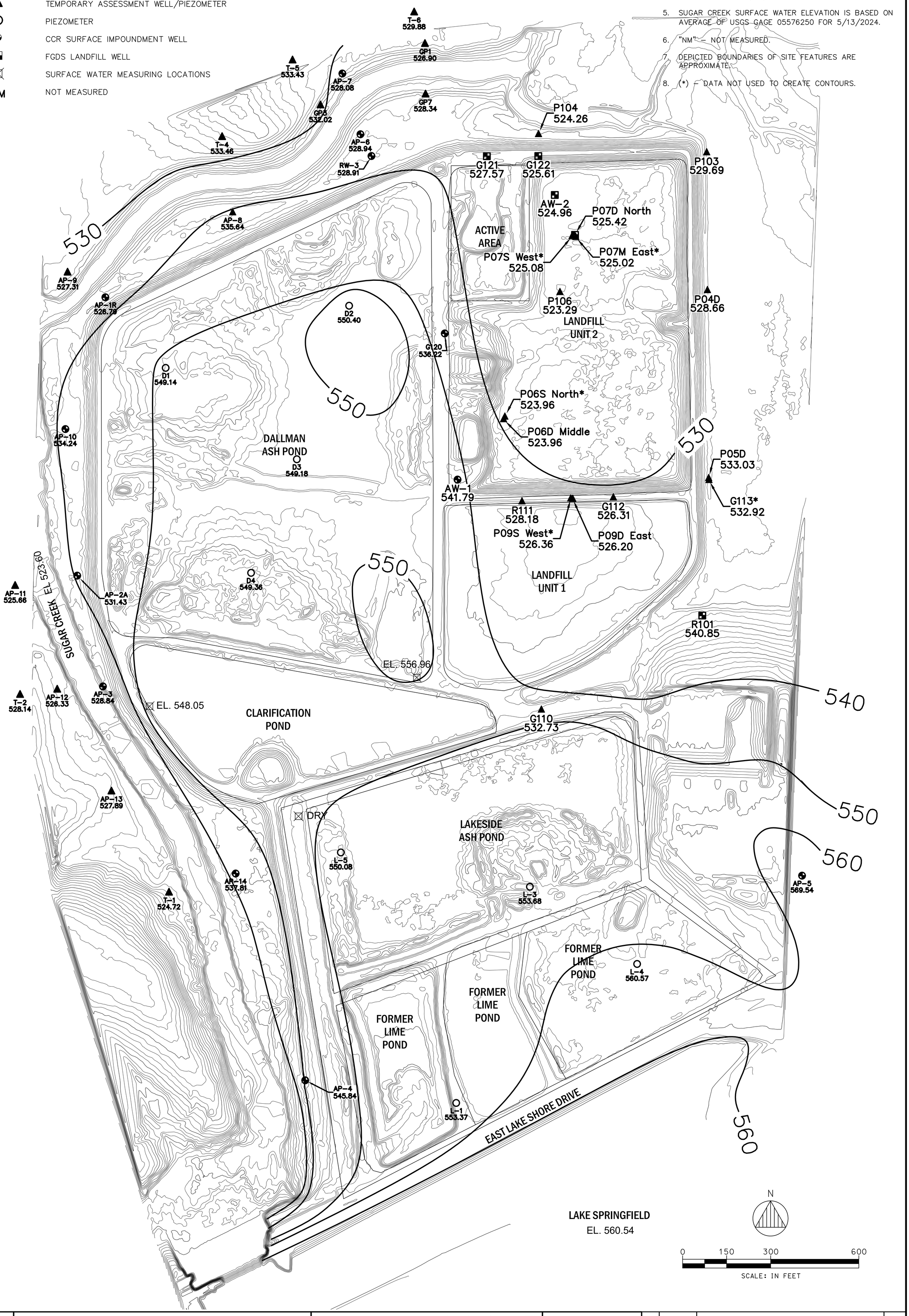
Tab: 5-13-2024 Last Saved: April 28, 2025, by Ben Karpus Plotted: Monday, April 28, 2025 4:24:29 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\MTH\1Q24-4Q24 MTH.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- 540 — GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL/PIEZOMETER
- ○ PIEZOMETER
- ◔ CCR SURFACE IMPOUNDMENT WELL
- ■ FGDS LANDFILL WELL
- ☒ SURFACE WATER MEASURING LOCATIONS
- NM NOT MEASURED

