

**City Water, Light & Power  
Coal Combustion Residuals Surface Impoundments**

**Annual Groundwater Monitoring and  
Corrective Action Report**

**40 CFR Part 257**

**Year Ending December 31, 2023**

**January 2024**



*Prepared for:*  
City Water, Light & Power  
3100 Stevenson Drive  
Springfield, Illinois

*Prepared by:*  
Andrews Engineering  
3300 Ginger Creek Dr.  
Springfield, IL

# Table of Contents

- 1. INTRODUCTION ..... 1
- 2. GROUNDWATER MONITORING PROGRAM ..... 8
- 3. 40 CFR 257.90(e): KEY ACTIONS, PROBLEMS ENCOUNTERED, AND KEY ACTIVITIES FOR 2023..... 8
  - 3.1 Key Actions ..... 8
    - 3.1.1 Assessment Monitoring ..... 8
    - 3.1.2 Assessment Monitoring Investigation ..... 9
  - 3.2 Assessment of Corrective Measures..... 9
  - 3.3 Problems Encountered..... 10
  - 3.4 Key Activities for Upcoming Year (2024)..... 11
- 4. 40 CFR 257.90(e)(1) – (5) ..... 11
- 5. CONCLUSION ..... 12

## FIGURES

- Figure 1: Site Location
- Figure 2: Site Details
- Figure 3: Assessment Monitoring Investigation

## TABLES

- Table 1: 2023 Groundwater Analytical Results Summary Table
- Table 2: 2023 Groundwater Analytical Results Exceedance Summary Table

## ATTACHMENTS

- Attachment 1: Statistical Analysis Plan and Calculations
- Attachment 2: 2023 Groundwater Monitoring Reports and Field Logs of 2023 Sampling Events

## 1. INTRODUCTION

Pursuant to 40 CFR §257.90(e), provided herein is the 2023 Annual Groundwater Monitoring and Corrective Action Report (2023 Annual Report) for year ending December 31, 2023.

City Water, Light and Power (CWLP) owns and operates two (2) existing coal combustion residual (CCR) surface impoundments. 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). These CCR surface impoundments are identified as the Lakeside Ash Pond and the Dallman Ash Pond (see Figure 2).

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. 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. The Lakeside Ash Pond consists of four separate ponds (i.e., three ponds formerly used for storage of lime softening sludge and the settling pond) totaling approximately 35.0 acres. The three lime softening sludge ponds were taken out of service in September 2023 with the completion of the construction of the new lime softening sludge-processing area. 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. The Dallman Ash Pond is approximately 34.5 acres and ceased receiving ash in 2021.

As of October 13, 2023, all CCR and non-CCR waste streams ceased flowing into the Lakeside Ash Pond and Dallman Ash Pond.

### **Status of the Groundwater Monitoring and Corrective Action Programs**

Pursuant to 40 CFR 257.90(e)(6), the annual report shall provide an overview of the current status of groundwater monitoring and corrective action programs for the subject CCR unit, to include (in italics):

- 1. At the beginning of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;*

The CWLP facility commenced the 2023 reporting year under the assessment monitoring program requirements of §257.95.

2. *At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 and the assessment monitoring pursuant to §257.95;*

The CWLP facility completed the 2023 reporting year under the assessment monitoring program requirements of §257.95.

3. *If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III to this part pursuant to §257.94(e):*
  - a. *Identify those constituents listed in Appendix III to this part and the names of the monitoring wells associated with such an increase; and*

Pursuant to U.S. EPA recommendations, background concentrations for the Appendix III parameters have been recalculated using eight quarters of data from 2016 and 2017. The background concentrations have been prepared using appropriate statistical calculations pursuant to the requirements of 40 CFR 257.93. The statistical calculations and methodology are provided in Attachment 1. The site specific background concentrations are provided below.

<b>Appendix III Parameter</b>	<b>Units</b>	<b>MCL<sup>1</sup></b>	<b>Site Specific Background</b>	<b>Final GWPS</b>
<i>Boron, total</i>	<i>mg/L</i>	<i>NA</i>	<i>0.150</i>	<i>0.150</i>
<i>Calcium, total</i>	<i>mg/L</i>	<i>NA</i>	<i>182</i>	<i>182</i>
<i>Chloride, total</i>	<i>mg/L</i>	<i>NA</i>	<i>12.3</i>	<i>12.3</i>
<i>Fluoride, total</i>	<i>mg/L</i>	<i>4</i>	<i>0.5</i>	<i>4</i>
<i>pH</i>	<i>s.u.</i>	<i>NA</i>	<i>6.70 – 7.87</i>	<i>6.70 – 7.87</i>
<i>Sulfate, total</i>	<i>mg/L</i>	<i>NA</i>	<i>55.5</i>	<i>55.5</i>
<i>TDS</i>	<i>mg/L</i>	<i>NA</i>	<i>609</i>	<i>609</i>

Notes:

1 - 40 CFR 141

Using the revised background concentrations and determination of applicable GWPS the 2023 groundwater analytical data was retroactively evaluated for statistically significant increases (SSI). A SSI is only concluded if both samples, in a series of two, exceeds the calculated upper prediction limit (UPL) or background and maximum concentration level (MCL), the greater of which is designated the final GWPS. The semi-annual analytical sampling events occurred during the first quarter 2023 (January 26-27, 2023) and third quarter 2023 (July 6-7, 2023). Confirmation samples, where necessary, were collected during the second quarter 2023 (April 11-17, 2023) and fourth quarter 2023 (October 25-26, 2023). The groundwater analytical results for the 2023 groundwater sampling events are summarized in Table 1. The confirmed exceedances are summarized in Table 2.

The Appendix III constituents that exhibited an SSI during 2023 are as follows:

<b>Appendix III Parameter</b>	<b>AP -1</b>	<b>AP -2</b>	<b>AP -3</b>	<b>AP -4</b>	<b>AP -5</b>	<b>AP -6</b>	<b>AP -7</b>	<b>RW -3</b>
<i>Boron, total</i>	X	X	X				X	X
<i>Calcium, total</i>	X	X						
<i>Chloride, total</i>	X	X	X	X		X	X	X
<i>pH</i>	X	X	X					
<i>Sulfate, total</i>	X		X					
<i>TDS</i>	X	X	X					

- b. Provide the date when the assessment monitoring program was initiated for the CCR unit.*

The assessment monitoring program for the CCR unit commenced with the First Quarter 2018 (February 2018) groundwater sampling event. Subsequent groundwater monitoring has been completed semiannually under the assessment monitoring program. The 2023 semiannual sampling events were completed April 11-17, 2023 (second quarter 2023) and October 25-26, 2023 (fourth quarter 2023).

- 4. If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in Appendix IV to this part pursuant to §257.95(g) include all of the following:*
- a. Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase;*

As recommended by the U.S.EPA, background concentrations for the Appendix IV parameters have also been recalculated using eight quarters of data from 2016 and 2017. For Antimony, Cobalt, Lead, Lithium and Thallium the background concentrations utilized eight consecutive quarters of data from 2020 through 2021. The background concentrations have been prepared using appropriate statistical calculations pursuant to the requirements of 40 CFR 257.93. The statistical calculations and methodology are provided in Attachment 1.

Both the MCLs and published GWPSs are provided below. However, the CCR Rule states that if background is higher than these published values, then a site-specific GWPS is developed based on background.

<b>Appendix IV Parameter</b>	<b>Units</b>	<b>MCL<sup>1</sup></b>	<b>Published GWPS<sup>2</sup></b>	<b>Site Specific Background</b>	<b>Final GWPS</b>
<i>Antimony, total</i>	mg/L	0.006	NA	0.001	0.006
<i>Arsenic, total</i>	mg/L	0.01	NA	0.0266	0.0266
<i>Barium, total</i>	mg/L	2	NA	0.519	2
<i>Beryllium, total</i>	mg/L	0.004	NA	0.0025	0.004
<i>Cadmium, total</i>	mg/L	0.005	NA	0.0025	0.005
<i>Chromium, total</i>	mg/L	0.1	NA	0.0653	0.1
<i>Cobalt, total</i>	mg/L	NA	0.006	0.0052	0.006
<i>Lead, total</i>	mg/L	NA	0.015	0.015	0.015
<i>Lithium</i>	mg/L	NA	0.04	0.0124	0.04
<i>Mercury, total</i>	mg/L	0.002	NA	0.0005	0.002
<i>Molybdenum</i>	mg/L	NA	0.1	0.025	0.1
<i>Radium-226+228</i>	pCi/L	0.005	NA	2.38	2.38
<i>Selenium, total</i>	mg/L	0.05	NA	0.025	0.05
<i>Thallium</i>	mg/L	0.002	NA	0.002	0.002

Notes:

1 - 40 CFR 141

2 - Published GWPS based upon 40 CFR 257.95(h)(2)

Using the revised background concentrations and determination of applicable GWPS the 2023 groundwater analytical data was retroactively evaluated for statistically significant levels (SSL). An SSL is only concluded if both samples in a series of two exceeds the calculated UPL or background and MCL. Exceedances of the groundwater protection standard (0.0266 mg/L) for total arsenic occurred at downgradient groundwater monitoring wells AP-7 and RW-3. The semiannual analytical sampling events occurred during the first quarter 2023 (January 26-27, 2023) and third quarter 2022 (July 6-7, 2023). Confirmation samples, where necessary, were collected during the second quarter 2023 (April 11-17, 2023) and fourth quarter 2023 (October 25-26, 2023). The groundwater analytical results for the 2023 semiannual groundwater sampling events are summarized in Table 1. The exceedances are summarized in Table 2.

<b>Appendix IV Parameter</b>	<b>AP -1</b>	<b>AP -2</b>	<b>AP -3</b>	<b>AP -4</b>	<b>AP -5</b>	<b>AP -6</b>	<b>AP -7</b>	<b>AP -14</b>	<b>RW -3</b>
<i>Arsenic, total</i>							X		X
<i>Cobalt, total</i>		X							

### *Arsenic, total*

The revised GWPS for total arsenic (0.0266 mg/L) was exceeded at downgradient groundwater monitoring wells AP-7, and RW-3 during 2023. The first quarter 2023 total arsenic concentration at well RW-3 was 0.169 mg/L and the confirmation sample, collected second quarter 2023, was 0.145 mg/L. For the third quarter 2023 sampling event, the total arsenic concentration was 0.0831 mg/L and the confirmation sample, collected fourth quarter 2023, was 0.74 mg/L. Total arsenic

concentrations at well RW-3 have historically been above the statistically derived background groundwater concentration with no upward or downward trend. The concentrations at this location appear to be related to spatial variation. Total arsenic concentrations are typically low to non-detect (<0.025 mg/L) in other downgradient groundwater monitoring wells. There are two wells located downgradient/north of RW-3. These wells are AP-6 and compliance boundary well AP-7.

The total arsenic concentrations at groundwater monitoring well AP-6 installed at a distance of 83 feet downgradient of RW-3, were non-detect (<0.025 mg/L) for the first quarter of 2023 and 0.004 mg/L for the third quarter 2023. At compliance boundary well AP-7, located at a distance of 298 feet downgradient of RW-3, the third quarter 2023 total arsenic concentration was 0.0412 mg/L, and the fourth quarter 2023 confirmation sample concentration was 0.075 mg/L. The total arsenic concentrations were slightly higher than that detected at AP-6, located closer to RW-3. This further suggests the total arsenic concentrations may be due to natural conditions.

Groundwater monitoring wells AP-6 and AP-7 were installed at downgradient locations to characterize the nature and extent of the total arsenic concentrations at well RW-3. Wells AP-6 and AP-7 are located approximately 83 feet and 298 feet downgradient of RW-3. Well AP-7 is located on the north side of Sugar Creek (see Figure 3).

#### Cobalt, total

Total cobalt exceeded the revised GWPS (0.006 mg/L) at downgradient well AP-2 during 2023. The GWPS was exceeded for the first quarter 2023 at well AP-2 (0.0091 mg/L) and the exceedance was confirmed second quarter 2023 (0.0102 mg/L). Total cobalt exceeded the GWPS for the third quarter 2023 sampling event (0.0085 mg/L) and confirmed with the fourth quarter 2023 sample (0.0091 mg/L).

The PQL/detection limit for total cobalt was 0.025 mg/L prior to first quarter 2020. Analytical results for data prior to first quarter 2020 were non-detect (<0.025 mg/L). Commencing first quarter 2020 the detection limit for total cobalt was reduced to 0.005 mg/L. Total cobalt concentrations at all other downgradient wells has been non-detect (<0.005 mg/L), with AP-2 being the only well exhibiting detections. Since the reduction of the detection limit, total cobalt concentrations at well AP-2 have ranged from 0.0089 to 0.0139 mg/L with concentrations showing an overall decrease from first quarter 2020 through fourth quarter 2023.

- b. Provide the date when the assessment of corrective measures was initiated for the CCR unit;*

An assessment of corrective measures was initiated in April 2019 for total arsenic SSI at RW-3. Subsequent investigation of the SSI completed as an alternate source demonstration pursuant to

§257.95(g)(3)(ii) demonstrated compliance with the groundwater protection standard as the subject concentration was below the detection limit (and groundwater protection limit) during the August 2019 sampling event.

The total arsenic concentration at RW-3 was confirmed to exceed the groundwater protection standard during the August 2020 semiannual sampling event. Plans for additional assessment monitoring were proposed in late 2020. The assessment included installation and sampling of several wells. As a result of the additional assessment pursuant to the new State CCR regulation (35 Ill. Adm. Code 845.650(d)(1)), the assessment of corrective measures was restarted in July of 2021.

- c. Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and*

CWLP initiated assessment of potential corrective action measures in July 2021. A preliminary Assessment of Corrective Measures report was placed on CWLP's public access website on October 25, 2021 for review prior to two public meetings that occurred on December 2, 2021, pursuant to State regulations. Based on the assessment of closure alternatives it has been determined that closure-in-place with a final cover system is most appropriate.

- d. Provide the date when the assessment of corrective measures was completed for the CCR unit.*

Both an assessment of corrective measures and a closure analysis were included in the assessment of alternatives application submitted to the Illinois EPA on February 1, 2022 as part of the closure construction permit application prepared pursuant to Section 845.700(c). The State regulations were derived based on 40 CFR Part 257 and are more restrictive than the Federal regulations. The application contains a final closure plan in accordance with the application schedule under Section 845.700(h) and is available on the CWLP website. CWLP has received comments for the proposed corrective action/closure plans and is in the process of addressing the regulatory comments.

- 5. Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of remedy selection; and*

Based on the October 25, 2021 Closure Alternatives Analyses prepared to address the Illinois EPA requirements of 35 Ill. Adm. Code 845, and two public meetings held on December 2, 2021, the selected remedy is closure of the CCR ash ponds-in place by installation of a final cover system. However, as indicated above, the final corrective action and closure activities are currently being discussed with the US EPA.

6. *Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.*

Pursuant to 40 CFR 257.95(g)(5) the surface impoundments shall be closed, which is the long-term corrective measure. In accordance with the 35 Ill. Adm. Code 845.660, CWLP has prepared an assessment of corrective measures, which includes contaminant transport modeling to evaluate closure-in-place. The model results demonstrate the final cover design will reduce surface water infiltration into the ash resulting in reduction of the liquid head levels within the ash, thereby reducing solute movement beneath the impoundments.

A public meeting was held December 2, 2021 for the assessment of corrective measures for the CCR unit. Documentation of the public meeting was entered into the facility record, dated December 17, 2021. Both of these assessments were submitted to the Illinois EPA on February 1, 2022 as part of the closure construction permit application prepared pursuant to Section 845.700(c), and containing a final closure plan in accordance with the application schedule under Section 845.700(h). CWLP has received comments for this permit application and is proceeding with addressing the Illinois EPA comments. CWLP must also address all comments and communication with the US EPA such that conformance to both set of regulations can be achieved.

As of October 2023, the construction of the new lime processing area has been completed and is operational. CWLP has shut down Dallman Units 31, 32 and 33 and has ceased receipt of coal combustion residuals and non-coal combustion residual materials at the Lakeside Ash Pond and Dallman Ash Ponds as of October 13, 2023. CWLP will commence with the permanent closure of the Dallman and Lakeside ash impoundments upon approval of the closure construction permit application by both Illinois EPA and the closure plan by US EPA.

In April 2019, CWLP submitted a demonstration for the Dallman Power Station and Water Purification Plant to continue using the Lakeside Ash Pond and Dallman Ash Pond until October 13, 2023 pursuant to the alternative closure provision of 40 CFR 257.103(f)(1). CWLP initiated the alternative closure requirements in accordance with 40 CFR 257.103(a)(l) and submitted annual progress reports in 2022 and 2023 updating the status of the impoundments.

In October 2023, CWLP submitted a request to withdraw the Part A demonstration submitted for the facility under 40 CFR 257.103(f)(1).

CWLP will permanently close the Dallman and Lakeside ash impoundments by grading and capping the ash impoundments. Groundwater monitoring will continue following the requirements outlined in 40 CFR 257 Subpart D or as otherwise required by 35 Ill. Adm. Code 845.

## 2. GROUNDWATER MONITORING PROGRAM

As required by §257.90(b), CWLP prepared and placed into the facility record a Groundwater Monitoring Program for the CCR surface impoundments in October 2017. This program document was updated on January 26, 2024. The current monitoring network includes two upgradient wells (wells AP-4 and AP-5) six downgradient wells (AP-1, AP-2, AP-3, AP-6, AP-7 and RW-3). In response to a request from the U.S.EPA, downgradient wells AP-14, AW-1 and G120 will be added to the groundwater monitoring program for 2024. The well locations are depicted in Figure 3.

A Groundwater Monitoring System Certification has been provided for the Groundwater Monitoring Program, placed in the site record and uploaded to the facility website, <https://www.cwlp.com/CCRCompliance.aspx>.

The following sections of the report address the annual groundwater monitoring and corrective action report requirements outlined in 40 CFR 257.90(e).

## 3. 40 CFR 257.90(E): KEY ACTIONS, PROBLEMS ENCOUNTERED, AND KEY ACTIVITIES FOR 2023

### 3.1 Key Actions

The following items identify key actions that occurred in 2023 specifically related to the Groundwater Monitoring Program.

#### 3.1.1 Assessment Monitoring

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. Pursuant to §257.95(b), the Assessment Monitoring Program requires groundwater monitoring for all constituents listed in Appendix III and Appendix IV be monitored until detection monitoring resumes. Notification that an Assessment Monitoring Program had been established occurred in February 2018. Groundwater protection standards were established for the detected Appendix IV parameters in July 2018.

Based upon U.S.EPA comments, background concentrations for the Appendix III and Appendix IV parameters have been recalculated using eight quarters of data from 2016 and 2017. For Antimony, Cobalt, Lead, Lithium and Thallium the background concentrations utilized eight consecutive quarters of data from 2020 through 2021. The background concentrations have been prepared using appropriate statistical calculations pursuant to the requirements of 40 CFR 257.93. The statistical calculations and methodology are provided in Attachment 1.

Assessment monitoring, which includes both Appendix III and IV List parameters, continued throughout 2023 for all wells in the monitor well network at the beginning of the year and has begun in 2024 for the new wells added to the network this year. The monitoring data are provided in Table 1 and field logs are included in Attachment 2. Appendix III and Appendix IV parameters are monitored in all wells pursuant to §257.95(f).

### **3.1.2 Assessment Monitoring Investigation**

Groundwater sampling was conducted at wells AP-1, AP-2, AP-3, AP-4, AP-5, AP-6, AP-7 and RW-3 on a semiannual interval during 2023—first quarter (January 26-27, 2023) and third quarter (July 6-7, 2023). Confirmation samples, where necessary, were collected second quarter 2023 (April 11-17, 2023) and fourth quarter 2023 (October 25-26, 2023).

Assessment monitoring data collected for 2023 are provided in tabular format in Table 1. The table includes the sample dates and identifies the Part 257 Appendix III and Appendix IV parameters.

In accordance with § 257.95(b), an Assessment Monitoring Program was implemented in February 2018 in response to the statistically significant level (SSL) of total arsenic at well RW-3 over background concentrations. Subsequent investigation of the SSI completed as an alternate source demonstration pursuant to §257.95(g)(3)(ii) demonstrated compliance with the groundwater protection standard. As part of the alternate source investigation, two additional wells were added to the monitoring program, AP-6 and AP-7 (see Figure 3). These wells continue to be monitored on a semiannual basis. At the request of the U.S.EPA, an additional three wells will be added to the groundwater monitoring program for the CCR surface impoundments. These wells are identified as AP-14, AW-1 and G120 (see Figure 2).

Assessment monitoring shall continue at the CWLP CCR surface impoundments pursuant to §257.95(f).

## **3.2 Assessment of Corrective Measures**

As presented in Section 1, pursuant to 40 CFR 257.95(g)(5) the surface impoundments must close which is the long term corrective measure selected. The initial assessment of corrective measures (i.e., closure-in-place and closure-by-removal) included contaminant transport modeling to evaluate differing final cover designs. The model results demonstrate final cover designs will reduce surface water infiltration into the ash resulting in reduction of the liquid head levels within the ash, thereby reducing solute movement beneath the impoundments.

CWLP has initiated the alternative closure requirements in accordance with 40 CFR 257.103(a)(I) and has submitted an annual progress report April 2023 updating the status of the impoundments.

CWLP will permanently close the Dallman and Lakeside ash impoundments by grading and capping the ash impoundments. Groundwater monitoring will continue following the requirements outlined in 40 CFR 257 Subpart D. Once the ash impoundments are capped, it will take approximately 13 years to achieve the groundwater protection standards. This estimate does not include the impacts expected from dewatering the impoundments prior to closure.

### 3.3 Problems Encountered

As discussed in Section 1, background concentrations for the Appendix III and Appendix IV parameters were recalculated on January 26, 2024 as requested by the U.S.EPA. The revised background concentrations utilized eight consecutive quarters of data from the 2016 through 2017. For Antimony, Cobalt, Lead, Lithium and Thallium the background concentrations utilized eight consecutive quarters of data from 2020 through 2021 groundwater monitoring period. The statistical calculations and methodology are provided in Attachment 1. While not necessarily a problem, it should be pointed out that as a result of the revised background calculations, the majority of the site-specific background concentrations have decreased. In particular, the lowering of the PQL for total arsenic decreased the background concentration from 0.0724 mg/L to 0.0266 mg/L. The following table summarizes the previous and proposed revised background concentrations.