NOTES

1. FLIGHT DATE: APRIL 2023.
2. POTENTIOMETRIC CONTOUR INTERVAL SHOWN IS 5 FEET.
3. TOPOGRAPHIC CONTOUR INTERVAL SHOWN IS 2 FEET.
4. SAMPLING DATE: 5/13/2024.
5. SUGAR CREEK SURFACE WATER ELEVATION IS BASED ON AVERAGE OF USGS GAGE 05576250 FOR 5/13/2024.
6. "NM" - NOT MEASURED.
7. DEPICTED BOUNDARIES OF SITE FEATURES ARE APPROXIMATE.
8. (*) - DATA NOT USED TO CREATE CONTOURS.



SHEET NUMBER: 10	DATE: APRIL 2025	POTENTIOMETRIC SURFACE MAP 2ND QUARTER 2024	ANDREWS ENGINEERING 3300 GINGER CREEK DRIVE SPRINGFIELD, ILLINOIS 62711-7233 PH (217) 787-2334 WWW.ANDREWS-ENG.COM PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO
PROJECT ID: 240338/0014		PREPARED FOR CITY WATER, LIGHT, AND POWER SPRINGFIELD, SANGAMON COUNTY, ILLINOIS	APPROVED BY: MTH DESIGNED BY: MTH DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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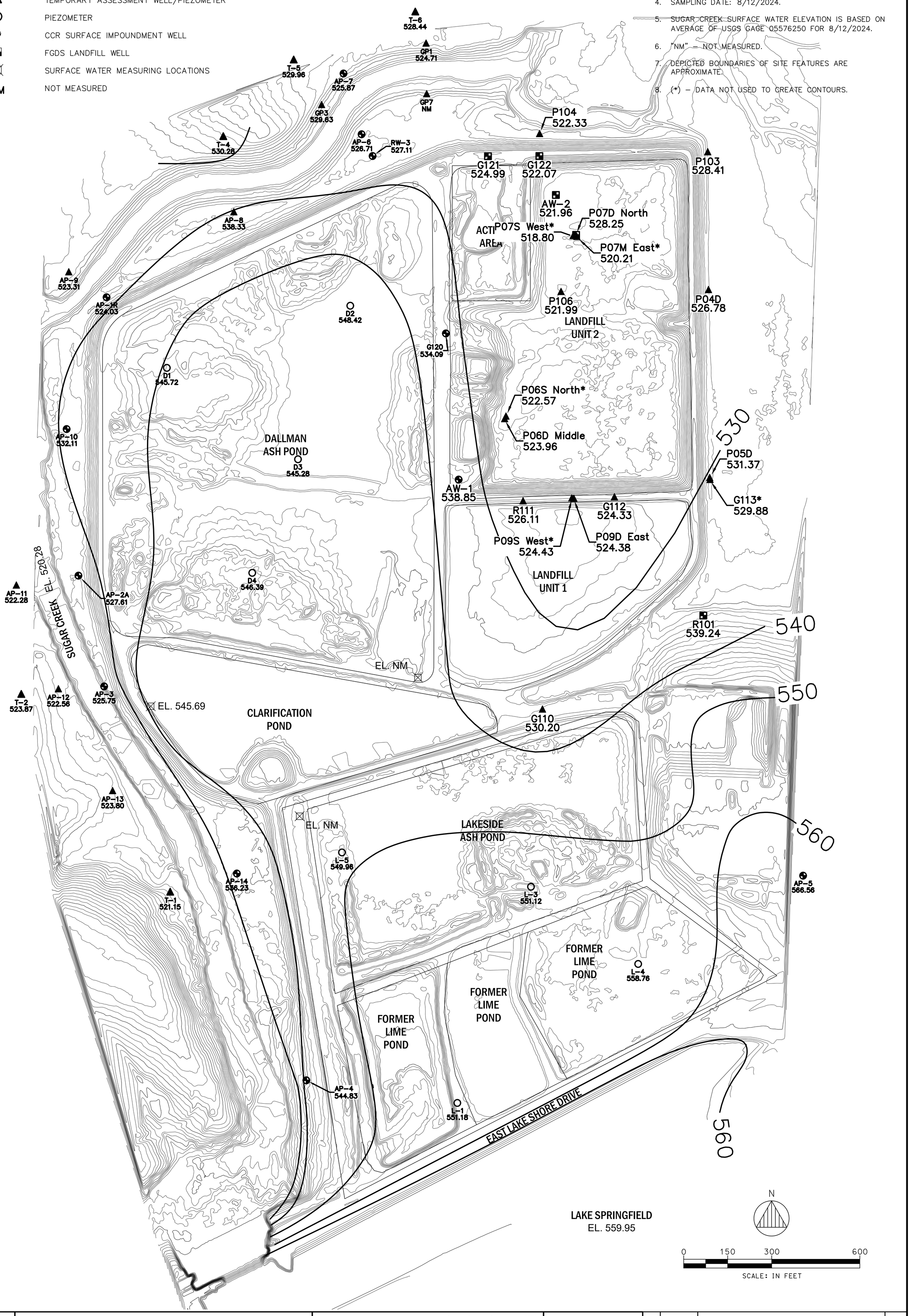
Tab: 8-12-2024 Last Saved: April 28, 2025, by Ben Karpus Plotted: Monday, April 28, 2025 4:25:13 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\MTH\1Q24-4Q24 MTH.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL/PIEZOMETER
- ○ PIEZOMETER
- ◔ CCR SURFACE IMPOUNDMENT WELL
- ◪ FGDS LANDFILL WELL
- ☒ SURFACE WATER MEASURING LOCATIONS
- NM NOT MEASURED

NOTES

1. FLIGHT DATE: APRIL 2023.
2. POTENTIOMETRIC CONTOUR INTERVAL SHOWN IS 5 FEET.
3. TOPOGRAPHIC CONTOUR INTERVAL SHOWN IS 2 FEET.
4. SAMPLING DATE: 8/12/2024.
5. SUGAR CREEK SURFACE WATER ELEVATION IS BASED ON AVERAGE OF USGS GAGE 05576250 FOR 8/12/2024.
6. "NM" – NOT MEASURED.
7. DEPICTED BOUNDARIES OF SITE FEATURES ARE APPROXIMATE.
8. (*) – DATA NOT USED TO CREATE CONTOURS.



SHEET NUMBER: 11	PROJECT ID: 240338/0014	DATE: APRIL 2025	

POTENTIOMETRIC SURFACE MAP
3RD QUARTER 2024

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH	DESIGNED BY: MTH	DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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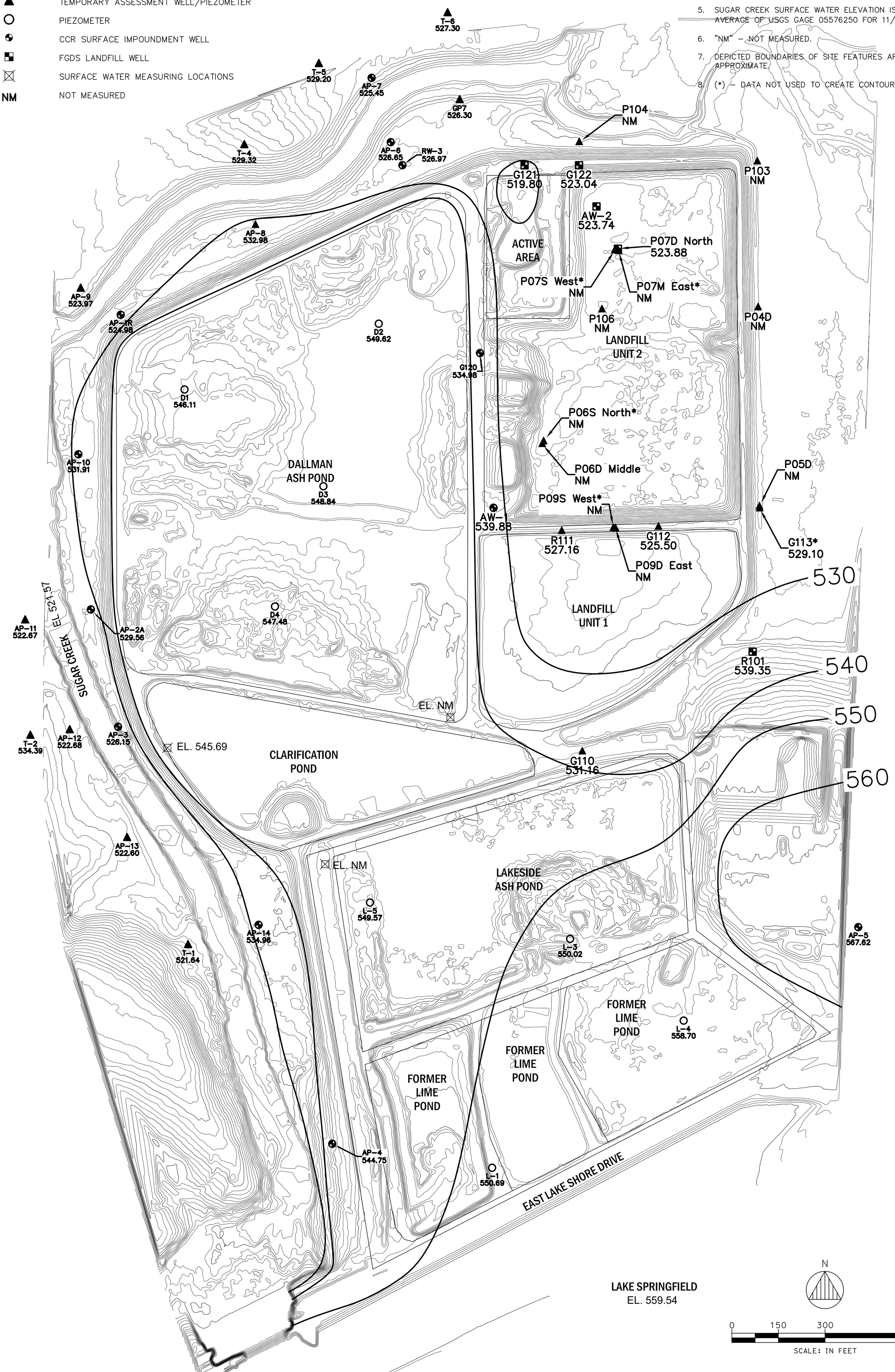
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\MTH\1Q24-4Q24 MTH.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL/PIEZOMETER
- ○ PIEZOMETER
- ◔ CCR SURFACE IMPOUNDMENT WELL
- ■ FGDS LANDFILL WELL
- ☒ SURFACE WATER MEASURING LOCATIONS
- NM NOT MEASURED