<b>Appendix III Parameter</b>	<b>Units</b>	<b>Previous Background</b>	<b>Revised Background</b>	<b>Effect</b>
<i>Boron, total</i>	mg/L	0.787	0.150	Lower
<i>Calcium, total</i>	mg/L	176.63	182	Higher
<i>Chloride, total</i>	mg/L	24.2	12.3	Lower
<i>Fluoride, total</i>	mg/L	0.62	0.5	Lower
<i>pH</i>	s.u.	6.76-7.63	6.70 – 7.87	Wider
<i>Sulfate, total</i>	mg/L	84.5	55.5	Lower
<i>TDS</i>	mg/L	597.94	609	Higher
<b>Appendix IV Parameter</b>				
<i>Antimony, total</i>	mg/L	0.016	0.001	Lower
<i>Arsenic, total</i>	mg/L	0.0724	0.0266	Lower
<i>Barium, total</i>	mg/L	5.24	0.519	Lower
<i>Beryllium, total</i>	mg/L	0.0164	0.0025	Lower
<i>Cadmium, total</i>	mg/L	0.0128	0.0025	Lower
<i>Chromium, total</i>	mg/L	0.811	0.0653	Lower
<i>Cobalt, total</i>	mg/L	0.297	0.0052	Lower
<i>Lead, total</i>	mg/L	0.638	0.015	Lower
<i>Lithium</i>	mg/L	0.05	0.0124	Lower
<i>Mercury, total</i>	mg/L	0.0008	0.0005	Lower
<i>Molybdenum</i>	mg/L	0.025	0.025	Same
<i>Radium-226+228</i>	pCi/L	12.2	2.38	Lower
<i>Selenium, total</i>	mg/L	0.0079	0.025	Higher
<i>Thallium</i>	mg/L	0.00556	0.002	Lower

The laboratory reporting limit/PQL for total arsenic was lowered from 0.025 mg/L to 0.001 mg/L beginning the third quarter 2023. All activities which occurred in 2023 were discussed in Section 3.1 and 3.2 above. No additional problems were encountered.

### **3.4 Key Activities for Upcoming Year (2024)**

Assessment monitoring shall continue at the CWLP CCR surface impoundments pursuant to §257.95(f). Communication will continue with the US EPA regarding future activities. Preparation for closure activities will continue and may include closure design modifications, public meetings, dewatering and grading of the CCR in preparation for cover placement.

Wells AP-14, AW-1 and G120 have been added to the groundwater monitoring program for the CCR ash impoundments in 2024.

The identified SSIs and SSLs as presented in this 2023 evaluation of groundwater, are based upon the proposed revised groundwater protection standards developed on January 26, 2024 which uses the revised background concentrations. In the case of total arsenic, the revised background concentration resulted in a lower groundwater protection standard. The evaluation provided in this report was made retroactively to the sampling period and as a result, no alternate source demonstration has been prepared for the third quarter 2023 exceedance at AP-7. An alternate source demonstration will be completed for any SSLs occurring in 2024 in accordance with §257.94(e)(2) and §257.95(g)(3)(ii).

CWLP is in the process of revising the background for total arsenic using data utilizing the lowered laboratory reporting limit/PQL. The first of the required eight consecutive samples using the lowered PQL were collected in July 2023.

## **4. 40 CFR 257.90(E)(1) – (5)**

Additional requirements for the Annual Groundwater Monitoring and Corrective Action Report are detailed in 40 CFR 257.90(e)(1)-(5). Each of the requirements is reproduced below along with the response.

- (1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers that are part of the groundwater monitoring program for the CCR unit. A map of the key features required above is provided as Figure 2 to this annual report.
- (2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken. No wells were installed or decommissioned from the 40 CFR Part 257 groundwater monitoring system in 2023. CWLP began sampling 3 additional existing wells as part of this

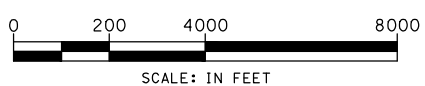
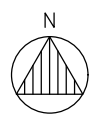
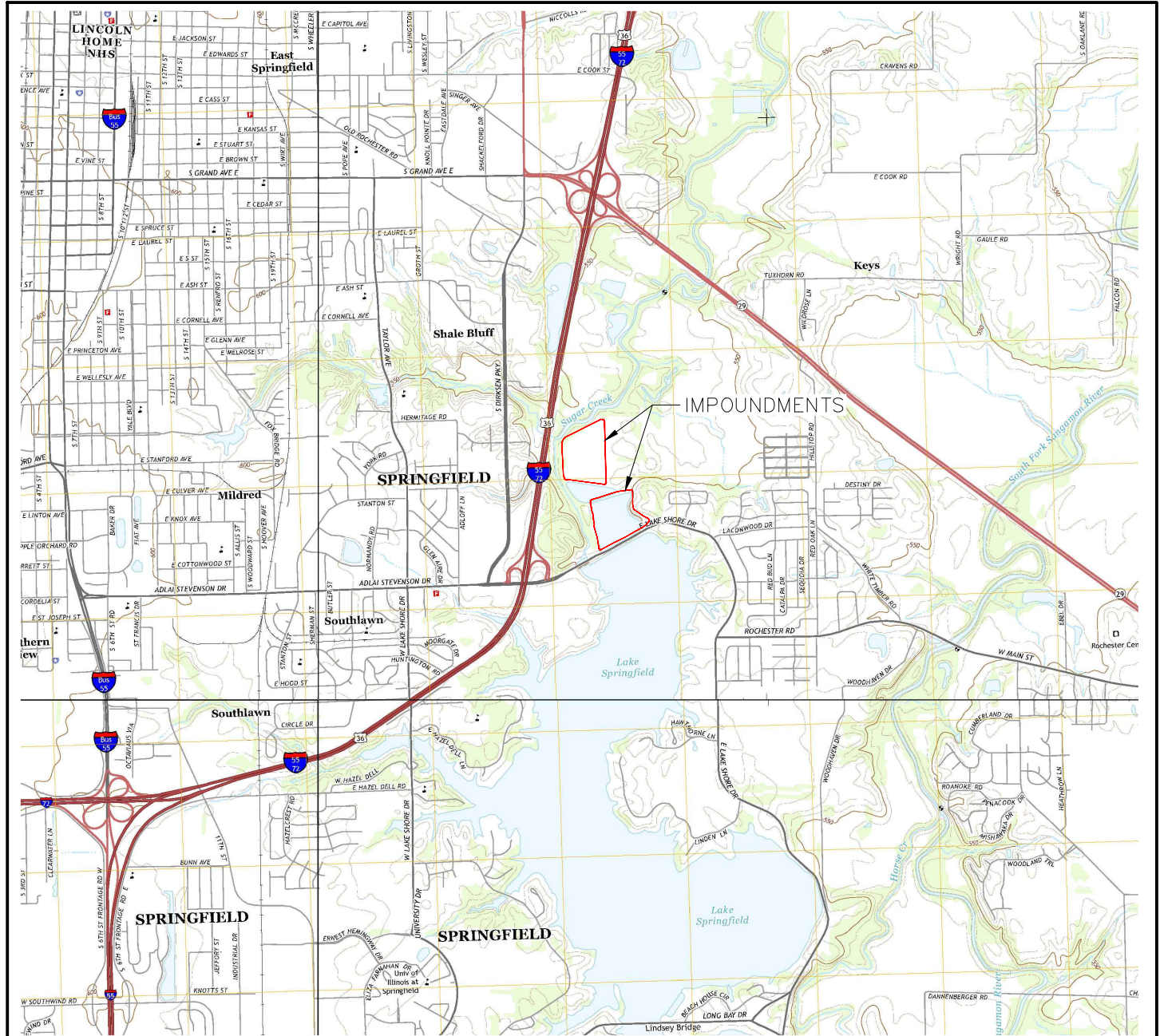
groundwater monitoring network on October 26, 2023 to obtain eight independent samples as required by 40 CFR 257.94(b).

- (3) All data collected as part of the detection or assessment monitoring programs in 2023. Assessment monitoring data collected for 2023 is provided in Table 1. The table includes the sample dates and identifies the Appendix III and Appendix IV parameters. Field logs are included in Attachment 2.
- (4) Discussion of any transition between monitoring programs including the dates of the transition and the identification of the constituent(s) that necessitated the initiation of assessment monitoring. In accordance with §257.95, an Assessment Monitoring Program was implemented in February 2018 in response to the statistically significant increase (SSI) over background levels for one or more parameters listed in 40 CFR Part 257, Appendix III. Assessment monitoring was conducted for wells contained in the groundwater monitoring system in 2023. Background concentrations were recalculated without pre-2016 data on January 26, 2024.
- (5) Other information required to be included in the annual report as specified in §§257.90 through 257.98.
  - a. Alternative monitoring frequency certification in accordance with §§257.94(d)(3) and 257.95(c)(3). No alternative monitoring frequency has been implemented at this time. Therefore, no certification is required.
  - b. Any alternate source demonstration completed in response to any statistically significant increases completed during the previous year in accordance with §257.94(e)(2) and §257.95(g)(3)(ii). No alternate source demonstrations were conducted in 2023.
  - c. Assessment of corrective measures completed during the previous year in accordance with §257.96(a). An assessment of corrective measures was drafted in October 2021 and discussed in two public meetings in December 2021 pursuant to requirements of State regulations 35 Ill. Adm. Code 845. Both of these assessments were submitted to the Illinois EPA on February 1, 2022 as part of the closure construction permit application prepared pursuant to Section 845.700(c), and containing a final closure plan in accordance with the application schedule under Section 845.700(h). CWLP has received comments for this permit application and is proceeding with addressing the Illinois EPA comments while also addressing comments from US EPA.

## 5. CONCLUSION

This annual groundwater monitoring and corrective action report has been provided in accordance with §257.90(e). The annual report for monitoring year 2024 will be provided by January 31, 2025.

## FIGURES



NOTE:  
BACKGROUND IMAGE COURTESY OF  
UNITED STATES GEOLOGICAL SURVEY.



**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, MD

APPROVED BY: BJH    DESIGNED BY: BJH    DRAWN BY: BCK

SITE LOCATION

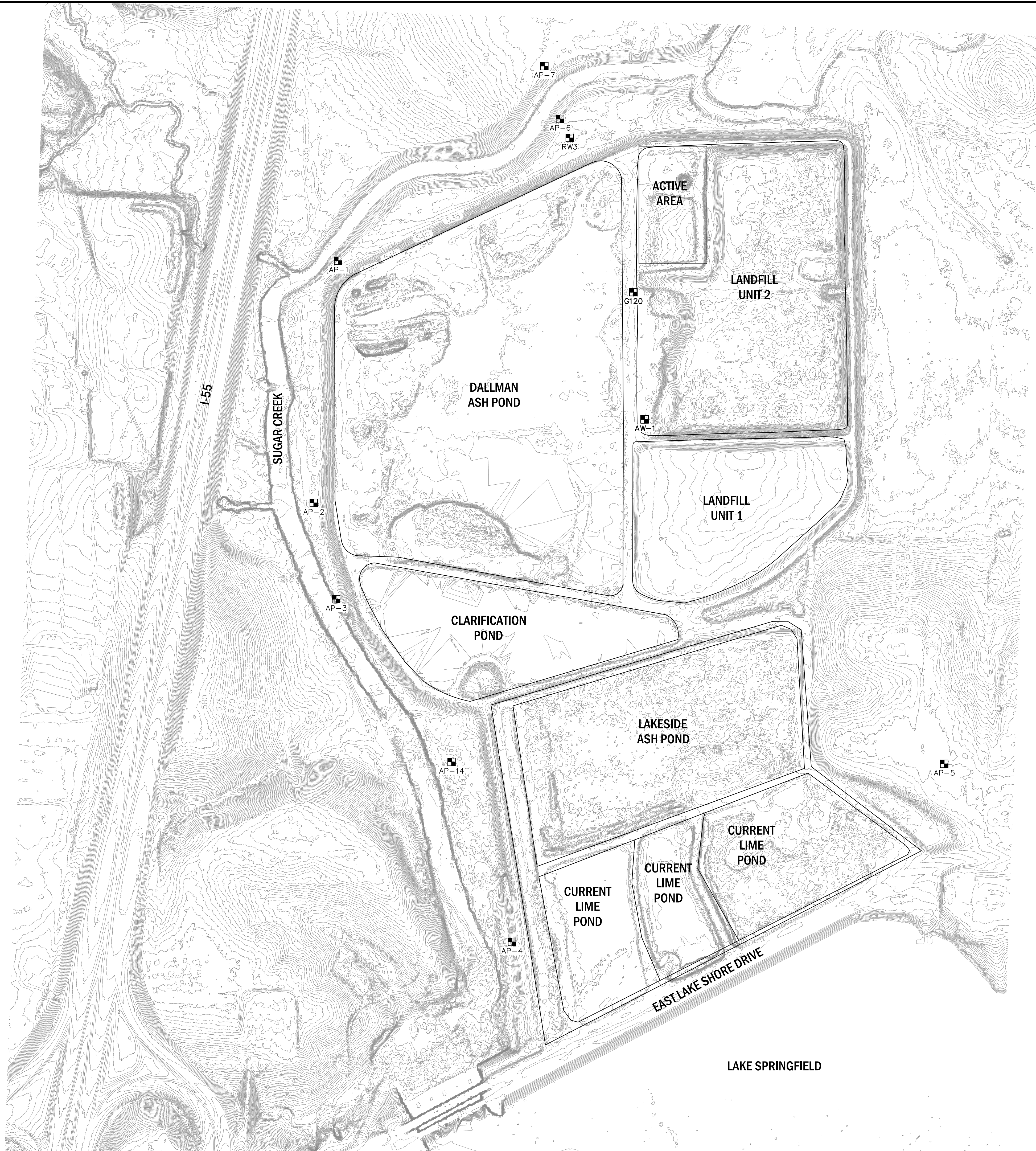
PLANS PREPARED FOR  
CITY, WATER, LIGHT & POWER  
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE:  
JANUARY 2024

PROJECT ID:  
220408/0032

SHEET NUMBER:  
**FIGURE**  
**1**

Tab: SITE DETAILS MAP Last Saved: January 12, 2024, by Ben Kernus Plotted: Thursday, January 18, 2024 3:16:43 PM  
 J:\S\Springfield CWLP\Ash Pond\DWG\2024\Potentiometric Surface Maps FIG 2.dwg

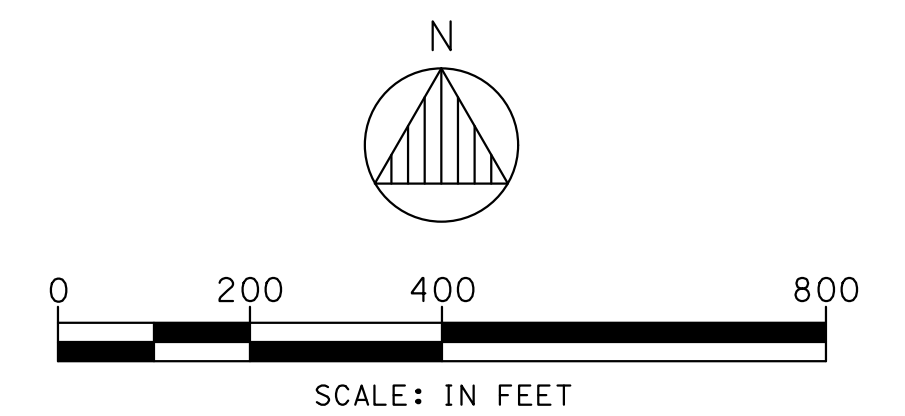


**LEGEND**

■ MONITORING WELL

**NOTES**

- LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: OCTOBER 15, 2018).



NO.	DATE	REVISION DESCRIPTION	BY

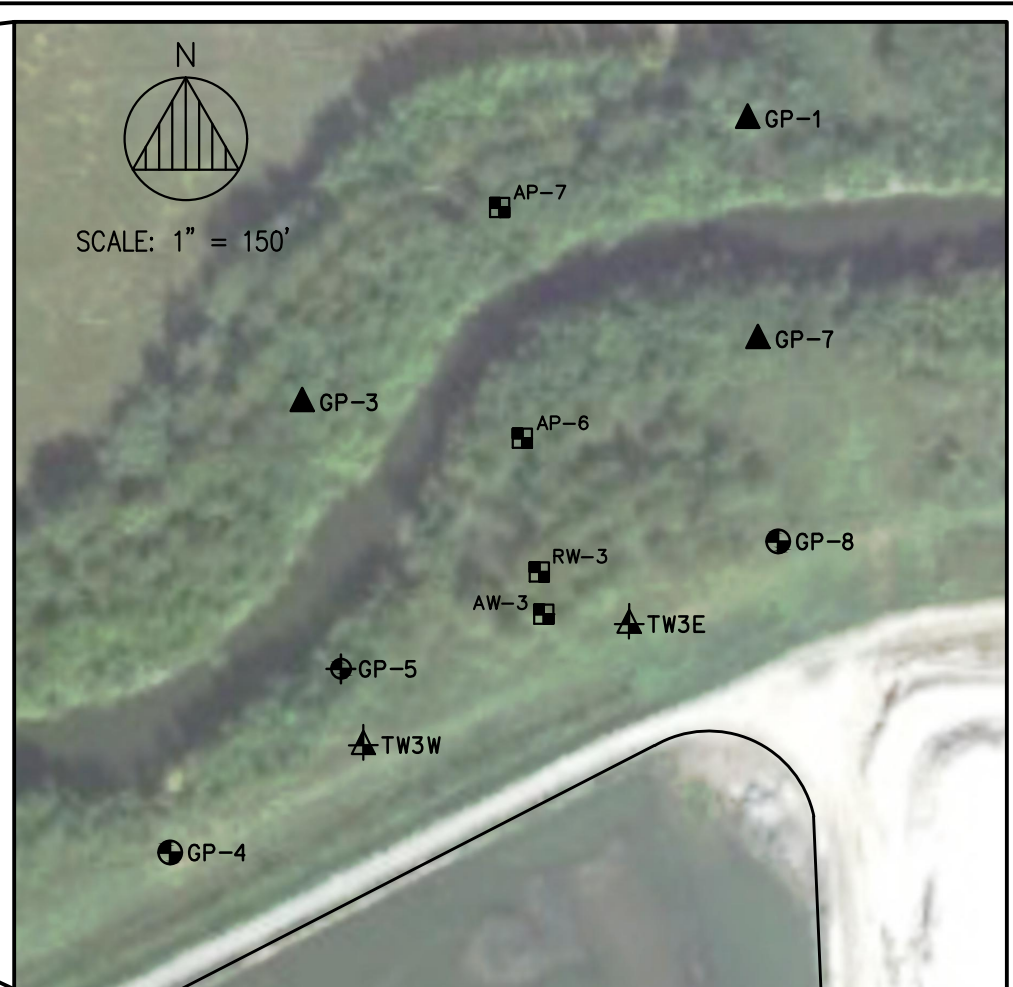
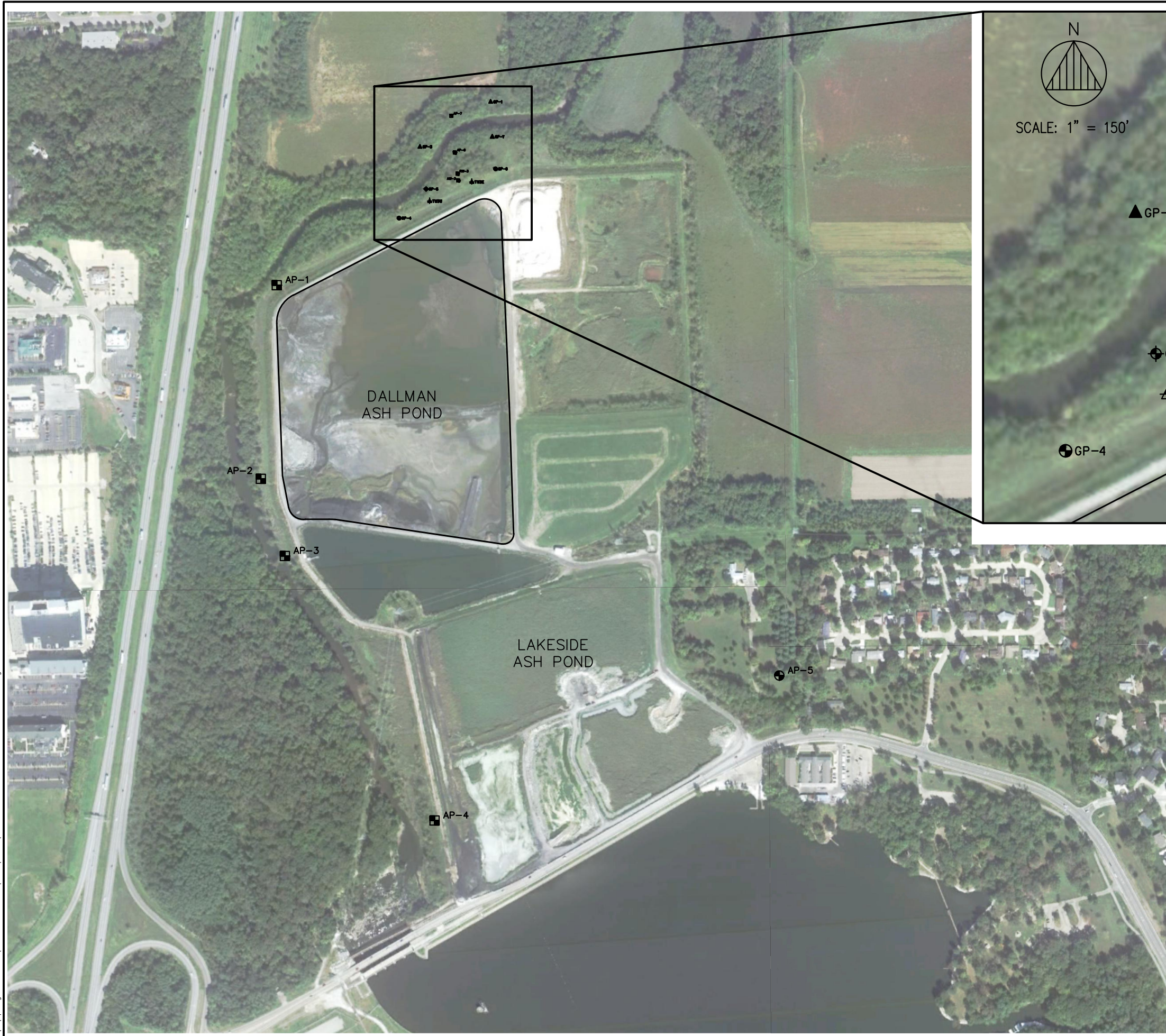
**ANDREWS ENGINEERING**  
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 APPROVED BY: BJH DESIGNED BY: MTH DRAWN BY: BCK

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

DATE: JANUARY 2024  
 PROJECT ID: 220408/0032  
 SHEET NUMBER:  
**FIG 2**

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Tab: Layout1 Last Saved: January 12, 2024, by Ben Karpus Plotted: Friday, January 12, 2024 11:09:30 AM  
 J:\S\Springfield\CWLP\_Ash Pond\DWG\2024\ASSESSMENT MONITORING PLAN FIG 3.dwg

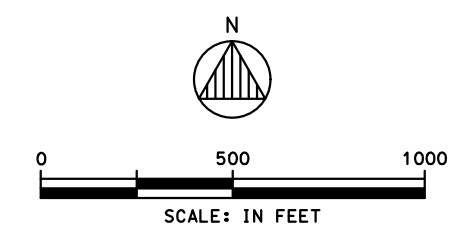


**LEGEND:**

- EXISTING MONITORING WELL LOCATION
- ⊕ GEOPROBE BORING LOCATION
- ▲ TEMPORARY WELL LOCATION (2018)
- ⊕ TEMPORARY WELL LOCATION (MAY 2019)
- ▲ TEMPORARY WELL LOCATION (JULY 2019)

**NOTES**

1. BORINGS GP-6 AND GP-7 CONTAINED TEMPORARY WELLS FROM BOTH THE MAY AND JULY 2019 INVESTIGATION.
2. AW-3 WAS REPLACED BY RW-3.