NOTES

1. FLIGHT DATE: APRIL 2023.
2. POTENTIOMETRIC CONTOUR INTERVAL SHOWN IS 5 FEET.
3. TOPOGRAPHIC CONTOUR INTERVAL SHOWN IS 2 FEET.
4. SAMPLING DATE: 11/12/2024.
5. SUGAR CREEK SURFACE WATER ELEVATION IS BASED ON AVERAGE OF USGS GAGE 05576250 FOR 11/12/2024.
6. "NM" – NOT MEASURED.
7. DEPICTED BOUNDARIES OF SITE FEATURES ARE APPROXIMATE.
8. (*) – DATA NOT USED TO CREATE CONTOURS.



SHEET NUMBER: 12	DATE: APRIL 2025	POTENTIOMETRIC SURFACE MAP 4TH QUARTER 2024	ANDREWS ENGINEERING 3300 GINGER CREEK DRIVE SPRINGFIELD, ILLINOIS 62711-7233 PH (217) 787-2334 WWW.ANDREWS-ENG.COM PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO
	PROJECT ID: 240338/0014	PREPARED FOR CITY WATER, LIGHT, AND POWER SPRINGFIELD, SANGAMON COUNTY, ILLINOIS	APPROVED BY: MTH DESIGNED BY: MTH DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◔ PART 257 GROUNDWATER MONITORING WELL
- ◪ PART 845 GROUNDWATER MONITORING WELL
- ☒ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.