ASSESSMENT MONITORING INVESTIGATION		APPROVED BY: BJK		NO.	DATE	REVISION DESCRIPTION	BY
		DESIGNED BY: BJK					
PREPARED FOR CITY WATER, LIGHT, AND POWER SPRINGFIELD, SANGAMON COUNTY, ILLINOIS		<b>ANDREWS ENGINEERING</b> 3300 GINGER CREEK DRIVE SPRINGFIELD, ILLINOIS 62711-7233 PH (217) 787-2334 WWW.ANDREWS-ENG.COM PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MD					
		DRAWN BY: BCK					
DATE: JANUARY 2024		PROJECT ID: 220408/0032		SHEET NUMBER:		<b>FIGURE 3</b>	

## TABLES

**TABLE 1:**  
**2023 Groundwater Analytical Results Summary Table**

**City Water, Light and Power  
Power Plant Ash Impoundment  
2023 Groundwater Analytical Summary Data**

Well	Parameter	Units	MCL <sup>1</sup>	Published GWPS <sup>2</sup>	Site-Specific Background	Final GWPS	2023-Q1 Jan 26-27, 2023	2023-Q2 Apr 11-17, 2023	2023-Q3 Jul 6-7, 2023	2023-Q4 Oct 25-26, 2023
<b>Appendix III</b>										
AP-1	Boron, total	mg/L	na	na	0.15	0.15	23.2	21.2	22.5	21.7
AP-2	Boron, total	mg/L	na	na	0.15	0.15	3.94	3.7	3.73	3.23
AP-3	Boron, total	mg/L	na	na	0.15	0.15	14.5	14.3	14	15.2
AP-4	Boron, total	mg/L	na	na	0.15	0.15	0.0918		0.0845	
AP-5	Boron, total	mg/L	na	na	0.15	0.15	0.0353		0.0323	
AP-6	Boron, total	mg/L	na	na	0.15	0.15	0.13		0.0753	
AP-7	Boron, total	mg/L	na	na	0.15	0.15	0.18	0.391	0.141	
RW-3	Boron, total	mg/L	na	na	0.15	0.15	0.175	0.186	0.0595	
AP-1	Calcium, total	mg/L	na	na	182	182	230	242	285	229
AP-2	Calcium, total	mg/L	na	na	182	182	217	210	244	204
AP-3	Calcium, total	mg/L	na	na	182	182	161		189	181
AP-4	Calcium, total	mg/L	na	na	182	182	115		132	
AP-5	Calcium, total	mg/L	na	na	182	182	78.3		96.3	
AP-6	Calcium, total	mg/L	na	na	182	182	52.4		49	
AP-7	Calcium, total	mg/L	na	na	182	182	49.3		49.6	
RW-3	Calcium, total	mg/L	na	na	182	182	67.8		52.8	
AP-1	Chloride, total	mg/L	na	na	12.3	12.3	58	60	36	53
AP-2	Chloride, total	mg/L	na	na	12.3	12.3	36	37	54	40
AP-3	Chloride, total	mg/L	na	na	12.3	12.3	60	59	51	57
AP-4	Chloride, total	mg/L	na	na	12.3	12.3	14	14	13	14
AP-5	Chloride, total	mg/L	na	na	12.3	12.3	3		4	
AP-6	Chloride, total	mg/L	na	na	12.3	12.3	27	31	28	33
AP-7	Chloride, total	mg/L	na	na	12.3	12.3	45	70	39	60
RW-3	Chloride, total	mg/L	na	na	12.3	12.3	29	32	28	31
AP-1	Fluoride, total	mg/L	na	4	0.5	4	0.2		0.24	
AP-2	Fluoride, total	mg/L	na	4	0.5	4	0.24		0.2	
AP-3	Fluoride, total	mg/L	na	4	0.5	4	0.22		0.21	
AP-4	Fluoride, total	mg/L	na	4	0.5	4	0.14		0.14	
AP-5	Fluoride, total	mg/L	na	4	0.5	4	0.34		0.31	
AP-6	Fluoride, total	mg/L	na	4	0.5	4	0.38		0.26	
AP-7	Fluoride, total	mg/L	na	4	0.5	4	0.36		0.34	
RW-3	Fluoride, total	mg/L	na	4	0.5	4	0.46		0.27	
AP-1	pH	s.u.	na	na	6.7- 7.87	6.7-7.87	6.6	6.52	6.51	6.71
AP-2	pH	s.u.	na	na	6.7- 7.87	6.7-7.87	6.46	6.44	6.4	6.57
AP-3	pH	s.u.	na	na	6.7- 7.87	6.7-7.87	6.58	6.64	6.53	6.69
AP-4	pH	s.u.	na	na	6.7- 7.87	6.7-7.87	6.99		6.86	
AP-5	pH	s.u.	na	na	6.7- 7.87	6.7-7.87	7.06		7.16	
AP-6	pH	s.u.	na	na	6.7- 7.87	6.7-7.87	7.07		7.06	
AP-7	pH	s.u.	na	na	6.7- 7.87	6.7-7.87	7.2		7.28	
RW-3	pH	s.u.	na	na	6.7- 7.87	6.7-7.87	6.15	7.06	7.13	
AP-1	Sulfate, total	mg/L	na	na	55.5	55.5	781	768	443	740
AP-2	Sulfate, total	mg/L	na	na	55.5	55.5	485	462	795	380
AP-3	Sulfate, total	mg/L	na	na	55.5	55.5	461	483	467	495
AP-4	Sulfate, total	mg/L	na	na	55.5	55.5	< 10		< 10	
AP-5	Sulfate, total	mg/L	na	na	55.5	55.5	37		43	
AP-6	Sulfate, total	mg/L	na	na	55.5	55.5	12		22	

**City Water, Light and Power  
Power Plant Ash Impoundment  
2023 Groundwater Analytical Summary Data**

Well	Parameter	Units	MCL <sup>1</sup>	Published GWPS <sup>2</sup>	Site-Specific Background	Final GWPS	2023-Q1 Jan 26-27, 2023	2023-Q2 Apr 11-17, 2023	2023-Q3 Jul 6-7, 2023	2023-Q4 Oct 25-26, 2023
AP-7	Sulfate, total	mg/L	na	na	55.5	55.5	16		20	
RW-3	Sulfate, total	mg/L	na	na	55.5	55.5	< 10		22	
AP-1	Total Dissolved Solids	mg/L	na	na	609	609	1520	1540	1190	1360
AP-2	Total Dissolved Solids	mg/L	na	na	609	609	1180	1100	1600	1020
AP-3	Total Dissolved Solids	mg/L	na	na	609	609	1040	984	990	1080
AP-4	Total Dissolved Solids	mg/L	na	na	609	609	515		560	
AP-5	Total Dissolved Solids	mg/L	na	na	609	609	374		400	
AP-6	Total Dissolved Solids	mg/L	na	na	609	609	322		268	
AP-7	Total Dissolved Solids	mg/L	na	na	609	609	328		300	
RW-3	Total Dissolved Solids	mg/L	na	na	609	609	420		290	
<b>Appendix IV</b>										
AP-1	Antimony, total	mg/L	na	0.006	0.001	0.006	< 0.001		< 0.001	
AP-2	Antimony, total	mg/L	na	0.006	0.001	0.006	< 0.001		< 0.001	
AP-3	Antimony, total	mg/L	na	0.006	0.001	0.006	< 0.001		< 0.001	
AP-4	Antimony, total	mg/L	na	0.006	0.001	0.006	< 0.001		< 0.001	
AP-5	Antimony, total	mg/L	na	0.006	0.001	0.006	< 0.001		< 0.001	
AP-6	Antimony, total	mg/L	na	0.006	0.001	0.006	< 0.001		< 0.001	
AP-7	Antimony, total	mg/L	na	0.006	0.001	0.006	< 0.001		< 0.001	
RW-3	Antimony, total	mg/L	na	0.006	0.001	0.006	< 0.001		< 0.001	
AP-1	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	< 0.025		< 0.001	
AP-2	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	< 0.025		0.002	
AP-3	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	< 0.025		0.0109	
AP-4	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	< 0.025		0.0239	
AP-5	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	< 0.025		< 0.001	
AP-6	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	< 0.025		0.004	
AP-7	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	< 0.025		0.0412	0.075
RW-3	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	0.169	0.185	0.0831	0.74
AP-1	Barium, total	mg/L	na	2	0.519	2	0.236		0.271	
AP-2	Barium, total	mg/L	na	2	0.519	2	0.0744		0.0719	
AP-3	Barium, total	mg/L	na	2	0.519	2	0.111		0.0993	
AP-4	Barium, total	mg/L	na	2	0.519	2	0.39		0.396	
AP-5	Barium, total	mg/L	na	2	0.519	2	0.0408		0.0461	
AP-6	Barium, total	mg/L	na	2	0.519	2	0.0938		0.0844	
AP-7	Barium, total	mg/L	na	2	0.519	2	0.111		0.106	
RW-3	Barium, total	mg/L	na	2	0.519	2	0.168		0.106	
AP-1	Beryllium, total	mg/L	na	0.004	0.0025	0.004	< 0.0005		< 0.0005	
AP-2	Beryllium, total	mg/L	na	0.004	0.0025	0.004	< 0.0005		< 0.0005	
AP-3	Beryllium, total	mg/L	na	0.004	0.0025	0.004	< 0.0005		< 0.0005	
AP-4	Beryllium, total	mg/L	na	0.004	0.0025	0.004	< 0.0005		< 0.0005	
AP-5	Beryllium, total	mg/L	na	0.004	0.0025	0.004	< 0.0005		< 0.0005	

**City Water, Light and Power  
Power Plant Ash Impoundment  
2023 Groundwater Analytical Summary Data**

Well	Parameter	Units	MCL <sup>1</sup>	Published GWPS <sup>2</sup>	Site-Specific Background	Final GWPS	2023-Q1 Jan 26-27, 2023	2023-Q2 Apr 11-17, 2023	2023-Q3 Jul 6-7, 2023	2023-Q4 Oct 25-26, 2023
AP-6	Beryllium, total	mg/L	na	0.004	0.0025	0.004	< 0.0005		< 0.0005	
AP-7	Beryllium, total	mg/L	na	0.004	0.0025	0.004	< 0.0005		< 0.0005	
RW-3	Beryllium, total	mg/L	na	0.004	0.0025	0.004	< 0.0005		< 0.0005	
AP-1	Cadmium, total	mg/L	na	0.005	0.0025	0.005	< 0.002		< 0.002	
AP-2	Cadmium, total	mg/L	na	0.005	0.0025	0.005	< 0.002		< 0.002	
AP-3	Cadmium, total	mg/L	na	0.005	0.0025	0.005	< 0.002		< 0.002	
AP-4	Cadmium, total	mg/L	na	0.005	0.0025	0.005	< 0.002		< 0.002	
AP-5	Cadmium, total	mg/L	na	0.005	0.0025	0.005	< 0.002		< 0.002	
AP-6	Cadmium, total	mg/L	na	0.005	0.0025	0.005	< 0.002		< 0.002	
AP-7	Cadmium, total	mg/L	na	0.005	0.0025	0.005	< 0.002		< 0.002	
RW-3	Cadmium, total	mg/L	na	0.005	0.0025	0.005	< 0.002		< 0.002	
AP-1	Chromium, total	mg/L	na	0.1	0.0653	0.1	< 0.005		< 0.005	
AP-2	Chromium, total	mg/L	na	0.1	0.0653	0.1	< 0.005		< 0.005	
AP-3	Chromium, total	mg/L	na	0.1	0.0653	0.1	< 0.005		< 0.005	
AP-4	Chromium, total	mg/L	na	0.1	0.0653	0.1	< 0.005		< 0.005	
AP-5	Chromium, total	mg/L	na	0.1	0.0653	0.1	< 0.005		< 0.005	
AP-6	Chromium, total	mg/L	na	0.1	0.0653	0.1	< 0.005		< 0.005	
AP-7	Chromium, total	mg/L	na	0.1	0.0653	0.1	< 0.005		< 0.005	
RW-3	Chromium, total	mg/L	na	0.1	0.0653	0.1	< 0.005		< 0.005	
AP-1	Cobalt, total	mg/L	0.006	na	0.0052	0.006	< 0.005		< 0.005	
AP-2	Cobalt, total	mg/L	0.006	na	0.0052	0.006	0.0091	0.0102	0.0085	0.0091
AP-3	Cobalt, total	mg/L	0.006	na	0.0052	0.006	< 0.005		< 0.005	
AP-4	Cobalt, total	mg/L	0.006	na	0.0052	0.006	< 0.005		< 0.005	
AP-5	Cobalt, total	mg/L	0.006	na	0.0052	0.006	< 0.005		< 0.005	
AP-6	Cobalt, total	mg/L	0.006	na	0.0052	0.006	< 0.005		< 0.005	
AP-7	Cobalt, total	mg/L	0.006	na	0.0052	0.006	< 0.005		< 0.005	
RW-3	Cobalt, total	mg/L	0.006	na	0.0052	0.006	< 0.005		< 0.005	
AP-1	Lead, total	mg/L	0.015	na	0.015	0.015	< 0.015		< 0.015	
AP-2	Lead, total	mg/L	0.015	na	0.015	0.015	< 0.015		< 0.015	
AP-3	Lead, total	mg/L	0.015	na	0.015	0.015	< 0.015		< 0.015	
AP-4	Lead, total	mg/L	0.015	na	0.015	0.015	< 0.015		< 0.015	
AP-5	Lead, total	mg/L	0.015	na	0.015	0.015	< 0.015		< 0.015	
AP-6	Lead, total	mg/L	0.015	na	0.015	0.015	< 0.015		< 0.015	
AP-7	Lead, total	mg/L	0.015	na	0.015	0.015	< 0.015		< 0.015	
RW-3	Lead, total	mg/L	0.015	na	0.015	0.015	< 0.015		< 0.015	
AP-1	Lithium	mg/L	0.04	na	0.0124	0.04	0.0566	< 0.005	0.0109	
AP-2	Lithium	mg/L	0.04	na	0.0124	0.04	0.0476		0.0063	
AP-3	Lithium	mg/L	0.04	na	0.0124	0.04	0.0501	< 0.005	0.0063	

**City Water, Light and Power  
Power Plant Ash Impoundment  
2023 Groundwater Analytical Summary Data**

Well	Parameter	Units	MCL <sup>1</sup>	Published GWPS <sup>2</sup>	Site-Specific Background	Final GWPS	2023-Q1 Jan 26-27, 2023	2023-Q2 Apr 11-17, 2023	2023-Q3 Jul 6-7, 2023	2023-Q4 Oct 25-26, 2023
AP-4	Lithium	mg/L	0.04	na	0.0124	0.04	0.0196		0.0078	
AP-5	Lithium	mg/L	0.04	na	0.0124	0.04	0.0142		0.0046	
AP-6	Lithium	mg/L	0.04	na	0.0124	0.04	0.014	< 0.003		
AP-7	Lithium	mg/L	0.04	na	0.0124	0.04	< 0.005		0.0047	
RW-3	Lithium	mg/L	0.04	na	0.0124	0.04	0.0179	< 0.003		
AP-1	Mercury, total	mg/L	na	0.002	0.0005	0.002	< 0.0002		< 0.0002	
AP-2	Mercury, total	mg/L	na	0.002	0.0005	0.002	< 0.0002		< 0.0002	
AP-3	Mercury, total	mg/L	na	0.002	0.0005	0.002	< 0.0002		< 0.0002	
AP-4	Mercury, total	mg/L	na	0.002	0.0005	0.002	< 0.0002		< 0.0002	
AP-5	Mercury, total	mg/L	na	0.002	0.0005	0.002	< 0.0002		< 0.0002	
AP-6	Mercury, total	mg/L	na	0.002	0.0005	0.002	< 0.0002		< 0.0002	
AP-7	Mercury, total	mg/L	na	0.002	0.0005	0.002	< 0.0002		< 0.0002	
RW-3	Mercury, total	mg/L	na	0.002	0.0005	0.002	< 0.0002		< 0.0002	
AP-1	Molybdenum, total	mg/L	<b>0.1</b>	na	0.025	0.1	< 0.01		< 0.01	
AP-2	Molybdenum, total	mg/L	<b>0.1</b>	na	0.025	0.1	< 0.01		< 0.01	
AP-3	Molybdenum, total	mg/L	<b>0.1</b>	na	0.025	0.1	< 0.01		< 0.01	
AP-4	Molybdenum, total	mg/L	<b>0.1</b>	na	0.025	0.1	< 0.01		< 0.01	
AP-5	Molybdenum, total	mg/L	<b>0.1</b>	na	0.025	0.1	< 0.01		< 0.01	
AP-6	Molybdenum, total	mg/L	<b>0.1</b>	na	0.025	0.1	< 0.01		< 0.01	
AP-7	Molybdenum, total	mg/L	<b>0.1</b>	na	0.025	0.1	< 0.01		< 0.01	
RW-3	Molybdenum, total	mg/L	<b>0.1</b>	na	0.025	0.1	< 0.01		< 0.01	
AP-1	Radium-226 + Radium-228	pCi/L	na	5	2.38	5	1.38		< 2	
AP-2	Radium-226 + Radium-228	pCi/L	na	5	2.38	5	0.87		< 2	
AP-3	Radium-226 + Radium-228	pCi/L	na	5	2.38	5	0.54		< 2	
AP-4	Radium-226 + Radium-228	pCi/L	na	5	2.38	5	1.04		1.12	
AP-5	Radium-226 + Radium-228	pCi/L	na	5	2.38	5	1.29		< 2	
AP-6	Radium-226 + Radium-228	pCi/L	na	5	2.38	5	0.47		< 2	
AP-7	Radium-226 + Radium-228	pCi/L	na	5	2.38	5	< 2		< 2	
RW-3	Radium-226 + Radium-228	pCi/L	na	5	2.38	5	0.28		< 2	
AP-1	Selenium, total	mg/L	na	0.05	0.025	0.05	< 0.001		< 0.001	
AP-2	Selenium, total	mg/L	na	0.05	0.025	0.05	< 0.001		< 0.001	
AP-3	Selenium, total	mg/L	na	0.05	0.025	0.05	< 0.001		< 0.001	
AP-4	Selenium, total	mg/L	na	0.05	0.025	0.05	< 0.001		< 0.001	
AP-5	Selenium, total	mg/L	na	0.05	0.025	0.05	< 0.001		< 0.001	
AP-6	Selenium, total	mg/L	na	0.05	0.025	0.05	< 0.001		< 0.001	
AP-7	Selenium, total	mg/L	na	0.05	0.025	0.05	< 0.001		< 0.001	
RW-3	Selenium, total	mg/L	na	0.05	0.025	0.05	< 0.001		< 0.001	
AP-1	Thallium, total	mg/L	na	0.002	0.002	0.002	< 0.002		< 0.002	

**City Water, Light and Power  
Power Plant Ash Impoundment  
2023 Groundwater Analytical Summary Data**

Well	Parameter	Units	MCL <sup>1</sup>	Published GWPS <sup>2</sup>	Site-Specific Background	Final GWPS	2023-Q1 Jan 26-27, 2023	2023-Q2 Apr 11-17, 2023	2023-Q3 Jul 6-7, 2023	2023-Q4 Oct 25-26, 2023
AP-2	Thallium, total	mg/L	na	0.002	0.002	0.002	< 0.002		< 0.002	
AP-3	Thallium, total	mg/L	na	0.002	0.002	0.002	< 0.002		< 0.002	
AP-4	Thallium, total	mg/L	na	0.002	0.002	0.002	< 0.002		< 0.002	
AP-5	Thallium, total	mg/L	na	0.002	0.002	0.002	< 0.002		< 0.002	
AP-6	Thallium, total	mg/L	na	0.002	0.002	0.002	< 0.002		< 0.002	
AP-7	Thallium, total	mg/L	na	0.002	0.002	0.002	< 0.002		< 0.002	
RW-3	Thallium, total	mg/L	na	0.002	0.002	0.002	< 0.002		< 0.002	

Notes:

1. MCL based upon concentrations presented in 40 CFR 141.
2. Published GWPS based upon concentrations presented in 40 CFR 257.95(h)(2).
3. A shaded value indicates an exceedance of the higher of the MCL or the Background. The comparison value that was used is in bold font.
4. The 40 CFR 257 list requires Radium-226 and Radium-228 combined. The established MCL is for the combined parameters. However, these parameters require two separate analysis and have been reported separately by the analytical laboratory. The sum of the values has been provided and compared to the MCL. Background values have been calculated for the individual parameters (Radium-226 = 7.1 pCi/L and Radium-228 = 5.1 pCi/L).