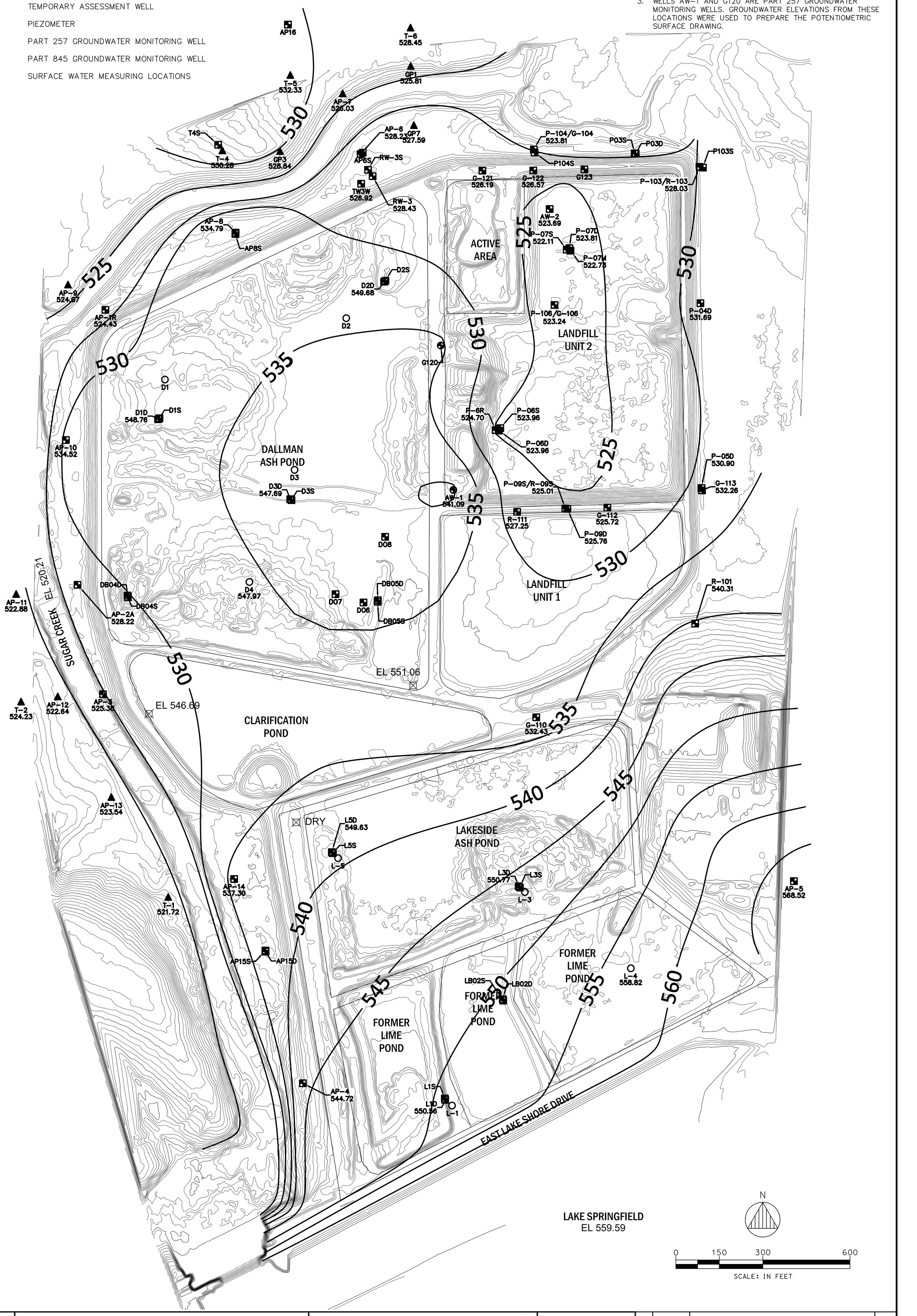

FIG. 1

POTENTIOMETRIC SURFACE MAP
JANUARY 27, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: AUGUST 2025

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

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NO.	DATE	REVISION DESCRIPTION	BY