**Table 2:**

**2023 Groundwater Analytical Results Exceedance Summary Table**

**City Water, Light and Power  
Power Plant Ash Impoundment  
2023 Groundwater Analytical Summary Data**

Well	Parameter	Units	MCL <sup>1</sup>	Published GWPS <sup>2</sup>	Site-Specific Background	Final GWPS	2023-Q1 Jan 26-27, 2023	2023-Q2 Apr 11-17, 2023	2023-Q3 Jul 6-7, 2023	2023-Q4 Oct 25-26, 2023
<b>Appendix III</b>										
AP-1	Boron, total	mg/L	na	na	<b>0.15</b>	0.15	23.2	21.2	22.5	21.7
AP-2	Boron, total	mg/L	na	na	<b>0.15</b>	0.15	3.94	3.7	3.73	3.23
AP-3	Boron, total	mg/L	na	na	<b>0.15</b>	0.15	14.5	14.3	14	15.2
AP-7	Boron, total	mg/L	na	na	<b>0.15</b>	0.15	0.18	0.391	0.141	
RW-3	Boron, total	mg/L	na	na	<b>0.15</b>	0.15	0.175	0.186	0.0595	
AP-1	Calcium, total	mg/L	na	na	<b>182</b>	182	230	242	285	229
AP-2	Calcium, total	mg/L	na	na	<b>182</b>	182	217	210	244	204
AP-1	Chloride, total	mg/L	na	na	<b>12.3</b>	12.3	58	60	36	53
AP-2	Chloride, total	mg/L	na	na	<b>12.3</b>	12.3	36	37	54	40
AP-3	Chloride, total	mg/L	na	na	<b>12.3</b>	12.3	60	59	51	57
AP-4	Chloride, total	mg/L	na	na	<b>12.3</b>	12.3	14	14	13	14
AP-6	Chloride, total	mg/L	na	na	<b>12.3</b>	12.3	27	31	28	33
AP-7	Chloride, total	mg/L	na	na	<b>12.3</b>	12.3	45	70	39	60
RW-3	Chloride, total	mg/L	na	na	<b>12.3</b>	12.3	29	32	28	31
AP-1	pH	s.u.	na	na	<b>6.7- 7.87</b>	6.7-7.87	6.6	6.52	6.51	6.71
AP-2	pH	s.u.	na	na	<b>6.7- 7.87</b>	6.7-7.87	6.46	6.44	6.4	6.57
AP-3	pH	s.u.	na	na	<b>6.7- 7.87</b>	6.7-7.87	6.58	6.64	6.53	6.69
AP-1	Sulfate, total	mg/L	na	na	55.5	55.5	781	768	443	740
AP-2	Sulfate, total	mg/L	na	na	55.5	55.5	485	462	795	380
AP-3	Sulfate, total	mg/L	na	na	55.5	55.5	461	483	467	495
AP-1	Total Dissolved Solids	mg/L	na	na	609	609	1520	1540	1190	1360
AP-2	Total Dissolved Solids	mg/L	na	na	609	609	1180	1100	1600	1020
AP-3	Total Dissolved Solids	mg/L	na	na	609	609	1040	984	990	1080
<b>Appendix IV</b>										
AP-7	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	< 0.025		0.0412	0.075
RW-3	Arsenic, total	mg/L	na	0.01	0.0266	0.0266	0.169	0.185	0.0831	0.74
AP-2	Cobalt, total	mg/L	0.006	na	0.0052	0.006	0.0091	0.0102	0.0085	0.0091

Notes:

1. MCL based upon concentrations presented in 40 CFR 141.
2. Published GWPS based upon concentrations presented in 40 CFR 257.95(h)(2).
3. A shaded value indicates an exceedance of the higher of the MCL or the Background. The comparison value that was used is in bold font.
4. The 40 CFR 257 list requires Radium-226 and Radium-228 combined. The established MCL is for the combined parameters. However, these parameters require two separate analysis and have been reported separately by the analytical laboratory. The sum of the values has been provided and compared to the MCL. Background values have been calculated for the individual parameters (Radium-226 = 7.1 pCi/L and Radium-228 = 5.1 pCi/L).

# ATTACHMENTS

**ATTACHMENT 1:  
STATISTICAL ANALYSIS PLAN AND CALCULATIONS**

# Statistical Analyses Plan

## 1. Introduction

The US Environmental Protection Agency (EPA) published the final rule for the management of Coal Combustion Residuals (CCR) on April 17, 2015. The CCR rule is formally promulgated in the U.S. Code of Federal Regulations, Title 40, Parts 257 and 261 (EPA, 2015) along with amendments to the rule published in July, 2018 (EPA, 2018) and August, 2020 (EPA, 2020).

This rule is applicable to the CCR surface impoundments identified as the Lakeside Ash Pond and the Dallman Ash Pond. These CCR surface impoundments are owned and operated by City Water, Light and Power (CWLP) and 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).

Pursuant to the 40 CFR §257.90(b)(1), a groundwater sampling and analysis program must be developed in accordance with 40 CFR, §257.93. The program must address the selection of statistical methods, and the selected statistical method(s) must be certified by a Qualified Professional Engineer.

This Statistical Analysis Plan (Plan) describes the method(s) to be used in identifying a statistically significant increase (SSI) over the upgradient or background groundwater quality. This plan is included as Appendix C of the Groundwater Monitoring Program. The Groundwater Monitoring Program contains additional information on the site-specific hydrogeology, groundwater monitoring system, sampling and analysis procedures, and reporting requirements.

## 2. Statistical Method

The statistical methods will evaluate if a statistically significant increase (SSI) of contaminant concentrations has occurred in groundwater samples when comparing a compliance monitoring sample analytical result with background (baseline) groundwater analytical results.

The chosen statistical methods will be in compliance with 40 CFR 257.93 and the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (EPA, March 2009). The primary software that will be used to conduct the statistical evaluations is the U.S.EPA's ProUCL (v. 5.2) software package. ProUCL was developed for analysis of environmental data sets with and without non-detect (ND) observations. ProUCL is a comprehensive statistical software package with statistical methods and graphical tools to address many environmental sampling and statistical issues.

The requirements for statistical analysis of groundwater quality data collected under the CCR Rule are given in 40 CFR 257.93(f)-(h). The owner or operator of a CCR unit must select one of the statistical methods specified in the Section to evaluate the groundwater data. The methods include:

1. A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures;
2. An ANOVA based on ranks followed by multiple comparisons procedures to identify significant evidence of contamination;
3. A tolerance or prediction interval procedure;
4. A control chart approach that gives control limits for each constituent; or
5. Another statistical test method that meets the performance standards specified by the CCR rule.

As groundwater monitoring progresses, the use of the selected statistical method will be subject to ongoing review. CWLP reserves the right to use other statistical tests in place of, or in addition to, the methods specified in this Plan if such methods are better suited for analysis of future results. Additionally, the methods in this Plan have been developed in accordance with the requirements of the CCR rule as published on April 17, 2015 (EPA, 2015), and as amended, and modifications to this Plan may occur if further revisions or amendments are made to the CCR rule. If test methods are changed this work plan will be revised, as appropriate, and its certification updated.

### **3. Statistical Analysis**

Using the Unified Guidance and ProUCL, a preliminary statistical analysis was performed on the eight rounds of baseline groundwater quality data to assess the background constituent data and determine the most appropriate statistical method(s) for data analysis and comparisons. The following sections present a summary of the statistical analyses methodology.

#### **3.1. Data Distribution Testing**

The pooled background data for each parameter were tested using statistical software (ProUCL v.5.2) to determine the underlying data distribution (normal, lognormal, or unknown/no discernable distribution). Data distribution testing was conducted using the Shapiro-Wilks test for datasets with less than or equal to 50 values. The data distribution tests were conducted at a 95 percent significance level.

If data were found to be normally or lognormally (test of lognormal transformed data) distributed at a 95 percent significance level, and the data contain less than or equal to 50 percent non-detects, parametric statistical methods are applied. If data were found to be not normally or lognormally distributed (unknown or no discernable distribution), or the data contain greater than 50 percent non-detects non-parametric statistical methods are applied.

#### **3.2. Outlier Testing**

Prior to statistical analyses the background dataset was pooled and parameter was screened for the existence of outliers using the Grubbs test. Outliers are defined as data points that vary significantly from the mean value for that data set. Outliers may represent sampling error, contamination from surface run-off, analytical laboratory error, or anomalous site conditions. Outliers, if not removed from the data set, can erroneously increase the calculated background value and minimize the occurrence of an

exceedances related to a release from a waste unit. Once a statistical outlier has been identified, the concentrations are evaluated to determine the cause. If a valid reason has been determined for the outlier, the data point will be removed from the data set. If no specific reason can be documented, the point will be considered representative and included in the analysis.

### **3.3. Handling of Non-Detects (NDs)**

Non-detect values (NDs) were handled according to the percentage of on-detects (%ND) present in the background sampling. The %ND was calculated for each parameter from the pooled background data of each well set. The data treatment was done according to the following criteria:

- a) For under 0% NDs, no adjustment is made to the values in the data set.
- b) For under 15% NDs, the value of one-half ( $\frac{1}{2}$ ) the reported Detection Limit (DL) was substituted for the ND value, and the mean and standard deviation were calculated using detected values with the substituted ND values.
- c) For 15-50% NDs, Cohen's Adjustment was used to adjust the mean and standard deviation. The adjusted mean and standard deviation was then used to calculate the prediction limit.
- d) For over 50% but not 100% NDs, the highest recorded concentration was substituted for the prediction limit.
- e) For 100% NDs, the Practical Quantitation Limit (PQL) will be substituted for the ND value. The mean and standard deviation was calculated using the substituted ND values.

### **3.4. Tolerance or Prediction Interval Procedure**

The prediction limit for each parameter was calculated using the mean, standard deviation, and the appropriate t value. The statistical analysis uses a one-tailed test to determine an upper limit of significance. The upper prediction limit is the concentration for the probability that the constituent can be measured without constituting a statistical increase above the background. Any concentration found below this limit is regarded as falling within the normal statistical population.

### **3.5. Prediction Limit**

The statistical procedure was conducted according to the following steps:

- a) Calculate arithmetic mean - the arithmetic mean was calculated using the pooled data for each parameter.

The arithmetic mean ( $X_b$ ) was calculated using the following equation:

$$X_b = \frac{X_1 + X_2 + \dots + X_n}{n}$$

where:  $X_b$  = Average background value  
 $X_n$  = Individual background value for  $n$  sample  
 $n$  = Number of background values

- b) Calculate standard deviation - the standard deviation was calculated using the pooled data for each parameter.

The standard deviation was calculated using the following equation:

$$S_b = \sqrt{\frac{(X_1 - X_b) + (X_2 - X_b) + \dots + (X_n - X_b)}{n - 1}}$$

where:  $S_b$  = Population standard deviation  
 $X_n$  = Individual background value for  $n$  sample  
 $X_b$  = Mean (1)  
 $n$  = Number of background samples

- c) Calculate the Upper Prediction Limit - the Upper Prediction Limit was calculated for each parameter using the mean (1), the standard deviation (2), the number of background samples, and the Student's t value.

The Student's t value  $\sigma$ , is determined by the facility permit whether it is  $\sigma = 0.05$  (95% Confidence). The Student's t value also varies upon the number of background samples utilized in the calculations. For those parameters with 15% to 50%% NDs, the Cohen Method was utilized to calculate the Prediction Limit. The methodology described in the Unified Guidance was used to calculate the Cohen Prediction Limit. The Upper Prediction Limit for the remaining parameters was calculated using the following equation:

$$PL = X_b \pm S_b \cdot t \cdot \sqrt{1 + \frac{1}{n}}$$

where: PL = Upper Prediction Limit (Upper and Lower for pH)  
 $X_b$  = Mean (1)  
 $S_b$  = Standard Deviation (2)  
 $t$  = Student's t value at 0.05 significance  
 $n$  = Number of background samples

#### 4. References

1. Andrews Engineering, Inc., 2024. Groundwater Monitoring Program, City Water, Light and Power, CCR Ash Impoundments, Springfield, Illinois.
2. Code of Federal Regulations (CFR), Title 40: Protection of the Environment. Part 257: Criteria for Classification of Solid Waste Disposal Facilities and Practices. Subpart D: Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments.
3. USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Unified Guidance. EPA 530/R-09-007. March 2009.
4. USEPA. 2022. ProUCL: Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations. Version 5.2. <https://www.epa.gov/land-research/proucl-software>.

City Water, Light and Power

Power Plant Ash Impoundment

Background Calculations - Interwell Prediction Limits

40 CFR 257 Appendix III Parameters

Raw Data Summary

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	Distribution <sup>[1]</sup>	Proposed Background Value
AP-4	Boron, total	ug/L	78.3	123	131	136	117	120	105	129	Normal Dataset - Calculate Interwell Prediction Limit	149.73
AP-5	Boron, total	ug/L	69.9	53.7	77.9	73.3	48.3	44.3	40.7	73		
AP-4	Calcium, total	mg/L	125	118	118	117	136	117	150	141	Normal Dataset - Calculate Interwell Prediction Limit	181.60
AP-5	Calcium, total	mg/L	98.1	77.3	158	201	155	83.5	105	118		
AP-4	Chloride, total	mg/L	11.3	12.3	11.3	9.8	10.6	12	11.9	12.1	Non-Parametric - Propose Highest Detected Concentration as Prediction Limit/Background	12.30
AP-5	Chloride, total	mg/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 30		
AP-4	Fluoride, total	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	100% NDs - Interwell value set at the laboratory PQL	0.50
AP-5	Fluoride, total	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		
AP-4	pH	s.u.	7.39	7.18	7.13	7.01	7.02	7.08	7.29	7.12	Normal Dataset - Calculate Interwell Prediction Limit	6.70 - 7.87
AP-5	pH	s.u.	7.66	7.56	6.83	7.62	7.42	7.36	7.77	7.19		
AP-4	Sulfate, total	mg/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	Non-Parametric - Propose Highest Detected Concentration as Prediction Limit/Background	55.50
AP-5	Sulfate, total	mg/L	54.3	46.8	50.8	52.5	55.5	54.8	48.4	55.3		
AP-4	Total Dissolved Solids	mg/L	492	514	554	558	482	538	526	544	Normal Dataset - Calculate Interwell Prediction Limit	609.21
AP-5	Total Dissolved Solids	mg/L	358	292	474	344	406	426	392	470		

Notes:

1. Shapiro-Wilk method utilized to determine if the data set follows a normal distribution. ProUCL 5.2 was used for the calculations. ProUCL 5.2 outputs are provided.
2. In accordance with Chapter 18.3 of the March 2009 Unified Guidance (Statistical Analysis of Groundwater at RCRA Facilities), the maximum detected concentration is utilized as the interwell prediction limit and proposed background when the dataset does not follow a normal distribution.

**City Water, Light and Power**

**Power Plant Ash Impoundment**

**Background Calculations - Interwell Prediction Limits**

**40 CFR 257 Appendix III Parameters**

**Outlier Analysis**

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	Number of Samples	Mean	Standard Deviation	Critical Values
AP-4	Boron, total	ug/L	78.3	123	131	136	117	120	105	129	16	88.775	33.73203	2.747
AP-5	Boron, total	ug/L	69.9	53.7	77.9	73.3	48.3	44.3	40.7	73				
AP-4	Calcium, total	mg/L	125	118	118	117	136	117	150	141	16	126.11875	30.70627	2.747
AP-5	Calcium, total	mg/L	98.1	77.3	158	201	155	83.5	105	118				
AP-4	pH	s.u.	7.39	7.18	7.13	7.01	7.02	7.08	7.29	7.12	16	7.289375	0.266395	2.747
AP-5	pH	s.u.	7.66	7.56	6.83	7.62	7.42	7.36	7.77	7.19				
AP-4	Total Dissolved Solids	mg/L	492	514	554	558	482	538	526	544	16	460.625	82.23128	2.747
AP-5	Total Dissolved Solids	mg/L	358	292	474	344	406	426	392	470				

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4
AP-4	Boron, total	ug/L	-0.310536	1.0146142	1.2517775	1.4000046	0.8367418	0.925678	0.4809968	1.1924867
AP-5	Boron, total	ug/L	-0.559557	-1.039813	-0.322394	-0.458763	-1.199898	-1.31848	-1.425203	-0.467656
AP-4	Calcium, total	mg/L	-0.036434	-0.2644	-0.2644	-0.296967	0.3217991	-0.296967	0.7777321	0.4846323
AP-5	Calcium, total	mg/L	-0.912477	-1.589863	1.0382652	2.4386307	0.9405653	-1.387949	-0.687767	-0.2644
AP-4	pH	s.u.	0.3777287	-0.410575	-0.598266	-1.048725	-1.011187	-0.785957	0.0023461	-0.635804
AP-5	pH	s.u.	1.3912615	1.015879	-1.724414	1.2411085	0.4903434	0.2651139	1.8041823	-0.373036
AP-4	Total Dissolved Solids	mg/L	0.3815458	0.6490839	1.1355168	1.1841601	0.2599376	0.9409436	0.7950138	1.0139086
AP-5	Total Dissolved Solids	mg/L	-1.248004	-2.050619	0.162651	-1.418256	-0.664285	-0.421068	-0.834536	0.1140077

Notes:

1. Outlier method presented above outlined is in ASTM paper E178-75 (Grubb's Test).
2. No outliers are observed.

**City Water, Light and Power**

**Power Plant Ash Impoundment**

**Background Calculations - Interwell Prediction Limits**

**40 CFR 257 Appendix III Parameters**

**Non-Detect Percentage Analysis**

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	Number of Samples	Number of ND's	% ND	ND Treatment
AP-4	Boron, total	ug/L	78.3	123	131	136	117	120	105	129	16	0	0%	No Adjustment
AP-5	Boron, total	ug/L	69.9	53.7	77.9	73.3	48.3	44.3	40.7	73				
AP-4	Calcium, total	mg/L	125	118	118	117	136	117	150	141	16	0	0%	No Adjustment
AP-5	Calcium, total	mg/L	98.1	77.3	158	201	155	83.5	105	118				
AP-4	pH	s.u.	7.39	7.18	7.13	7.01	7.02	7.08	7.29	7.12	16	0	0%	No Adjustment
AP-5	pH	s.u.	7.66	7.56	6.83	7.62	7.42	7.36	7.77	7.19				
AP-4	Total Dissolved Solids	mg/L	492	514	554	558	482	538	526	544	16	0	0%	No Adjustment
AP-5	Total Dissolved Solids	mg/L	358	292	474	344	406	426	392	470				

Notes:

1. For datasets with a fraction of non-detect values from 25% to 50%, adjustments to the mean and standard deviation (SD) are required.
2. For datasets with a single censoring point (RL), Cohen's Adjustment may be used to adjust the mean and SD or a substitution of 1/2 the RL may be used for small datasets (<5) in accordance with Section 15.2 of the March 2009 Unified Guidance (Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities).
3. Kaplan-Meier may be used to adjust the mean and SD for datasets with single or multiple censoring points (RL). The Kaplan-Meier adjusted mean and SD were calculated using ProUCL 5.2.
2. For datasets that do not include non-detect values, no adjustment to the mean and standard deviation are required prior to calculating the prediction limit.

City Water, Light and Power

Power Plant Ash Impoundment

Background Calculations - Interwell Prediction Limits

40 CFR 257 Appendix III Parameters

Prediction Limit Calculation

$$\text{Prediction Limit} = x + st[1+(1/n)]^{1/2}$$

Confidence Level = 95%

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	ND Treatment	Mean [x]	Standard Deviation [s]	Number of Samples	T Value [t]	Prediction Limit	
AP-4	Boron, total	ug/L	78.3	123	131	136	117	120	105	129	No Adj.	88.775	33.73	16	1.753	149.7271	
AP-5	Boron, total	ug/L	69.9	53.7	77.9	73.3	48.3	44.3	40.7	73							
AP-4	Calcium, total	mg/L	125	118	118	117	136	117	150	141	No Adj.	126.11875	30.71	16	1.753	181.6035	
AP-5	Calcium, total	mg/L	98.1	77.3	158	201	155	83.5	105	118							
AP-4	Chloride, total	mg/L	11.3	12.3	11.3	9.8	10.6	12	11.9	12.1	Highest Detected Value	Non-parametric dataset				12.3000	
AP-5	Chloride, total	mg/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 30							
AP-4	Fluoride, total	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	PQL	100% Non-detects				0.5000	
AP-5	Fluoride, total	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5							
AP-4	pH	s.u.	7.39	7.18	7.13	7.01	7.02	7.08	7.29	7.12	No Adj.	7.289375	0.27	16	2.131	6.7042	7.8745
AP-5	pH	s.u.	7.66	7.56	6.83	7.62	7.42	7.36	7.77	7.19							
AP-4	Sulfate, total	mg/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	Highest Detected Value	Non-parametric dataset				55.5000	
AP-5	Sulfate, total	mg/L	54.3	46.8	50.8	52.5	55.5	54.8	48.4	55.3							
AP-4	Total Dissolved Solids	mg/L	492	514	554	558	482	538	526	544	No Adj.	460.625	82.23	16	1.753	609.2129	
AP-5	Total Dissolved Solids	mg/L	358	292	474	344	406	426	392	470							

City Water, Light and Power

Power Plant Ash Impoundment

Background Calculations - Interwell Prediction Limits

40 CFR 257 Appendix IV Parameters

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	Distribution <sup>[1]</sup>	Proposed Background Value	
AP-4	Arsenic, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	26.6	> 50% NDs - Propose Highest Detected Concentration as Prediction Limit/Background	26.6
AP-5	Arsenic, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25			
AP-4	Barium, total	ug/L	322	373	381	357	413	405	391	410	Normal Dataset - Calculate Interwell Prediction Limit	519.18	
AP-5	Barium, total	ug/L	61.8	62.8	251	201	137	80.7	43	308			
AP-4	Beryllium, total	ug/L	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	100% NDs - Interwell value set at the laboratory PQL	2.5	
AP-5	Beryllium, total	ug/L	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5			
AP-4	Cadmium, total	ug/L	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	100% NDs - Interwell value set at the laboratory PQL	2.5	
AP-5	Cadmium, total	ug/L	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5			
AP-4	Chromium, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	> 50% NDs - Propose Highest Detected Concentration as Prediction Limit/Background	65.3	
AP-5	Chromium, total	ug/L	< 25	< 25	60.5	43.2	< 25	< 25	< 25	65.3			
AP-4	Mercury, total	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	100% NDs - Interwell value set at the laboratory PQL	0.5	
AP-5	Mercury, total	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
AP-4	Molybdenum, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	100% NDs - Interwell value set at the laboratory PQL	25	
AP-5	Molybdenum, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25			
AP-4	Radium-226	pCi/L	< 1	< 0.57	0.3	0.91	0.82	0.63	0.53	0.69	Normal Dataset - Calculate Interwell Prediction Limit	1.41	
AP-5	Radium-226	pCi/L	< 1	< 0.42	0.3	0.34	0.34	0.55	1.9	1.3			
AP-4	Radium-228	pCi/L	2.2	< 0.58	1.3	1.4	1.7	0.73	1.5	1.3	Normal Dataset - Calculate Interwell Prediction Limit	2.38	
AP-5	Radium-228	pCi/L	< 1	< -0.06	1	2.2	0.85	1.2	1	1.9			
AP-4	Selenium, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	100% NDs - Interwell value set at the laboratory PQL	25	
AP-5	Selenium, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25			

Notes:

1. Shapiro-Wilk method utilized to determine if the data set follows a normal distribution. ProUCL 5.2 was used for the calculations. ProUCL 5.2 outputs are provided.
2. In accordance with Section 18.3 of the March 2009 Unified Guidance (Statistical Analysis of Groundwater at RCRA Facilities), the maximum detected concentration is utilized as the interwell prediction limit and proposed background when the dataset does not follow a normal distribution.

City Water, Light and Power

Power Plant Ash Impoundment

Background Calculations - Interwell Prediction Limits

40 CFR 257 Appendix IV Parameters

Outlier Analysis

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	Number of Samples	Mean	Standard Deviation	Critical Values
AP-4	Barium, total	ug/L	322	373	381	357	413	405	391	410	16	262.33125	142.1442	2.747
AP-5	Barium, total	ug/L	61.8	62.8	251	201	137	80.7	43	308				
AP-4	Radium-226	pCi/L	< 1	< 0.57	0.3	0.91	0.82	0.63	0.53	0.69	16	0.725	0.428906	2.747
AP-5	Radium-226	pCi/L	< 1	< 0.42	0.3	0.34	0.34	0.55	1.9	1.3				
AP-4	Radium-228	pCi/L	2.2	< 0.58	1.3	1.4	1.7	0.73	1.5	1.3	16	1.2375	0.594581	2.747
AP-5	Radium-228	pCi/L	< 1	< -0.06	1	2.2	0.85	1.2	1	1.9				

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4
AP-4	Barium, total	ug/L	0.419776	0.778567	0.834848	0.666005	1.059971	1.00369	0.905199	1.038866
AP-5	Barium, total	ug/L	-1.41076	-1.40372	-0.07972	-0.43147	-0.88172	-1.2778	-1.54302	0.321285
AP-4	Radium-226	pCi/L	0.641167	-0.36138	-0.99089	0.43133	0.221494	-0.22149	-0.45465	-0.0816
AP-5	Radium-226	pCi/L	0.641167	-0.71111	-0.99089	-0.89763	-0.89763	-0.40802	2.739531	1.340621
AP-4	Radium-228	pCi/L	1.618787	-1.10582	0.105116	0.273302	0.777859	-0.85354	0.441487	0.105116
AP-5	Radium-228	pCi/L	-0.39944	0	-0.39944	1.618787	-0.65172	-0.06307	-0.39944	1.11423

Notes:

1. Outlier method presented above outlined is in ASTM paper E178-75 (Grubb's Test).
2. No outliers are observed.

**City Water, Light and Power**

**Power Plant Ash Impoundment**

**Background Calculations - Interwell Prediction Limits**

**40 CFR 257 Appendix IV Parameters**

**Non-Detect Percentage Analysis**

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	Number of Samples	Number of ND's	% ND	ND Treatment
AP-4	Barium, total	ug/L	322	373	381	357	413	405	391	410	16	0	0%	NO ADJ
AP-5	Barium, total	ug/L	61.8	62.8	251	201	137	80.7	43	308				
AP-4	Radium-226	pCi/L	< 1	< 0.57	0.3	0.91	0.82	0.63	0.53	0.69	16	4	25%	Kaplan-Meier
AP-5	Radium-226	pCi/L	< 1	< 0.42	0.3	0.34	0.34	0.55	1.9	1.3				
AP-4	Radium-228	pCi/L	2.2	< 0.58	1.3	1.4	1.7	0.73	1.5	1.3	16	3	19%	Kaplan-Meier
AP-5	Radium-228	pCi/L	< 1	< -0.06	1	2.2	0.85	1.2	1	1.9				

Notes:

1. For datasets with a fraction of non-detect values from 25% to 50%, adjustments to the mean and standard deviation (SD) are required.
2. For datasets with a single censoring point (RL), Cohen's Ajustment may be used to adjust the mean and SD or a substitution of 1/2 the RL may be used for small datasets (<5) in accordance with Section 15.2 of the March 2009 Unified Guidance (Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities).
3. Kaplan-Meier may be used to adjust the mean and SD for datasets with single or multiple censoring points (RL). The Kaplan-Meier adjusted mean and SD were calculated using ProUCL 5.2.
2. For datasets that do not include non-detect values, no adjustment to the mean and standard deviation are required prior to calculating the prediction limit.

City Water, Light and Power

Power Plant Ash Impoundment

Background Calculations - Interwell Prediction Limits

40 CFR 257 Appendix IV Parameters

Prediction Limit Calculation

Prediction Limit =  $x + st[1+(1/n)]^{.5}$   
 Confidence Level = 95%

Well	Parameter	Units	2016-Q1	2016-Q2	2016-Q3	2016-Q4	2017-Q1	2017-Q2	2017-Q3	2017-Q4	ND	Mean [x]	Standard Deviation [s]	Number of Samples	T Value [t]	Prediction Limit
			< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25					< 25
AP-4	Arsenic, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	26.6	Highest Detected Value	Non-parametric dataset				26.6
AP-5	Arsenic, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25						
AP-4	Barium, total	ug/L	322	373	381	357	413	405	391	410	No Adj.	262.3313	142.14	16	1.753	519.1789
AP-5	Barium, total	ug/L	61.8	62.8	251	201	137	80.7	43	308						
AP-4	Beryllium, total	ug/L	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	PQL	100% Non-detects				2.5
AP-5	Beryllium, total	ug/L	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5						
AP-4	Cadmium, total	ug/L	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	PQL	100% Non-detects				2.5
AP-5	Cadmium, total	ug/L	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5						
AP-4	Chromium, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	Highest Detected Value	Non-parametric dataset				65.3
AP-5	Chromium, total	ug/L	< 25	< 25	60.5	43.2	< 25	< 25	< 25	65.3						
AP-4	Mercury, total	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	PQL	100% Non-detects				0.5
AP-5	Mercury, total	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5						
AP-4	Molybdenum, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	PQL	100% Non-detects				25
AP-5	Molybdenum, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25						
AP-4	Radium-226	pCi/L	< 1	< 0.57	0.3	0.91	0.82	0.63	0.53	0.69	<sup>1</sup> Kaplan-Meier	0.646	0.42	16	1.753	1.4103
AP-5	Radium-226	pCi/L	< 1	< 0.42	0.3	0.34	0.34	0.55	1.9	1.3						
AP-4	Radium-228	pCi/L	2.2	< 0.58	1.3	1.4	1.7	0.73	1.5	1.3	<sup>1</sup> Kaplan-Meier	1.158	0.68	16	1.753	2.3813
AP-5	Radium-228	pCi/L	< 1	< -0.06	1	2.2	0.85	1.2	1	1.9						
AP-4	Selenium, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	PQL	100% Non-detects				25
AP-5	Selenium, total	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25						

Note:  
 1. Multiple censoring points (RL's) were observed. Therefore, Kaplan-Meier was utilized to adjust the mean and SD.

City Water, Light and Power

Power Plant Ash Impoundment

Background Calculations - Interwell Prediction Limits

40 CFR 257 Appendix IV Parameters

Raw Data Summary

Well	Parameter	Units	2021-Q1	2021-Q2	2021-Q3	2021-Q4	2022-Q1	2022-Q2	2022-Q3	2022-Q4	Distribution <sup>[1]</sup>	Proposed Background Value
AP-4	Antimony, total	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	100% NDs - Interwell value set at the laboratory PQL	1.00
AP-5	Antimony, total	ug/L	< 1	< 1	< 0.5	< 1	< 1	< 1	< 1	< 1		
AP-4	Cobalt, total	ug/L	< 5	5.2	5	< 5	< 5	< 5	< 5	< 5	> 50% NDs - Propose Highest Detected Concentration as Prediction Limit/Background	5.20
AP-5	Cobalt, total	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5		
AP-4	Lithium, total	mg/L	0.0087	0.0108	0.0113	0.0079	0.0092	0.0092	0.0077		Non-Parametric - Propose Highest Detected Concentration as Prediction Limit/Background	0.0124
AP-5	Lithium, total	mg/L	0.005	0.006	0.0068	0.009	0.0053	< 0.005	0.0104			
AP-4	Lead, total	ug/L	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	100% NDs - Interwell value set at the laboratory PQL	15.00
AP-5	Lead, total	ug/L	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15		
AP-4	Thallium, total	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	100% NDs - Interwell value set at the laboratory PQL	2.00
AP-5	Thallium, total	ug/L	< 2	< 2		< 2	< 2	< 2	< 2	< 2		

Notes:

1. Shapiro-Wilk method utilized to determine if the data set follows a normal distribution. ProUCL 5.2 was used for the calculations. ProUCL 5.2 outputs are provided.
2. In accordance with Chapter 18.3 of the March 2009 Unified Guidance (Statistical Analysis of Groundwater at RCRA Facilities), the maximum detected concentration is utilized as the interwell prediction limit and proposed background when the dataset does not follow a normal distribution.

City Water, Light and Power

Power Plant Ash Impoundment

Background Calculations - Interwell Prediction Limits

40 CFR 257 Appendix IV Parameters

Outlier Analysis

Well	Parameter	Units	2021-Q1	2021-Q2	2021-Q3	2021-Q4	2022-Q1	2022-Q2	2022-Q3	2022-Q4	Number of Samples	Mean	Standard Deviation	Critical Values
AP-4	Antimony, total	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	16	0.96875	0.125	2.747
AP-5	Antimony, total	ug/L	< 1	< 1	< 0.5	< 1	< 1	< 1	< 1	< 1				
AP-4	Cobalt, total	ug/L	< 5	5.2	5	< 5	< 5	< 5	< 5	< 5	16	5.0125	0.05	2.747
AP-5	Cobalt, total	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5				
AP-4	Lithium, total	mg/L	0.0087	0.0108	0.0113	0.0079	0.0092	0.0092	0.0077	< 0.05	16	0.01326875	0.014476	2.747
AP-5	Lithium, total	mg/L	0.005	0.006	0.0068	0.009	0.0053	< 0.005	0.0104	< 0.05				
AP-4	Lead, total	ug/L	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	16	15	0	2.747
AP-5	Lead, total	ug/L	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15				
AP-4	Thallium, total	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	16	1.99375	0.025	2.747
AP-5	Thallium, total	ug/L	< 2	< 2	1.9	< 2	< 2	< 2	< 2	< 2				

Well	Parameter	Units	2021-Q1	2021-Q2	2021-Q3	2021-Q4	2022-Q1	2022-Q2	2022-Q3	2022-Q4
AP-4	Antimony, total	ug/L	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
AP-5	Antimony, total	ug/L	0.25	0.25	-3.75	0.25	0.25	0.25	0.25	0.25
AP-4	Cobalt, total	mg/L	-0.25	3.75	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
AP-5	Cobalt, total	mg/L	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
AP-4	Lithium, total	mg/L	-0.315598	-0.170535	-0.135996	-0.37086	-0.281059	-0.281059	-0.384675	2.5373024
AP-5	Lithium, total	mg/L	-0.571184	-0.502107	-0.446845	-0.294875	-0.550461	-0.571184	-0.198166	2.5373024
AP-4	Lead, total	ug/L	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AP-5	Lead, total	ug/L	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AP-4	Thallium, total	ug/L	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
AP-5	Thallium, total	ug/L	0.25	0.25	-3.75	0.25	0.25	0.25	0.25	0.25

Notes:

1. Outlier method presented above outlined is in ASTM paper E178-75 (Grubb's Test).
2. - The 3Q21 detection of 1.9 ug/L is an outlier. The outlier will be removed.
3. The 4Q22 Lithium reporting limit (0.05 mg/L) is 10 times higher than the standard reporting limit (0.005 mg/L). The data set has been removed from the evaluation.

**City Water, Light and Power**

**Power Plant Ash Impoundment**

**Background Calculations - Interwell Prediction Limits**

**40 CFR 257 Appendix IV Parameters**

**Non-Detect Percentage Analysis**

Well	Parameter	Units	2021-Q1	2021-Q2	2021-Q3	2021-Q4	2022-Q1	2022-Q2	2022-Q3	2022-Q4	Number of Samples	Number of ND's	% ND	ND Treatment
AP-4	Antimony, total	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	16	16	100%	PQL
AP-5	Antimony, total	ug/L	< 1	< 1	< 0.5	< 1	< 1	< 1	< 1	< 1				
AP-4	Cobalt, total	ug/L	< 5	5.2	5	< 5	< 5	< 5	< 5	< 5	16	14	88%	Highest Detection
AP-5	Cobalt, total	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5				
AP-4	Lithium, total	mg/L	0.0087	0.0108	0.0113	0.0079	0.0092	0.0092	0.0077		14	1	7%	½ PQL
AP-5	Lithium, total	mg/L	0.005	0.006	0.0068	0.009	0.0053	< 0.005	0.0104					
AP-4	Lead, total	ug/L	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	16	16	100%	PQL
AP-5	Lead, total	ug/L	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15				
AP-4	Thallium, total	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	15	15	100%	PQL
AP-5	Thallium, total	ug/L	< 2	< 2		< 2	< 2	< 2	< 2	< 2				

Notes:

1. For datasets with a fraction of non-detect values from 25% to 50%, adjustments to the mean and standard deviation (SD) are required. (Monitoring Data at RCRA Facilities).
2. For datasets that do not include non-detect values, no adjustment to the mean and standard deviation are required prior to calculating the prediction limit.

City Water, Light and Power

Power Plant Ash Impoundment

Background Calculations - Interwell Prediction Limits

40 CFR 257 Appendix IV Parameters

Prediction Limit Calculation

$$\text{Prediction Limit} = x + st[1+(1/n)]^{**1/2}$$

Confidence Level = 95%

Well	Parameter	Units	2021-Q1	2021-Q2	2021-Q3	2021-Q4	2022-Q1	2022-Q2	2022-Q3	2022-Q4	ND Treatment	Mean [x]	Standard Deviation [s]	Number of Samples	T Value [t]	Prediction Limit
AP-4	Antimony, total	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	PQL	100% Non-detects				1.0000
AP-5	Antimony, total	ug/L	< 1	< 1	< 0.5	< 1	< 1	< 1	< 1	< 1		100% Non-detects				1.0000
AP-4	Cobalt, total	ug/L	< 5	5.2	5	< 5	< 5	< 5	< 5	< 5	Highest Detection				5.2000	
AP-5	Cobalt, total	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	Highest Detection				5.2000	
AP-4	Lithium, total	mg/L	0.0087	0.0108	0.0113	0.0079	0.0092	0.0092	0.0077		½ PQL	0.00784286	0.0025	14	1.7709	0.0124
AP-5	Lithium, total	mg/L	0.005	0.006	0.0068	0.009	0.0053	< 0.0025	0.0104							
AP-4	Lead, total	ug/L	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	PQL	100% Non-detects				15.0000
AP-5	Lead, total	ug/L	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15		100% Non-detects				15.0000
AP-4	Thallium, total	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	PQL	100% Non-detects				2.0000
AP-5	Thallium, total	ug/L	< 2	< 2		< 2	< 2	< 2	< 2	< 2		100% Non-detects				2.0000

Lithium - the 4Q22 reporting limit (0.05 mg/L) is 10 times higher than the standard reporting limit (0.005 mg/L). Data set has been removed from the evaluation.

**ATTACHMENT 2:  
2023 GROUNDWATER MONITORING REPORTS AND FIELD LOGS OF  
2023 SAMPLING EVENTS**

## **FIRST QUARTER 2023 ANALYTICAL REPORT AND FIELD NOTES**

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  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

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**Client:** City Water, Light & Power

**Work Order:** 23010325

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 07-Mar-23

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**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

**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)

**Client:** City Water, Light & Power

**Work Order:** 23010325

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 07-Mar-23

### Qualifiers

- # - Unknown hydrocarbon
- C - RL shown is a Client Requested Quantitation Limit
- H - Holding times exceeded
- J - Analyte detected below quantitation limits
- ND - Not Detected at the Reporting Limit
- S - Spike Recovery outside recovery limits
- X - Value exceeds Maximum Contaminant Level
- B - Analyte detected in associated Method Blank
- E - Value above quantitation range
- I - Associated internal standard was outside method criteria
- M - Manual Integration used to determine area response
- R - RPD outside accepted recovery limits
- T - TIC(Tentatively identified compound)



## 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

#### Collinsville Air

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**Email** EHurley@teklabinc.com

#### Springfield

**Address** 3920 Pintail Dr  
Springfield, IL 62711-9415  
**Phone** (217) 698-1004  
**Fax** (217) 698-1005  
**Email** KKlostermann@teklabinc.com

#### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

#### Kansas City

**Address** 8421 Nieman Road  
Lenexa, KS 66214  
**Phone** (913) 541-1998  
**Fax** (913) 541-1998  
**Email** jhriley@teklabinc.com

**Client:** City Water, Light & Power

**Work Order:** 23010325

**Client Project:** Ash Pond 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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23010325-001  
 Matrix: GROUNDWATER

Work Order: 23010325  
 Report Date: 07-Mar-23

Client Sample ID: RW-3

Collection Date: 01/26/2023 14:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		170	NTU	1	01/26/2023 14:40	R324367
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		41.9	°F	1	01/26/2023 14:40	R324367
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.15		1	01/26/2023 14:40	R324367
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1640	µmhos/cm @25C	1	01/26/2023 14:40	R324367
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		435	mg/L	2.5	01/31/2023 8:38	R324271
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		< 10	mg/L	1	02/06/2023 13:57	R324440
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.46	mg/L	1	02/07/2023 9:56	R324472
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	1		29	mg/L	1	02/06/2023 13:57	R324453
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	02/01/2023 18:13	202480
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23010325-002  
 Matrix: GROUNDWATER

Work Order: 23010325  
 Report Date: 07-Mar-23

Client Sample ID: AP-1

Collection Date: 01/27/2023 11:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		504.29	ft	1	01/27/2023 11:19	R324367
Depth to water	*	-5.00		7.62	ft	1	01/27/2023 11:19	R324367
Depth to water from measuring point	*	0		9.89	ft	1	01/27/2023 11:19	R324367
Elevation of groundwater surface	*	0		525.48	ft	1	01/27/2023 11:19	R324367
Measuring Point Elevation	*	0		535.37	ft	1	01/27/2023 11:19	R324367
Measuring Point Height Above Land Surface	*	0		2.27	ft	1	01/27/2023 11:19	R324367
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		7.4	NTU	1	01/27/2023 11:19	R324367
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		56.8	°F	1	01/27/2023 11:19	R324367
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.60		1	01/27/2023 11:19	R324367
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		3060	µmhos/cm @25C	1	01/27/2023 11:19	R324367
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		1520	mg/L	2.5	01/31/2023 8:38	R324271
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		781	mg/L	20	02/06/2023 14:25	R324440
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.20	mg/L	1	02/07/2023 9:58	R324472
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	5		58	mg/L	5	02/06/2023 14:19	R324453
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	02/02/2023 12:42	202449
Barium	NELAP	0.0025		0.236	mg/L	1	02/02/2023 12:42	202449
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	02/02/2023 12:42	202449
Boron	NELAP	0.200	S	23.2	mg/L	10	02/06/2023 17:24	202449
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	02/02/2023 12:42	202449
Calcium	NELAP	0.100	S	230	mg/L	1	02/02/2023 12:42	202449
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	02/02/2023 12:42	202449
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	02/02/2023 12:42	202449
Lead	NELAP	0.0150		< 0.0150	mg/L	1	02/02/2023 12:42	202449
Lithium	NELAP	0.0050		0.0566	mg/L	1	02/06/2023 17:39	202449
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	02/02/2023 12:42	202449
<i>Matrix spike control limits for B are not applicable due to high sample/spike ratio.</i>								
<i>Matrix spike control limits for Ca are not applicable due to high sample/spike ratio.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	02/07/2023 1:32	202449
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	02/03/2023 16:41	202449
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	02/03/2023 16:41	202449
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	02/01/2023 18:15	202480
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-226	*	0		See Attached	pci/L	1	02/14/2023 0:00	R325259



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power  
**Client Project:** Ash Pond Monitoring Wells  
**Lab ID:** 23010325-002  
**Matrix:** GROUNDWATER