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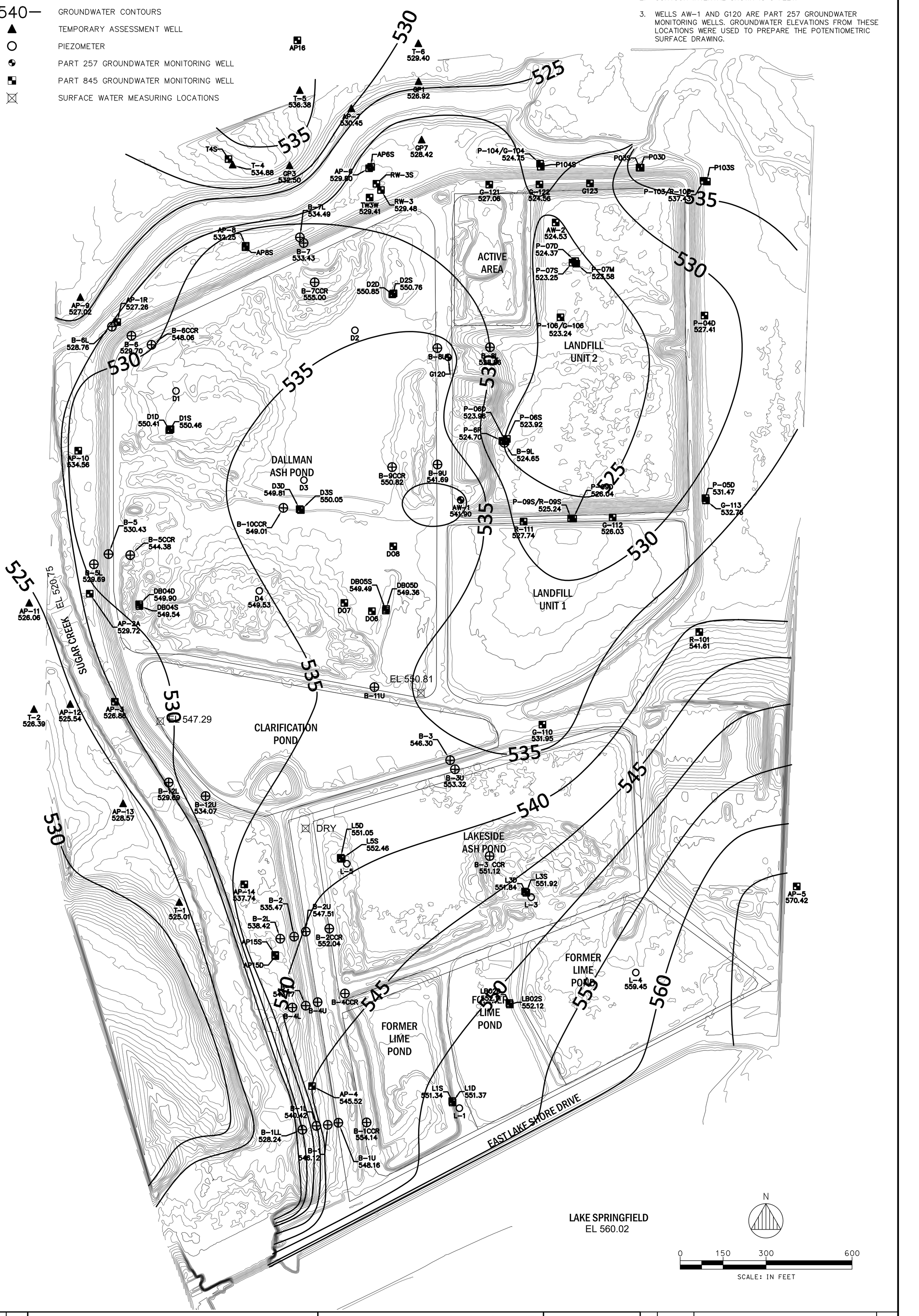
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- 540 — GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◕ PART 257 GROUNDWATER MONITORING WELL
- ■ PART 845 GROUNDWATER MONITORING WELL
- ⊠ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.



LAKE SPRINGFIELD
EL 560.02

N

0 150 300 600
SCALE: IN FEET

FIG. 4

POTENTIOMETRIC SURFACE MAP
APRIL 20, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: AUGUST 2025
PROJECT ID: 240338/0014
SHEET NUMBER:

ANDREWS ENGINEERING
3300 GINGER CREEK DRIVE
SPRINGFIELD, ILLINOIS 62711-7233
PH (217) 787-2334 WWW.ANDREWS-ENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◔ PART 257 GROUNDWATER MONITORING WELL
- ▪ PART 845 GROUNDWATER MONITORING WELL
- ☒ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.