**Work Order:** 23010325  
**Report Date:** 07-Mar-23  
**Client Sample ID:** AP-1  
**Collection Date:** 01/27/2023 11:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-228	*	0		See Attached	pci/L	1	02/14/2023 0:00	R325259



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23010325-003  
 Matrix: GROUNDWATER

Work Order: 23010325  
 Report Date: 07-Mar-23

Client Sample ID: AP-2

Collection Date: 01/27/2023 10:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		8.9	NTU	1	01/27/2023 10:55	R324367
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		55.6	°F	1	01/27/2023 10:55	R324367
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.46		1	01/27/2023 10:55	R324367
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		2440	µmhos/cm @25C	1	01/27/2023 10:55	R324367
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		1180	mg/L	2.5	01/31/2023 8:39	R324271
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		485	mg/L	20	02/06/2023 14:45	R324440
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.24	mg/L	1	02/07/2023 10:00	R324472
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	1		36	mg/L	1	02/06/2023 14:27	R324453
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	02/01/2023 18:17	202480
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



## Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23010325-004  
 Matrix: GROUNDWATER

Work Order: 23010325  
 Report Date: 07-Mar-23  
 Client Sample ID: AP-3  
 Collection Date: 01/27/2023 10:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		< 1.0	NTU	1	01/27/2023 10:35	R324367
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		55.9	°F	1	01/27/2023 10:35	R324367
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.58		1	01/27/2023 10:35	R324367
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		2090	µmhos/cm @25C	1	01/27/2023 10:35	R324367
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		1040	mg/L	2.5	01/31/2023 8:39	R324271
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	100		461	mg/L	10	02/06/2023 14:53	R324440
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.22	mg/L	1	02/07/2023 10:01	R324472
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	5		60	mg/L	5	02/06/2023 14:48	R324453
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	02/01/2023 18:24	202480
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23010325-005  
 Matrix: GROUNDWATER

Work Order: 23010325  
 Report Date: 07-Mar-23

Client Sample ID: AP-4

Collection Date: 01/26/2023 13:51

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		498.79	ft	1	01/26/2023 13:51	R324367
Depth to water	*	-5.00		4.67	ft	1	01/26/2023 13:51	R324367
Depth to water from measuring point	*	0		9.97	ft	1	01/26/2023 13:51	R324367
Elevation of groundwater surface	*	0		549.23	ft	1	01/26/2023 13:51	R324367
Measuring Point Elevation	*	0		559.20	ft	1	01/26/2023 13:51	R324367
Measuring Point Height Above Land Surface	*	0		5.30	ft	1	01/26/2023 13:51	R324367
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		2.4	NTU	1	01/26/2023 13:51	R324367
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		57.7	°F	1	01/26/2023 13:51	R324367
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.99		1	01/26/2023 13:51	R324367
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1160	µmhos/cm @25C	1	01/26/2023 13:51	R324367
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		515	mg/L	2.5	01/31/2023 8:44	R324271
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		< 10	mg/L	1	02/06/2023 14:56	R324440
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.14	mg/L	1	02/07/2023 10:03	R324472
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	1		14	mg/L	1	02/06/2023 14:56	R324453
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	02/02/2023 13:16	202449
Barium	NELAP	0.0025		0.390	mg/L	1	02/02/2023 13:16	202449
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	02/02/2023 13:16	202449
Boron	NELAP	0.0200		0.0918	mg/L	1	02/06/2023 17:22	202449
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	02/02/2023 13:16	202449
Calcium	NELAP	0.100		115	mg/L	1	02/02/2023 13:16	202449
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	02/02/2023 13:16	202449
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	02/02/2023 13:16	202449
Lead	NELAP	0.0150		< 0.0150	mg/L	1	02/02/2023 13:16	202449
Lithium	NELAP	0.0050		0.0196	mg/L	1	02/06/2023 17:22	202449
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	02/02/2023 13:16	202449
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	02/07/2023 1:11	202449
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	02/03/2023 16:19	202449
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	02/03/2023 16:19	202449
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	02/01/2023 18:26	202480
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23010325-006  
 Matrix: GROUNDWATER

Work Order: 23010325  
 Report Date: 07-Mar-23

Client Sample ID: AP-5

Collection Date: 01/27/2023 12:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		552.63	ft	1	01/27/2023 12:40	R324367
Depth to water	*	-5.00		12.57	ft	1	01/27/2023 12:40	R324367
Depth to water from measuring point	*	0		14.87	ft	1	01/27/2023 12:40	R324367
Elevation of groundwater surface	*	0		569.03	ft	1	01/27/2023 12:40	R324367
Measuring Point Elevation	*	0		583.90	ft	1	01/27/2023 12:40	R324367
Measuring Point Height Above Land Surface	*	0		2.30	ft	1	01/27/2023 12:40	R324367
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		3.7	NTU	1	01/27/2023 12:40	R324367
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		55.4	°F	1	01/27/2023 12:40	R324367
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.06		1	01/27/2023 12:40	R324367
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1000	µmhos/cm @25C	1	01/27/2023 12:40	R324367
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		374	mg/L	1	01/31/2023 8:44	R324271
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	20		37	mg/L	2	02/06/2023 15:17	R324440
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.34	mg/L	1	02/07/2023 10:06	R324472
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	1		3	mg/L	1	02/06/2023 15:06	R324453
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	02/02/2023 13:18	202449
Barium	NELAP	0.0025		0.0408	mg/L	1	02/02/2023 13:18	202449
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	02/02/2023 13:18	202449
Boron	NELAP	0.0200		0.0353	mg/L	1	02/02/2023 13:18	202449
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	02/02/2023 13:18	202449
Calcium	NELAP	0.100		78.3	mg/L	1	02/02/2023 13:18	202449
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	02/02/2023 13:18	202449
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	02/02/2023 13:18	202449
Lead	NELAP	0.0150		< 0.0150	mg/L	1	02/02/2023 13:18	202449
Lithium	NELAP	0.0050		0.0142	mg/L	1	02/06/2023 17:46	202449
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	02/02/2023 13:18	202449
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	02/07/2023 1:16	202449
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	02/03/2023 16:25	202449
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	02/03/2023 16:25	202449
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	02/01/2023 18:33	202480
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23010325-007  
 Matrix: GROUNDWATER

Work Order: 23010325  
 Report Date: 07-Mar-23

Client Sample ID: AP-6

Collection Date: 01/27/2023 12:05

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		498.20	ft	1	01/27/2023 12:05	R324367
Depth to water	*	-5.00		5.53	ft	1	01/27/2023 12:05	R324367
Depth to water from measuring point	*	0		7.95	ft	1	01/27/2023 12:05	R324367
Elevation of groundwater surface	*	0		529.87	ft	1	01/27/2023 12:05	R324367
Measuring Point Elevation	*	0		537.82	ft	1	01/27/2023 12:05	R324367
Measuring Point Height Above Land Surface	*	0		2.42	ft	1	01/27/2023 12:05	R324367
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		< 1.0	NTU	1	01/27/2023 12:05	R324367
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		54.7	°F	1	01/27/2023 12:05	R324367
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.07		1	01/27/2023 12:05	R324367
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		866	µmhos/cm @25C	1	01/27/2023 12:05	R324367
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		322	mg/L	1	01/31/2023 8:51	R324271
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		12	mg/L	1	02/06/2023 15:44	R324440
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.38	mg/L	1	02/07/2023 10:07	R324472
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	1		27	mg/L	1	02/06/2023 15:44	R324453
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	02/02/2023 13:20	202449
Barium	NELAP	0.0025		0.0938	mg/L	1	02/02/2023 13:20	202449
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	02/02/2023 13:20	202449
Boron	NELAP	0.0200		0.130	mg/L	1	02/02/2023 13:20	202449
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	02/02/2023 13:20	202449
Calcium	NELAP	0.100		52.4	mg/L	1	02/02/2023 13:20	202449
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	02/02/2023 13:20	202449
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	02/02/2023 13:20	202449
Lead	NELAP	0.0150		< 0.0150	mg/L	1	02/02/2023 13:20	202449
Lithium	NELAP	0.0050		0.0140	mg/L	1	02/06/2023 17:47	202449
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	02/02/2023 13:20	202449
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	02/07/2023 1:21	202449
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	02/03/2023 16:30	202449
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	02/03/2023 16:30	202449
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	02/01/2023 18:35	202480
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Receiving Check List

<http://www.teklabinc.com/>

Client: City Water, Light & Power

Work Order: 23010325

Client Project: Ash Pond Monitoring Wells

Report Date: 07-Mar-23

Carrier: John Riley

Received By: ANC

Completed by:

Reviewed by:

On:

On:

30-Jan-23

30-Jan-23

Lindsey Maddox

Shelly A. Hennessy

Pages to follow: Chain of custody

Extra pages included

- 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

### CHAIN OF CUSTODY

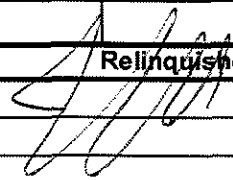
TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: <u>City Water, Light &amp; Power</u> Address: <u>3100 Stevenson Drive, 2nd Floor Maintenance Building</u> City/State/Zip: <u>Springfield IL 62712</u> Contact: <u>Eric Staley</u> Phone: <u>(217) 757-8610</u> Email: <u>eric.staley@cwlp.com</u> Fax: _____				Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>0</u> °C #5 Preserved in: <input checked="" type="checkbox"/> LAB <input type="checkbox"/> FIELD <b>FOR LAB USE ONLY</b> LAB NOTES: <u>87147 TM</u> <u>Added HNO<sub>3</sub> (8051) to AP-1, AP-2, AP-3, AP-4 (100%)</u>															
Are these samples known to be involved in litigation? If yes, a surcharge will apply: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 <u>Ash Pond Monitoring Wells</u>		SAMPLE COLLECTOR'S NAME <u>TEKLAB/JCOP</u>		# and Type of Containers		INDICATE ANALYSIS REQUESTED													
RESULTS REQUESTED <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		BILLING INSTRUCTIONS		UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity	
Lab Use Only	Sample ID	Date/Time Sampled	Matrix																
<u>23010325-001</u>	<u>RW-3</u>	<u>11/20/23 10:40</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>002</u>	<u>AP-1</u>	<u>11/19/23 11:19</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>003</u>	<u>AP-2</u>	<u>01/27/23 10:56</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>004</u>	<u>AP-3</u>	<u>01/27/23 10:35</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>005</u>	<u>AP-4</u>	<u>01/26/23 13:51</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>006</u>	<u>AP-5</u>	<u>01/27/23/24</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>007</u>	<u>AP-6</u>	<u>01/27/23 12:05</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>008</u>	<u>AP-7</u>	<u>FROZEN</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>009</u>	<u>AP-8</u>	<u>01/27/23 11:45</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>010</u>	<u>AP-9</u>	<u>FROZEN</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>011</u>	<u>AP-10</u>	<u>FROZEN</u>	<u>Groundwater</u>	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Relinquished By			Date/Time	Received By			Date/Time												
<u>[Signature]</u>			<u>01/31/23 09:20</u>	<u>[Signature]</u>			<u>1/30/23 09:20</u>												

\*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

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: <u>City Water, Light &amp; Power</u> Address: <u>3100 Stevenson Drive, 2nd Floor Maintenance Building</u> City/State/Zip: <u>Springfield IL 62712</u> Contact: <u>Eric Staley</u> Phone: <u>(217) 757-8610</u> Email: <u>eric.staley@cwlp.com</u> Fax: _____				Samples on: <input type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE _____ °C Preserved in: <input type="checkbox"/> LAB <input type="checkbox"/> FIELD <b>FOR LAB USE ONLY</b> LAB NOTES: _____															
Are these samples known to be involved in litigation? If yes, a surcharge will apply: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 <u>Ash Pond Monitoring Wells</u>		SAMPLE COLLECTOR'S NAME _____		# and Type of Containers		INDICATE ANALYSIS REQUESTED													
RESULTS REQUESTED <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		BILLING INSTRUCTIONS _____		UNP HNO3 NaOH H2SO4 HCL MeOH NaHSO4 TSP Other		Field parameters* Cl F SO4 TDS (T) Metals (T)** Radium-226 Radium-228 Field Turbidity													
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	
	<u>23010325-012</u>	<u>AP-11</u>	<u>FROZEN</u> Groundwater	<u>1</u>	<u>3</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>013</u>	<u>AP-12</u>	<u>FROZEN</u> Groundwater	<u>1</u>	<u>3</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>014</u>	<u>AP-13</u>	<u>FROZEN</u> Groundwater	<u>1</u>	<u>3</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>015</u>	<u>AP-14</u>	<u>FROZEN</u> Groundwater	<u>1</u>	<u>3</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
			Groundwater																
			Groundwater																
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			Groundwater																
Relinquished By		Date/Time		Received By				Date/Time											
		<u>01/31/23</u> <u>0720</u>																	

\*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>

February 22, 2023

Shelly Hennessy  
TEKLAB Inc,  
5445 Horseshoe lake Road  
Collinsville, IL 62234  
TEL:  
FAX:  
RE: 23010325

Order No.: 23020178

Dear Shelly Hennessy:

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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3310 Win St.  
Cuyahoga Falls, Ohio 44223  
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## Case Narrative

WO#: 23020178  
Date: 2/22/2023

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**CLIENT:** TEKLAB Inc,  
**Project:** 23010325

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### 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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Original

These commonly used Qualifiers and Acronyms may or may not be present in this report.

### Qualifiers

<b>U</b>	The compound was analyzed for but was not detected above the MDL.
<b>J</b>	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
<b>H</b>	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
<b>D</b>	The result is reported from a dilution.
<b>E</b>	The result exceeded the linear range of the calibration or is estimated due to interference.
<b>MC</b>	The result is below the Minimum Compound Limit.
<b>*</b>	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
<b>m</b>	Manual integration was used to determine the area response.
<b>d</b>	Manual integration in which peak was deleted
<b>N</b>	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
<b>P</b>	The second column confirmation exceeded 25% difference.
<b>C</b>	The result has been confirmed by GC/MS.
<b>X</b>	The result was not confirmed when GC/MS Analysis was performed.
<b>B</b>	The analyte was detected in the Method Blank at a concentration greater than the RL.
<b>MB+</b>	The analyte was detected in the Method Blank at a concentration greater than the MDL.
<b>G</b>	The ICB or CCB contained reportable amounts of analyte.
<b>QC-/+</b>	The CCV recovery failed low (-) or high (+).
<b>R/QDR</b>	The RPD was outside of accepted recovery limits.
<b>QL-/+</b>	The LCS or LCSD recovery failed low (-) or high (+).
<b>QLR</b>	The LCS/LCSD RPD was outside of accepted recovery limits.
<b>QM-/+</b>	The MS or MSD recovery failed low (-) or high (+).
<b>QMR</b>	The MS/MSD RPD was outside of accepted recovery limits.
<b>QV-/+</b>	The ICV recovery failed low (-) or high (+).
<b>S</b>	The spike result was outside of accepted recovery limits.
<b>W</b>	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
<b>Z</b>	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

### Acronyms

<b>ND</b>	Not Detected	<b>RL</b>	Reporting Limit
<b>QC</b>	Quality Control	<b>MDL</b>	Method Detection Limit
<b>MB</b>	Method Blank	<b>LOD</b>	Level of Detection
<b>LCS</b>	Laboratory Control Sample	<b>LOQ</b>	Level of Quantitation
<b>LCSD</b>	Laboratory Control Sample Duplicate	<b>PQL</b>	Practical Quantitation Limit
<b>QCS</b>	Quality Control Sample	<b>CRQL</b>	Contract Required Quantitation Limit
<b>DUP</b>	Duplicate	<b>PL</b>	Permit Limit
<b>MS</b>	Matrix Spike	<b>RegLvl</b>	Regulatory Limit
<b>MSD</b>	Matrix Spike Duplicate	<b>MCL</b>	Maximum Contamination Limit
<b>RPD</b>	Relative Percent Different	<b>MinCL</b>	Minimum Compound Limit
<b>ICV</b>	Initial Calibration Verification	<b>RA</b>	Reanalysis
<b>ICB</b>	Initial Calibration Blank	<b>RE</b>	Reextraction
<b>CCV</b>	Continuing Calibration Verification	<b>TIC</b>	Tentatively Identified Compound
<b>CCB</b>	Continuing Calibration Blank	<b>RT</b>	Retention Time
<b>RLC</b>	Reporting Limit Check	<b>CF</b>	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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 3310 Win St.  
 Cuyahoga Falls, Ohio 44223  
 TEL: (330) 253-8211 FAX: (330) 253-4489  
 Website: <http://www.settek.com>

## 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



**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  
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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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 3310 Win St.  
 Cuyahoga Falls, Ohio 44223  
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# Analytical Report

(consolidated)

WO#: 23020178

Date Reported: 2/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23010325  
**Lab ID:** 23020178-001  
**Client Sample ID:** 23010325-001

**Collection Date:** 1/26/2023 2:20:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226/Radium-228	0.28	2.00	U	pCi/L	± 0.54	1	2/17/2023 5:17:57 PM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226	0.28	1.00	U	pCi/L	± 0.11	1	2/15/2023
Yield	1					1	2/15/2023
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0 E903-904</b>		Analyst: <b>HDJ</b>	
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

<b>Qualifiers:</b>	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,  
**Project:** 23010325  
**Lab ID:** 23020178-002  
**Client Sample ID:** 23010325-002

**Collection Date:** 1/27/2023 1:19:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226/Radium-228	1.38	2.00	U	pCi/L	± 0.64	1	2/17/2023 5:17:57 PM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226	0.45	1.00	U	pCi/L	± 0.14	1	2/15/2023
Yield	0.96					1	2/15/2023
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-228	0.93	1.00	J	pCi/L	± 0.5	1	2/14/2023 1:39:00 PM
Yield	0.96					1	2/14/2023 1:39:00 PM

<b>Qualifiers:</b>	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,  
**Project:** 23010325  
**Lab ID:** 23020178-003  
**Client Sample ID:** 23010325-003

**Collection Date:** 1/27/2023 10:55:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226/Radium-228	0.87	2.00	U	pCi/L	± 0.56	1	2/17/2023 5:17:57 PM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226	0.41	1.00	U	pCi/L	± 0.14	1	2/15/2023
Yield	0.91					1	2/15/2023
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0 E903-904</b>		Analyst: <b>HDJ</b>	
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

<b>Qualifiers:</b>	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,  
**Project:** 23010325  
**Lab ID:** 23020178-004  
**Client Sample ID:** 23010325-004

**Collection Date:** 1/27/2023 10:35:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226/Radium-228	0.54	2.00	U	pCi/L	± 0.53	1	2/17/2023 5:17:57 PM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226	0.13	1.00	U	pCi/L	± 0.08	1	2/15/2023
Yield	0.97					1	2/15/2023
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0 E903-904</b>		Analyst: <b>HDJ</b>	
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

<b>Qualifiers:</b>	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,  
**Project:** 23010325  
**Lab ID:** 23020178-005  
**Client Sample ID:** 23010325-005

**Collection Date:** 1/26/2023 1:51:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226/Radium-228	1.04	2.00	U	pCi/L	± 0.56	1	2/17/2023 5:17:57 PM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226	0.58	1.00	U	pCi/L	± 0.15	1	2/15/2023
Yield	1					1	2/15/2023
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-228	0.46	1.00	U	pCi/L	± 0.41	1	2/14/2023 1:39:00 PM
Yield	1					1	2/14/2023 1:39:00 PM

<b>Qualifiers:</b>	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.  
 3310 Win St.  
 Cuyahoga Falls, Ohio 44223  
 TEL: (330) 253-8211 FAX: (330) 253-4489  
 Website: <http://www.settek.com>

# Analytical Report

(consolidated)

WO#: 23020178

Date Reported: 2/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23010325  
**Lab ID:** 23020178-006  
**Client Sample ID:** 23010325-006

**Collection Date:** 1/27/2023 12:40:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226/Radium-228	1.29	2.00	U	pCi/L	± 0.62	1	2/17/2023 5:17:57 PM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226	0.1	1.00	U	pCi/L	± 0.07	1	2/15/2023
Yield	1					1	2/15/2023
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-228	1.19	1.00		pCi/L	± 0.55	1	2/14/2023 1:39:00 PM
Yield	1					1	2/14/2023 1:39:00 PM

<b>Qualifiers:</b>	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,  
**Project:** 23010325  
**Lab ID:** 23020178-007  
**Client Sample ID:** 23010325-007

**Collection Date:** 1/27/2023 12:05:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226/Radium-228	0.47	2.00	U	pCi/L	± 0.51	1	2/17/2023 5:17:57 PM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-226	0.32	1.00	U	pCi/L	± 0.13	1	2/15/2023
Yield	0.96					1	2/15/2023
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0 E903-904</b>		Analyst: <b>HDJ</b>	
Radium-228	0.15	1.00	U	pCi/L	± 0.38	1	2/14/2023 1:39:00 PM
Yield	0.98					1	2/14/2023 1:39:00 PM

<b>Qualifiers:</b>	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: <b>23020178-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158366</b>						
Client ID: <b>23010325-001</b>	Batch ID: <b>62679</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>2/14/2023</b>	SeqNo: <b>4210556</b>						
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: <b>23020178-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158366</b>						
Client ID: <b>23010325-002</b>	Batch ID: <b>62679</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>2/14/2023</b>	SeqNo: <b>4210558</b>						
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
  - J Analyte detected below quantitation limits
  - ND Not Detected
  - PL Permit Limit
  - E Value above quantitation range
  - M Manual Integration used to determine area response
  - OG1
  - R RPD outside accepted recovery limits
  - H Holding times for preparation or analy
  - MC Value is below Minimum Compound
  - P Second column confirmation exceeds
  - 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: <b>MB-62679</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b> Units: <b>pCi/L</b>				Prep Date: <b>2/7/2023</b>	RunNo: <b>158366</b>				
Client ID: <b>PBW</b>	Batch ID: <b>62679</b>	TestNo: <b>E904.0</b>		<b>E903-904</b>	Analysis Date: <b>2/14/2023</b>	SeqNo: <b>4210547</b>					
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: <b>LCS-62679</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b> Units: <b>pCi/L</b>				Prep Date: <b>2/7/2023</b>	RunNo: <b>158366</b>				
Client ID: <b>LCSW</b>	Batch ID: <b>62679</b>	TestNo: <b>E904.0</b>		<b>E903-904</b>	Analysis Date: <b>2/14/2023</b>	SeqNo: <b>4210548</b>					
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: <b>LCSD-62679</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-228_</b> Units: <b>pCi/L</b>				Prep Date: <b>2/7/2023</b>	RunNo: <b>158366</b>				
Client ID: <b>LCSS02</b>	Batch ID: <b>62679</b>	TestNo: <b>E904.0</b>		<b>E903-904</b>	Analysis Date: <b>2/14/2023</b>	SeqNo: <b>4210549</b>					
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



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# QC SUMMARY REPORT

WO#: 23020178  
 22-Feb-23

**Client:** TEKLAB Inc,  
**Project:** 23010325

**BatchID:** 62679

Sample ID: <b>RLC-62679</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158366</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>62679</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>2/14/2023</b>	SeqNo: <b>4210551</b>						
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: <b>RLCD-62679</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158366</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>62679</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>2/14/2023</b>	SeqNo: <b>4210552</b>						
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: <b>23020315-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158366</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>62679</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>2/14/2023</b>	SeqNo: <b>4210553</b>						
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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# QC SUMMARY REPORT

WO#: **23020178**  
**22-Feb-23**

**Client:** TEKLAB Inc,  
**Project:** 23010325

**BatchID: 62679**

Sample ID: <b>23020178-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158369</b>						
Client ID: <b>23010325-001</b>	Batch ID: <b>62679</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>2/15/2023</b>	SeqNo: <b>4210647</b>						
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: <b>23020178-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158369</b>						
Client ID: <b>23010325-002</b>	Batch ID: <b>62679</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>2/15/2023</b>	SeqNo: <b>4210649</b>						
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
  - J Analyte detected below quantitation limits
  - ND Not Detected
  - PL Permit Limit
  - E Value above quantitation range
  - M Manual Integration used to determine area response
  - OG1
  - R RPD outside accepted recovery limits
  - H Holding times for preparation or analy
  - MC Value is below Minimum Compound
  - P Second column confirmation exceeds
  - 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: <b>MB-62679</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158369</b>
Client ID: <b>PBW</b>	Batch ID: <b>62679</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>2/15/2023</b>	SeqNo: <b>4210638</b>
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: <b>LCS-62679</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158369</b>
Client ID: <b>LCSW</b>	Batch ID: <b>62679</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>2/15/2023</b>	SeqNo: <b>4210639</b>
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: <b>RLC-62679</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158369</b>
Client ID: <b>BatchQC</b>	Batch ID: <b>62679</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>2/15/2023</b>	SeqNo: <b>4210642</b>
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: <b>RLCD-62679</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158369</b>
Client ID: <b>BatchQC</b>	Batch ID: <b>62679</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>2/15/2023</b>	SeqNo: <b>4210643</b>
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#: 23020178  
 22-Feb-23

**Client:** TEKLAB Inc,  
**Project:** 23010325

**BatchID:** 62679

Sample ID: <b>RLCD-62679</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158369</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>62679</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>2/15/2023</b>	SeqNo: <b>4210643</b>						
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: <b>23020315-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/7/2023</b>	RunNo: <b>158369</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>62679</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>2/15/2023</b>	SeqNo: <b>4210644</b>						
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

### 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  Lab  Field

Teklab Inc  
5445 Horseshoe Lake Road  
Collinsville, IL 62234

Project# 23010325

Contact: Shelly A. Hennessy Email: SHennessy@TeklabInc.com  
20 business days or less Billing/PO: 33924

Requested Due Date: \_\_\_\_\_

State of Origin: \_\_\_\_\_

Phone: 618-344-1004

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**

**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	CPH
	23010325-001	1/26/23 1420	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	28	1
	23010325-002	1/27/23 1319	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	23	1
	23010325-003	1/27/23 1055	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	23	1
	23010325-004	1/27/23 1035	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	10	1
	23010325-005	1/26/23 1351	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	1
	23010325-006	1/27/23 1240	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	24	1
	23010325-007	1/27/23 1205	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	23	1
	23010325-009	1/27/23 1145	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	40	1
			Unpres	Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
			Unpres	Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
			Unpres	Aqueous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

*Relinquished By	Date/Time	Received By	Date/Time
<i>SMK</i>	1/30/23		

*C. Attafors*  
 2 coolers 50 4.6 + 0.3 = 4.9 @ 4.5 + 0.3 = 4.8  
 Fedex 2/2/23 1305

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)



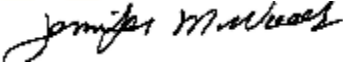


# Sample Log-In Check List

Client Name: **TEK-IL-62234-A**

Work Order Number: **23020178**

RcptNo: **1**

Logged by:	<b>Anthony W. Britton</b>	<b>2/2/2023 1:05:00 PM</b>	
Completed By:	<b>Anthony W. Britton</b>	<b>2/2/2023 7:00:57 PM</b>	
Reviewed By:	<b>Jennifer Woolf</b>	<b>2/3/2023 10:02:23 AM</b>	

### Chain of Custody

- Were seals intact? Yes  No  Not Present
- Is Chain of Custody complete? Yes  No  Not Present
- How was the sample delivered? FedEx

### Log In

- Coolers are present? Yes  No  NA
- Was an attempt made to cool the samples? Yes  No  NA
- Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- Sample(s) in proper container(s)? Yes  No
- Sufficient sample volume for indicated test(s)? Yes  No
- Are samples (except VOA and ONG) properly preserved? Yes  No
- Was preservative added to bottles? Yes  No  NA
- Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes  No  No VOA Vials
- Were any sample containers received broken? Yes  No
- Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
- Are matrices correctly identified on Chain of Custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No

### Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

- Additional remarks:  
 IL per email  
 project address not included

### Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	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: **23020178**

RcptNo: **1**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	4.9	Good	Not Present			

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  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

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**Client:** City Water, Light & Power

**Work Order:** 23020985

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 13-Mar-23

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**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

**Client:** City Water, Light & Power

**Work Order:** 23020985

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 13-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)

**Client:** City Water, Light & Power

**Work Order:** 23020985

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 13-Mar-23

### Qualifiers

- # - Unknown hydrocarbon
- C - RL shown is a Client Requested Quantitation Limit
- H - Holding times exceeded
- J - Analyte detected below quantitation limits
- ND - Not Detected at the Reporting Limit
- S - Spike Recovery outside recovery limits
- X - Value exceeds Maximum Contaminant Level
- B - Analyte detected in associated Method Blank
- E - Value above quantitation range
- I - Associated internal standard was outside method criteria
- M - Manual Integration used to determine area response
- R - RPD outside accepted recovery limits
- T - TIC(Tentatively identified compound)



## 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

#### Collinsville Air

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**Email** EHurley@teklabinc.com

#### Springfield

**Address** 3920 Pintail Dr  
Springfield, IL 62711-9415  
**Phone** (217) 698-1004  
**Fax** (217) 698-1005  
**Email** KKlostermann@teklabinc.com

#### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

#### Kansas City

**Address** 8421 Nieman Road  
Lenexa, KS 66214  
**Phone** (913) 541-1998  
**Fax** (913) 541-1998  
**Email** jhriley@teklabinc.com



## Accreditations

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power

**Work Order:** 23020985

**Client Project:** Ash Pond Monitoring Wells

**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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23020985-001  
 Matrix: GROUNDWATER

Work Order: 23020985  
 Report Date: 13-Mar-23

Client Sample ID: AP-7  
 Collection Date: 02/16/2023 14:54

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		22	NTU	1	02/16/2023 14:54	R325158
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		51.4	°F	1	02/16/2023 14:54	R325158
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.20		1	02/16/2023 14:54	R325158
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		626	µmhos/cm @25C	1	02/16/2023 14:54	R325158
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		328	mg/L	1	02/20/2023 9:58	R325069
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		16	mg/L	1	02/27/2023 16:13	R325321
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.36	mg/L	1	02/24/2023 9:35	R325243
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8		45	mg/L	2	02/27/2023 16:40	R325333
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	02/18/2023 9:22	203036
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Receiving Check List

<http://www.teklabinc.com/>

Client: City Water, Light & Power

Work Order: 23020985

Client Project: Ash Pond Monitoring Wells

Report Date: 13-Mar-23

Carrier: Joe Riley

Received By: ANC

Completed by:

Reviewed by:

On:

17-Feb-23

Timothy W. Mathis

On:

17-Feb-23

Elizabeth A. Hurley

Pages to follow: Chain of custody

Extra pages included

- 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: <u>City Water, Light &amp; Power</u> Address: <u>3100 Stevenson Drive, 2nd Floor Maintenance Building</u> City/State/Zip: <u>Springfield IL 62712</u> Contact: <u>Eric Staley</u> Phone: <u>(217) 757-8610</u> Email: <u>eric.staley@cwlp.com</u> Fax: _____	Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>12</u> °C <u>CTB</u> Preserved in: <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <b>FOR LAB USE ONLY</b> LAB NOTES: <u>PHU 841117-66.5 2-17-23.</u>
Client Comments: *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

<b>PROJECT NAME/NUMBER</b> Ash Pond Monitoring Wells	<b>SAMPLE COLLECTOR'S NAME</b> <u>J. RILEY</u>	<b>RESULTS REQUESTED</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other _____ <input type="checkbox"/> 3 Day (50% Surcharge)	<b>BILLING INSTRUCTIONS</b>
---	---	---	-----------------------------

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		
	<del>AP-1</del>		Groundwater	1	3															
	<del>AP-1</del>		Groundwater	1	3															
	<del>AP-2</del>		Groundwater	1	3															
	<del>AP-3</del>		Groundwater	1	3															
	<del>AP-4</del>		Groundwater	1	3															
	<del>AP-5</del>		Groundwater	1	3															
	<del>AP-6</del>		Groundwater	1	3															
	<del>AP-8</del>		Groundwater	1	3															
	<u>AP-7</u>	<u>02/16/23 1454</u>	Groundwater	1	3															
	<del>AP-8</del>		Groundwater	1	3															
	<u>AP-9</u>	<u>02/16/23 1511</u>	Groundwater	1	3															
	<u>AP-10</u>	<u>02/16/23 1134</u>	Groundwater	1	3															

Relinquished By <u>[Signature]</u>	Date/Time <u>02/17/23 0850</u>	Received By <u>[Signature]</u>	Date/Time <u>2/17/23 850</u>
---------------------------------------	-----------------------------------	-----------------------------------	---------------------------------

\*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

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:  
  
 Client Comments:  
 \*elevations, pH, conductivity, temperature  
 \*\*Sb Se TI (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. KILBY

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										
23020785 004	AP-11	02/16/23 1254	Groundwater	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
005	AP-12	02/16/23 1310	Groundwater	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
006	AP-13	02/16/23 1323	Groundwater	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
007	AP-14	02/16/23 1213	Groundwater	1	3								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
			Groundwater										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										

Relinquished By	Date/Time	Received By	Date/Time
<i>[Signature]</i>	02/17/23 0850	<i>[Signature]</i>	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

Order No.: 23021632

Dear Shelly Hennessy:

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.  
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

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### 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

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Original

These commonly used Qualifiers and Acronyms may or may not be present in this report.

### Qualifiers

<b>U</b>	The compound was analyzed for but was not detected above the MDL.
<b>J</b>	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
<b>H</b>	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
<b>D</b>	The result is reported from a dilution.
<b>E</b>	The result exceeded the linear range of the calibration or is estimated due to interference.
<b>MC</b>	The result is below the Minimum Compound Limit.
<b>*</b>	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
<b>m</b>	Manual integration was used to determine the area response.
<b>d</b>	Manual integration in which peak was deleted
<b>N</b>	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
<b>P</b>	The second column confirmation exceeded 25% difference.
<b>C</b>	The result has been confirmed by GC/MS.
<b>X</b>	The result was not confirmed when GC/MS Analysis was performed.
<b>B</b>	The analyte was detected in the Method Blank at a concentration greater than the RL.
<b>MB+</b>	The analyte was detected in the Method Blank at a concentration greater than the MDL.
<b>G</b>	The ICB or CCB contained reportable amounts of analyte.
<b>QC-/+</b>	The CCV recovery failed low (-) or high (+).
<b>R/QDR</b>	The RPD was outside of accepted recovery limits.
<b>QL-/+</b>	The LCS or LCSD recovery failed low (-) or high (+).
<b>QLR</b>	The LCS/LCSD RPD was outside of accepted recovery limits.
<b>QM-/+</b>	The MS or MSD recovery failed low (-) or high (+).
<b>QMR</b>	The MS/MSD RPD was outside of accepted recovery limits.
<b>QV-/+</b>	The ICV recovery failed low (-) or high (+).
<b>S</b>	The spike result was outside of accepted recovery limits.
<b>W</b>	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
<b>Z</b>	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

### Acronyms

<b>ND</b>	Not Detected	<b>RL</b>	Reporting Limit
<b>QC</b>	Quality Control	<b>MDL</b>	Method Detection Limit
<b>MB</b>	Method Blank	<b>LOD</b>	Level of Detection
<b>LCS</b>	Laboratory Control Sample	<b>LOQ</b>	Level of Quantitation
<b>LCSD</b>	Laboratory Control Sample Duplicate	<b>PQL</b>	Practical Quantitation Limit
<b>QCS</b>	Quality Control Sample	<b>CRQL</b>	Contract Required Quantitation Limit
<b>DUP</b>	Duplicate	<b>PL</b>	Permit Limit
<b>MS</b>	Matrix Spike	<b>RegLvl</b>	Regulatory Limit
<b>MSD</b>	Matrix Spike Duplicate	<b>MCL</b>	Maximum Contamination Limit
<b>RPD</b>	Relative Percent Different	<b>MinCL</b>	Minimum Compound Limit
<b>ICV</b>	Initial Calibration Verification	<b>RA</b>	Reanalysis
<b>ICB</b>	Initial Calibration Blank	<b>RE</b>	Reextraction
<b>CCV</b>	Continuing Calibration Verification	<b>TIC</b>	Tentatively Identified Compound
<b>CCB</b>	Continuing Calibration Blank	<b>RT</b>	Retention Time
<b>RLC</b>	Reporting Limit Check	<b>CF</b>	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#: **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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 Cuyahoga Falls, Ohio 44223  
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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



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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#: 23021632

Date Reported: 3/10/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23020985  
**Lab ID:** 23021632-001  
**Client Sample ID:** 23020985-001

**Collection Date:** 2/16/2023 2:54:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	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
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	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

<b>Qualifiers:</b>	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.  
 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: <b>MB-63147</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159591</b>						
Client ID: <b>PBW</b>	Batch ID: <b>63147</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>3/8/2023</b>	SeqNo: <b>4241639</b>						
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: <b>LCSD-63147</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159591</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>63147</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>3/8/2023</b>	SeqNo: <b>4241641</b>						
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: <b>RLC-63147</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159591</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>3/8/2023</b>	SeqNo: <b>4241643</b>						
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.  
 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: <b>RLCD-63147</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159591</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>3/8/2023</b>	SeqNo: <b>4241644</b>						
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: <b>23021630-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159591</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>3/8/2023</b>	SeqNo: <b>4241645</b>						
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: <b>23021631-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159591</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>3/8/2023</b>	SeqNo: <b>4241650</b>						
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.  
 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: <b>23021637-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159591</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>3/8/2023</b>	SeqNo: <b>4241652</b>						
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		

<b>Qualifiers:</b>	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.  
 3310 Win St.  
 Cuyahoga Falls, Ohio 44223  
 TEL: (330) 253-8211 FAX: (330) 253-4489  
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# QC SUMMARY REPORT

WO#: 23021632  
 10-Mar-23

**Client:** TEKLAB Inc,  
**Project:** 23020985

**BatchID:** 63147

Sample ID: <b>MB-63147</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159596</b>						
Client ID: <b>PBW</b>	Batch ID: <b>63147</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>3/9/2023</b>	SeqNo: <b>4241980</b>						
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: <b>LCS-63147</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159596</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>63147</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>3/9/2023</b>	SeqNo: <b>4241981</b>						
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: <b>LCSD-63147</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159596</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>63147</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>3/9/2023</b>	SeqNo: <b>4241982</b>						
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: <b>RLC-63147</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>2/27/2023</b>	RunNo: <b>159596</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>3/9/2023</b>	SeqNo: <b>4241984</b>						
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#: 23021632  
 10-Mar-23

**Client:** TEKLAB Inc,  
**Project:** 23020985

**BatchID:** 63147

Sample ID: <b>RLC-63147</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b> Units: <b>pCi/L</b>				Prep Date: <b>2/27/2023</b>			RunNo: <b>159596</b>		
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E903.0</b>		<b>E903-904</b>		Analysis Date: <b>3/9/2023</b>			SeqNo: <b>4241984</b>		
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: <b>RLCD-63147</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b> Units: <b>pCi/L</b>				Prep Date: <b>2/27/2023</b>			RunNo: <b>159596</b>		
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E903.0</b>		<b>E903-904</b>		Analysis Date: <b>3/9/2023</b>			SeqNo: <b>4241985</b>		
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: <b>23021637-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b> Units: <b>pCi/L</b>				Prep Date: <b>2/27/2023</b>			RunNo: <b>159596</b>		
Client ID: <b>BatchQC</b>	Batch ID: <b>63147</b>	TestNo: <b>E903.0</b>		<b>E903-904</b>		Analysis Date: <b>3/9/2023</b>			SeqNo: <b>4241987</b>		
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**

5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1004  
 Preserved in:  Lab  Field

23020985  
 23021632

Are the samples chilled? YES  NO  With:  Ice  Blue Ice  Sampler: Current QC Level: 2

Teklab Inc  
 5445 Horseshoe Lake Road  
 Collinsville, IL 62234

Project# 23020985  
 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.

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
	23020985-001	2/16/23 1454	HNO3	Aqueous
	23020985-002	2/16/23 1511	HNO3	Aqueous
	23020985-003	2/16/23 1134	HNO3	Aqueous
	23020985-004	2/16/23 1254	HNO3	Aqueous
	23020985-005	2/16/23 1310	HNO3	Aqueous
	23020985-006	2/16/23 1325	HNO3	Aqueous
	23020985-007	2/16/23 1213	HNO3	Aqueous
			Unpres	Aqueous
			Unpres	Aqueous
			Unpres	Aqueous
			Unpres	Aqueous

Radium 226	Radium 228	CPM	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST	CPM/ST
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

\*Relinquished By [Signature] Date/Time 2-20-23

Received By [Signature] Date/Time 2/22/23 110  
17-0103-173

Redox  
CPM  
NOI

Teklab maintains a strict policy of client confidentiality and as such does not provide client/sampler information without proper authorization, and proprietary rights.



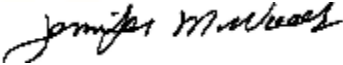


# Sample Log-In Check List

Client Name: **TEK-IL-62234-A**

Work Order Number: **23021632**

RcptNo: **1**

Logged by:	<b>Anthony W. Britton</b>	<b>2/22/2023 11:10:00 AM</b>	
Completed By:	<b>Anthony W. Britton</b>	<b>2/24/2023 9:19:09 AM</b>	
Reviewed By:	<b>Jennifer Woolf</b>	<b>2/24/2023 10:27:12 AM</b>	

### Chain of Custody

- Were seals intact? Yes  No  Not Present
- Is Chain of Custody complete? Yes  No  Not Present
- How was the sample delivered? FedEx

### Log In

- Coolers are present? Yes  No  NA
- Was an attempt made to cool the samples? Yes  No  NA
- Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- Sample(s) in proper container(s)? Yes  No
- Sufficient sample volume for indicated test(s)? Yes  No
- Are samples (except VOA and ONG) properly preserved? Yes  No
- Was preservative added to bottles? Yes  No  NA
- Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes  No  No VOA Vials
- Were any sample containers received broken? Yes  No
- Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
- Are matrices correctly identified on Chain of Custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No

### Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

- Additional remarks:

### Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	17.3	Good	Not Present			

## **SECOND QUARTER 2023 ANALYTICAL REPORT AND FIELD NOTES**

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  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

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**Client:** City Water, Light & Power

**Work Order:** 23040094

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 24-May-23

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**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

**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)

**Client:** City Water, Light & Power

**Work Order:** 23040094

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 24-May-23

### Qualifiers

- # - Unknown hydrocarbon
- C - RL shown is a Client Requested Quantitation Limit
- H - Holding times exceeded
- J - Analyte detected below quantitation limits
- ND - Not Detected at the Reporting Limit
- S - Spike Recovery outside recovery limits
- X - Value exceeds Maximum Contaminant Level
- B - Analyte detected in associated Method Blank
- E - Value above quantitation range
- I - Associated internal standard was outside method criteria
- M - Manual Integration used to determine area response
- R - RPD outside accepted recovery limits
- T - TIC(Tentatively identified compound)



## Case Narrative

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power  
**Client Project:** Ash Pond Monitoring Wells

**Work Order:** 23040094  
**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

#### Collinsville Air

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**Email** EHurley@teklabinc.com

#### Springfield

**Address** 3920 Pintail Dr  
Springfield, IL 62711-9415  
**Phone** (217) 698-1004  
**Fax** (217) 698-1005  
**Email** KKlostermann@teklabinc.com

#### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

#### Kansas City

**Address** 8421 Nieman Road  
Lenexa, KS 66214  
**Phone** (913) 541-1998  
**Fax** (913) 541-1998  
**Email** jhriley@teklabinc.com



## Accreditations

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power

**Work Order:** 23040094

**Client Project:** Ash Pond Monitoring Wells

**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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23040094-001  
 Matrix: GROUNDWATER

Work Order: 23040094  
 Report Date: 24-May-23

Client Sample ID: RW-3

Collection Date: 04/11/2023 12:24

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		4.5	NTU	1	04/11/2023 12:24	R327742
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		57.6	°F	1	04/11/2023 12:24	R327742
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.06		1	04/11/2023 12:24	R327742
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		749	µmhos/cm @25C	1	04/11/2023 12:24	R327742
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		426	mg/L	1	04/14/2023 10:00	R327370
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		< 10	mg/L	1	04/17/2023 20:21	R327359
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.52	mg/L	1	04/13/2023 11:01	R327239
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		31	mg/L	1	04/17/2023 20:21	R327452
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	04/14/2023 15:00	204954
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23040094-002  
 Matrix: GROUNDWATER