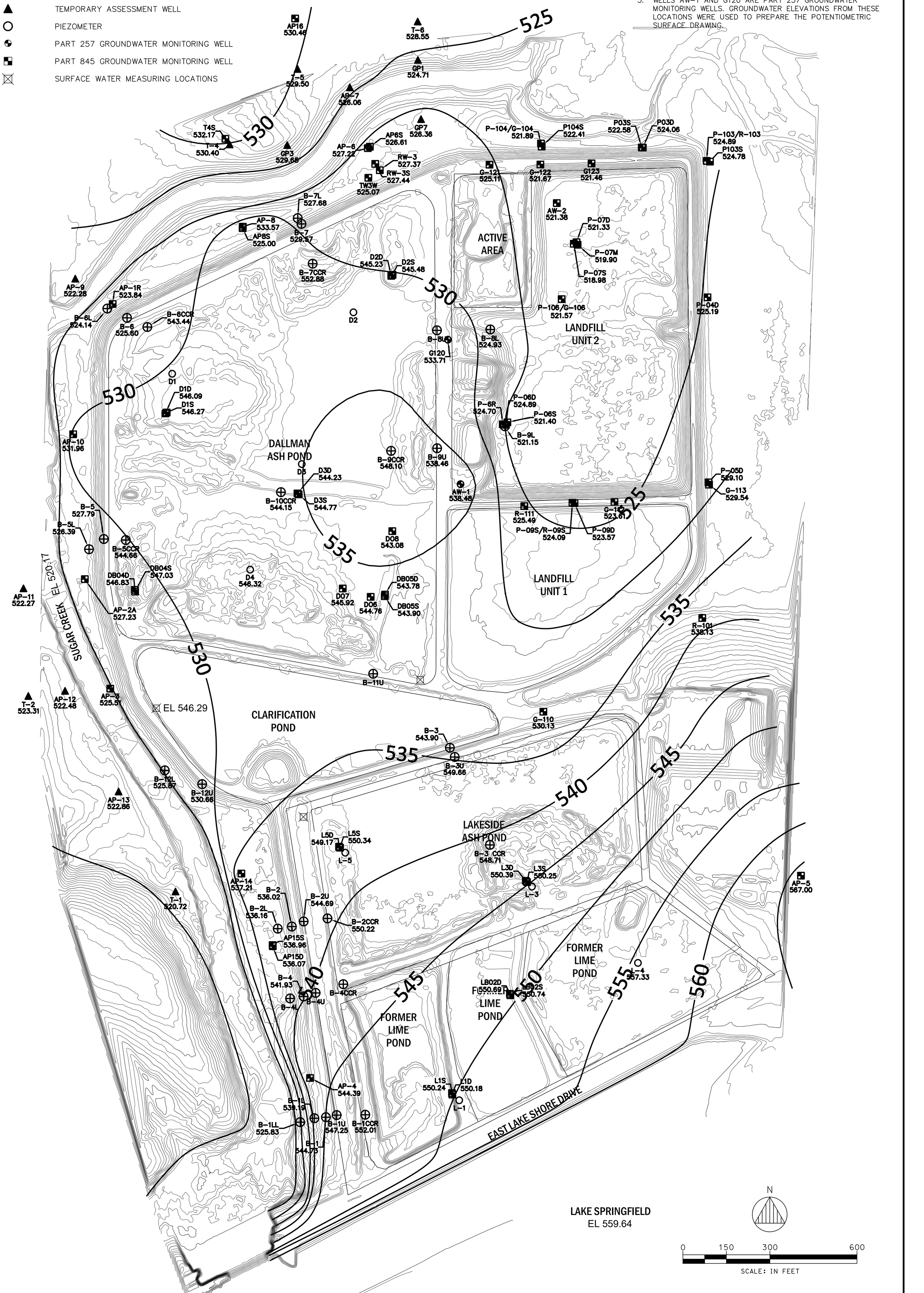

FIG. 8

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: AUGUST 2025

POTENTIOMETRIC SURFACE MAP
AUGUST 21, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

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NO.	DATE	REVISION DESCRIPTION	BY

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