Work Order: 23040094  
 Report Date: 24-May-23

Client Sample ID: AP-1

Collection Date: 04/12/2023 12:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		504.29	ft	1	04/12/2023 12:49	R327742
Depth to water	*	-5.00		7.65	ft	1	04/12/2023 12:49	R327742
Depth to water from measuring point	*	0		9.92	ft	1	04/12/2023 12:49	R327742
Elevation of groundwater surface	*	0		525.45	ft	1	04/12/2023 12:49	R327742
Measuring Point Elevation	*	0		535.37	ft	1	04/12/2023 12:49	R327742
Measuring Point Height Above Land Surface	*	0		2.27	ft	1	04/12/2023 12:49	R327742
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		13	NTU	1	04/12/2023 12:49	R327742
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		57.2	°F	1	04/12/2023 12:49	R327742
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.52		1	04/12/2023 12:49	R327742
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1910	µmhos/cm @25C	1	04/12/2023 12:49	R327742
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		1540	mg/L	1	04/14/2023 10:00	R327370
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		768	mg/L	20	04/17/2023 20:33	R327359
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.27	mg/L	1	04/13/2023 11:03	R327239
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	20		60	mg/L	5	04/17/2023 20:29	R327452
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	04/14/2023 16:17	204956
Barium	NELAP	0.0025		0.329	mg/L	1	04/14/2023 16:17	204956
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	04/14/2023 16:17	204956
Boron	NELAP	0.200		21.2	mg/L	10	04/19/2023 17:57	204956
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	04/14/2023 16:17	204956
Calcium	NELAP	0.100		242	mg/L	1	04/14/2023 16:17	204956
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	04/14/2023 16:17	204956
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	04/14/2023 16:17	204956
Lead	NELAP	0.0150		< 0.0150	mg/L	1	04/14/2023 16:17	204956
Lithium	NELAP	0.0050		< 0.0050	mg/L	1	04/14/2023 16:17	204956
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	04/14/2023 16:17	204956
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	04/17/2023 19:36	204956
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	04/17/2023 19:36	204956
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	04/17/2023 19:36	204956
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	04/14/2023 15:02	204954
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-226	*	0		See attached	pci/L	1	05/08/2023 0:00	R329224
Radium-228	*	0		See attached	pci/L	1	05/08/2023 0:00	R329224



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23040094-003  
 Matrix: GROUNDWATER

Work Order: 23040094  
 Report Date: 24-May-23

Client Sample ID: AP-2

Collection Date: 04/12/2023 14:49

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		9.2	NTU	1	04/12/2023 14:49	R327742
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		55.6	°F	1	04/12/2023 14:49	R327742
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.44		1	04/12/2023 14:49	R327742
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1470	µmhos/cm @25C	1	04/12/2023 14:49	R327742
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		1100	mg/L	1	04/14/2023 10:00	R327370
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		462	mg/L	20	04/17/2023 20:42	R327359
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.22	mg/L	1	04/13/2023 11:05	R327239
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		37	mg/L	1	04/17/2023 20:36	R327452
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	04/14/2023 15:04	204954
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23040094-004  
 Matrix: GROUNDWATER

Work Order: 23040094  
 Report Date: 24-May-23

Client Sample ID: AP-3

Collection Date: 04/12/2023 15:26

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		6.2	NTU	1	04/12/2023 15:26	R327742
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		55.6	°F	1	04/12/2023 15:26	R327742
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.64		1	04/12/2023 15:26	R327742
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1300	µmhos/cm @25C	1	04/12/2023 15:26	R327742
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		984	mg/L	1	04/14/2023 10:01	R327370
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	100		483	mg/L	10	04/17/2023 21:05	R327359
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.22	mg/L	1	04/13/2023 11:06	R327239
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	20		59	mg/L	5	04/17/2023 21:00	R327452
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	04/14/2023 15:11	204954
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23040094-005  
 Matrix: GROUNDWATER

Work Order: 23040094  
 Report Date: 24-May-23

Client Sample ID: AP-4

Collection Date: 04/13/2023 10:13

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		492.46	ft	1	04/13/2023 10:13	R327742
Depth to water	*	-5.00		6.38	ft	1	04/13/2023 10:13	R327742
Depth to water from measuring point	*	0		9.52	ft	1	04/13/2023 10:13	R327742
Elevation of groundwater surface	*	0		546.08	ft	1	04/13/2023 10:13	R327742
Measuring Point Elevation	*	0		555.60	ft	1	04/13/2023 10:13	R327742
Measuring Point Height Above Land Surface	*	0		3.14	ft	1	04/13/2023 10:13	R327742
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		10	NTU	1	04/13/2023 10:13	R327742
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		60.4	°F	1	04/13/2023 10:13	R327742
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.82		1	04/13/2023 10:13	R327742
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		969	µmhos/cm @25C	1	04/13/2023 10:13	R327742
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		534	mg/L	1	04/14/2023 11:14	R327370
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		< 10	mg/L	1	05/01/2023 17:02	R328161
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.14	mg/L	1	04/21/2023 12:37	R327650
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		14	mg/L	1	04/17/2023 21:08	R327452
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		0.0250	mg/L	1	04/17/2023 13:48	204986
Barium	NELAP	0.0025	B	0.404	mg/L	1	04/17/2023 13:48	204986
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	04/17/2023 13:48	204986
Boron	NELAP	0.0200		0.101	mg/L	1	04/17/2023 13:48	204986
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	04/17/2023 13:48	204986
Calcium	NELAP	0.100		125	mg/L	1	04/17/2023 13:48	204986
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	04/17/2023 13:48	204986
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	04/17/2023 13:48	204986
Lead	NELAP	0.0150		< 0.0150	mg/L	1	04/17/2023 13:48	204986
Lithium	NELAP	0.0050		< 0.0050	mg/L	1	04/17/2023 13:48	204986
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	04/17/2023 13:48	204986
<i>Sample result(s) for Ba exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	04/17/2023 15:42	204986
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	04/17/2023 15:42	204986
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	04/17/2023 15:42	204986
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	04/17/2023 11:09	204996
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23040094-006  
 Matrix: GROUNDWATER

Work Order: 23040094  
 Report Date: 24-May-23

Client Sample ID: AP-5

Collection Date: 04/13/2023 11:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		552.63	ft	1	04/13/2023 11:27	R327742
Depth to water	*	-5.00		10.75	ft	1	04/13/2023 11:27	R327742
Depth to water from measuring point	*	0		13.05	ft	1	04/13/2023 11:27	R327742
Elevation of groundwater surface	*	0		570.85	ft	1	04/13/2023 11:27	R327742
Measuring Point Elevation	*	0		583.90	ft	1	04/13/2023 11:27	R327742
Measuring Point Height Above Land Surface	*	0		2.30	ft	1	04/13/2023 11:27	R327742
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		5.3	NTU	1	04/13/2023 11:27	R327742
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		54.7	°F	1	04/13/2023 11:27	R327742
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.08		1	04/13/2023 11:27	R327742
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		698	µmhos/cm @25C	1	04/13/2023 11:27	R327742
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		404	mg/L	1	04/14/2023 11:15	R327370
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		44	mg/L	1	04/17/2023 21:17	R327359
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.32	mg/L	1	04/21/2023 12:40	R327650
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		4	mg/L	1	04/17/2023 21:16	R327452
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	04/20/2023 18:40	205144
Barium	NELAP	0.0025		0.0451	mg/L	1	04/20/2023 18:40	205144
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	04/20/2023 18:40	205144
Boron	NELAP	0.0200		0.0311	mg/L	1	04/20/2023 18:40	205144
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	04/20/2023 18:40	205144
Calcium	NELAP	0.100		80.4	mg/L	1	04/20/2023 18:40	205144
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	04/20/2023 18:40	205144
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	04/20/2023 18:40	205144
Lead	NELAP	0.0150		< 0.0150	mg/L	1	04/20/2023 18:40	205144
Lithium	NELAP	0.0050		0.0074	mg/L	1	04/24/2023 18:12	205144
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	04/20/2023 18:40	205144
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	04/20/2023 21:04	205144
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	04/20/2023 21:04	205144
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	04/20/2023 21:04	205144
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	04/19/2023 15:15	205181
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23040094-007  
 Matrix: GROUNDWATER

Work Order: 23040094  
 Report Date: 24-May-23

Client Sample ID: AP-6

Collection Date: 04/12/2023 11:03

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		498.20	ft	1	04/12/2023 11:03	R327742
Depth to water	*	-5.00		5.01	ft	1	04/12/2023 11:03	R327742
Depth to water from measuring point	*	0		7.43	ft	1	04/12/2023 11:03	R327742
Elevation of groundwater surface	*	0		530.39	ft	1	04/12/2023 11:03	R327742
Measuring Point Elevation	*	0		537.82	ft	1	04/12/2023 11:03	R327742
Measuring Point Height Above Land Surface	*	0		2.42	ft	1	04/12/2023 11:03	R327742
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		4.0	NTU	1	04/12/2023 11:03	R327742
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		55.2	°F	1	04/12/2023 11:03	R327742
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.02		1	04/12/2023 11:03	R327742
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		642	µmhos/cm @25C	1	04/12/2023 11:03	R327742
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		380	mg/L	1	04/14/2023 11:15	R327370
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		11	mg/L	1	04/17/2023 21:24	R327359
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.51	mg/L	1	04/13/2023 11:08	R327239
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		31	mg/L	1	04/17/2023 21:24	R327452
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	04/14/2023 16:43	204956
Barium	NELAP	0.0025		0.111	mg/L	1	04/14/2023 16:43	204956
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	04/14/2023 16:43	204956
Boron	NELAP	0.0200		0.174	mg/L	1	04/19/2023 17:56	204956
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	04/14/2023 16:43	204956
Calcium	NELAP	0.100		60.9	mg/L	1	04/14/2023 16:43	204956
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	04/14/2023 16:43	204956
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	04/14/2023 16:43	204956
Lead	NELAP	0.0150		< 0.0150	mg/L	1	04/14/2023 16:43	204956
Lithium	NELAP	0.0050		< 0.0050	mg/L	1	04/14/2023 16:43	204956
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	04/14/2023 16:43	204956
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	04/17/2023 19:55	204956
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	04/17/2023 19:55	204956
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	04/17/2023 19:55	204956
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	04/14/2023 15:13	204954
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



## Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23040094-008  
 Matrix: GROUNDWATER

Work Order: 23040094  
 Report Date: 24-May-23  
 Client Sample ID: AP-7  
 Collection Date: 04/17/2023 15:59

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		25	NTU	1	04/17/2023 15:59	R327742
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		54.7	°F	1	04/17/2023 15:59	R327742
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.11		1	04/17/2023 15:59	R327742
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		712	µmhos/cm @25C	1	04/17/2023 15:59	R327742
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		444	mg/L	1	04/19/2023 9:21	R327565
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		< 10	mg/L	1	05/01/2023 17:23	R328161
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.53	mg/L	1	04/21/2023 12:41	R327650
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8		70	mg/L	2	05/01/2023 17:28	R328107
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	04/19/2023 15:17	205181
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Receiving Check List

<http://www.teklabinc.com/>

Client: City Water, Light & Power

Work Order: 23040094

Client Project: Ash Pond Monitoring Wells

Report Date: 24-May-23

Carrier: Tracy Carroll

Received By: LM

Completed by:

Reviewed by:

On:

18-Apr-23

Lindsey Maddox

On:

18-Apr-23

Elizabeth A. Hurley

Pages to follow: Chain of custody

Extra pages included

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	Temp °C <b>7.8</b>
Type of thermal preservation?	None <input type="checkbox"/>	Ice <input checked="" type="checkbox"/>	Blue Ice <input type="checkbox"/>	Dry Ice <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Reported field parameters measured:	Field <input checked="" type="checkbox"/>	Lab <input type="checkbox"/>	NA <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		

*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 <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials <input checked="" type="checkbox"/>
Water - TOX containers have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No TOX containers <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
NPDES/CWA TCN interferences checked/treated in the field?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

**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). - Imaddox 4/18/23

pH strip #88374. - CET/Imaddox - 4/18/2023 9:26:13 AM

Additional Nitric Acid (89071) was needed in AP-11 upon arrival at the laboratory. - CET/Imaddox - 4/18/2023 9:26:50 AM



TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: <u>City Water, Light &amp; Power</u> Address: <u>3100 Stevenson Drive, 2nd Floor Maintenance Building</u> City/State/Zip: <u>Springfield IL 62712</u> Contact: <u>Eric Staley</u> Phone: <u>(217) 757-8610</u> Email: <u>eric.staley@cwlp.com</u> Fax: _____				Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>3.8 °C LG</u> Preserved in: <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <u>FOR LAB USE ONLY</u> LAB NOTES: <u>PHV 88374.055 4-12-23</u>																	
Are these samples known to be involved in litigation? If yes, a surcharge will apply: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 <u>Ash Pond Monitoring Wells</u>		SAMPLE COLLECTOR'S NAME <u>Yelp + Carroll</u>		# and Type of Containers		INDICATE ANALYSIS REQUESTED															
RESULTS REQUESTED <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 12 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)			BILLING INSTRUCTIONS			UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity	
Lab Use Only	Sample ID	Date/Time Sampled	Matrix																		
23040094-001	RW-3 <del>8.74</del>	<del>4-12-23/1224</del>	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														
Relinquished By			Date/Time			Received By			Date/Time												
<u>Jeremy Carroll J. Gelp</u>			4-12-23 1755						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.teklabin.com for terms and conditions

CIS 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: <u>City Water, Light &amp; Power</u> Address: <u>3100 Stevenson Drive, 2nd Floor Maintenance Building</u> City/State/Zip: <u>Springfield IL 62712</u> Contact: <u>Eric Staley</u> Phone: <u>(217) 757-8610</u> Email: <u>eric.staley@cwlp.com</u> Fax: _____				Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NOICE <u>9.0 °C</u> Preserved in: <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <u>FOR LAB USE ONLY</u> LAB NOTES: <u>ph 8.374, CAS 4-13-23.</u>										
Are these samples known to be involved in litigation? If yes, a surcharge will apply: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>Permit on file</u>				Client Comments: *elevations, pH, conductivity, temperature **Sb Se TI (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo Quarterly monitoring										
PROJECT NAME/NUMBER <u>Ash Pond Monitoring Wells</u>		SAMPLE COLLECTOR'S NAME <u>J. Colp &amp; T. Carroll</u>		# and Type of Containers		INDICATE ANALYSIS REQUESTED								
RESULTS REQUESTED <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (50% Surcharge)		BILLING INSTRUCTIONS		UNP HNO3 NaOH H2SO4 HCL MeOH NaHSO4 TSP Other		Field parameters* Cl F SO4 TDS (T) Metals (T)** Radium-226 Radium-228 Field Turbidity								
Lab Use Only	Sample ID	Date/Time Sampled	Matrix	2 4/13/23										
<u>23040094-001</u>	<u>RW-3</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>002</u>	<u>AP-1</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>003</u>	<u>AP-2</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>004</u>	<u>AP-3</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>005</u>	<u>AP-4</u>	<u>9.52</u>	<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>006</u>	<u>AP-5</u>	<u>13.05</u>	<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>007</u>	<u>AP-6</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>008</u>	<u>AP-7</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>009</u>	<u>AP-8</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>010</u>	<u>AP-9</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<u>011</u>	<u>AP-10</u>		<u>Groundwater</u>	<u>1</u>	<u>\$</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Relinquished By <u>J. Carroll J. Colp</u>		Date/Time <u>4-13-23 / 1449</u>		Received By <u>Morgan Peter</u>		Date/Time <u>4/13/23 1510</u> <u>1449 temp</u>								

\*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 4-13-23



# 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: <u>City Water, Light &amp; Power</u> Address: <u>3100 Stevenson Drive, 2nd Floor Maintenance Building</u> City/State/Zip: <u>Springfield IL 62712</u> Contact: <u>Eric Staley</u> Phone: <u>(217) 757-8610</u> Email: <u>eric.staley@cwlp.com</u> Fax: _____	Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>7.8</u> °C Preserved in: <input checked="" type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <u>TEC</u> <u>FOR LAB USE ONLY</u> <u>LTG5</u> LAB NOTES: <u>phv 88374. Added HNO3(89071) to 2L April</u> <u>CS 4-18-23</u>
--	--

Are these samples known to be involved in litigation? If yes, a surcharge will apply: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Permit on file	Client Comments: *elevations, pH, conductivity, temperature **Sb Se TI (ICPMS) As Ba Be B Cd Ca Cr Co Pb Li Hg Mo Quarterly monitoring
---	---

PROJECT NAME/NUMBER <u>Ash Pond Monitoring Wells</u>	SAMPLE COLLECTOR'S NAME <u>JCARP &amp; T. Carroll</u>	# and Type of Containers	INDICATE ANALYSIS REQUESTED
RESULTS REQUESTED <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 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	Groundwater	1	2								✓	✓	✓	✓	✓	✓																								
009	AP-8		Groundwater	1	2								✓	✓	✓	✓	✓	✓																								
010	AP-9	12.13	Groundwater	1	2								✓	✓	✓	✓	✓	✓																								
011	AP-10		Groundwater	1	2								✓	✓	✓	✓	✓	✓																								

Relinquished By <u>Kenny Carroll</u>	Date/Time <u>4/17/23 18:34</u>	Received By <u>AMP</u>	Date/Time <u>4/17/23 18:34</u>

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CS 4-18-23



**WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM**

**PROJECT INFORMATION**

Site: CWSP Client: \_\_\_\_\_  
 Project Number: \_\_\_\_\_ Task #: \_\_\_\_\_ Start Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Field Personnel: J. G. / T. Carroll Finish Date: 4-11-23 Time: 1224

WELL INFORMATION		EVENT TYPE	
Well ID: <u>RW-3</u>		Well Development	Low-Flow / Low Stress Sampling Other
Casing ID: _____ inches		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
	<u>1157</u>		<u>8.74</u>								
	<u>1212</u>	<u>0.65</u>			<u>14.1</u>	<u>7.13</u>	<u>737</u>	<u>2.24</u>	<u>12.81</u>	<u>-108.0</u>	
	<u>1215</u>	<u>0.78</u>			<u>14.1</u>	<u>7.11</u>	<u>740</u>	<u>2.12</u>	<u>9.92</u>	<u>-110.2</u>	
	<u>1218</u>	<u>0.91</u>			<u>14.1</u>	<u>7.09</u>	<u>743</u>	<u>2.00</u>	<u>9.42</u>	<u>-112.5</u>	
	<u>1227</u>	<u>1.04</u>			<u>14.2</u>	<u>7.08</u>	<u>745</u>	<u>1.89</u>	<u>4.60</u>	<u>-114.4</u>	
	<u>1229</u>	<u>1.17</u>		<u>14.90</u>	<u>14.2</u>	<u>7.06</u>	<u>749</u>	<u>1.78</u>	<u>4.49</u>	<u>-116.3</u>	

**NOTES (continued)**

**ABBREVIATIONS**

Diaphragm pump / clear / no turbidity / slight odor

Cond. - Actual Conductivity  
 FT BTCC - 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 Celsius



**WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM**

**PROJECT INFORMATION**

Site: CWCP Client: \_\_\_\_\_  
 Project Number: \_\_\_\_\_ Task #: \_\_\_\_\_ Start Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Field Personnel: J. Galo / J. Carroll Finish Date: 7-12-23 Time: 1449

WELL INFORMATION	EVENT TYPE
Well ID: <u>AD-2</u> Casing ID: _____ inches	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
	<u>1401</u>		<u>7.24</u>								
	<u>1437</u>	<u>1.56</u>			<u>13.1</u>	<u>6.45</u>	<u>1450</u>	<u>0.70</u>	<u>11.34</u>	<u>-2.1</u>	
	<u>1440</u>	<u>1.69</u>			<u>13.1</u>	<u>6.45</u>	<u>1453</u>	<u>0.69</u>	<u>11.01</u>	<u>-2.4</u>	
	<u>1443</u>	<u>1.82</u>			<u>13.0</u>	<u>6.45</u>	<u>1460</u>	<u>0.67</u>	<u>10.17</u>	<u>-2.7</u>	
	<u>1446</u>	<u>1.82</u>			<u>13.1</u>	<u>6.45</u>	<u>1465</u>	<u>0.66</u>	<u>8.94</u>	<u>-2.9</u>	
	<u>1449</u>	<u>1.95</u>		<u>7.38</u>	<u>13.1</u>	<u>6.44</u>	<u>1469</u>	<u>0.64</u>	<u>9.24</u>	<u>-3.2</u>	

**NOTES (continued)**

**ABBREVIATIONS**

Bladder Pump / Slight turbidity / Strong odor / Clear

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 Celsius

## WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

### PROJECT INFORMATION

Site: CusLP Client: \_\_\_\_\_  
 Project Number: \_\_\_\_\_ Task #: \_\_\_\_\_ Start Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Field Personnel: J. Gato / T. Carroll Finish Date: 4-12-23 Time: 1526

#### WELL INFORMATION

Well ID: A23  
 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)

#### ABBREVIATIONS

Bladder Pump / Clear / no odor / no turbidity

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 Celsius

**WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM**

**PROJECT INFORMATION**

Site: CWLP Client: \_\_\_\_\_  
 Project Number: \_\_\_\_\_ Task #: \_\_\_\_\_ Start Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Field Personnel: J. Galp / B. Gillihan Finish Date: 4-13-23 Time: 1013

**WELL INFORMATION**

Well ID: AD-4  
 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
	0958		9.52								
	1004	.26			15.8	6.74	965	2.90	9.02	-66.0	
	1007	.39			15.8	6.78	969	2.12	8.17	-98.1	
	1010	.52			15.8	6.80	970	1.72	10.08	-114.9	
	1013	.65		9.6	15.8	6.82	969	1.38	10.35	-125.7	

**NOTES (continued)**

**ABBREVIATIONS**

Bladder pump / Clear / Slight odor / no turbidity

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 Celsius

**WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM**

**PROJECT INFORMATION**

Site: CWD Client: \_\_\_\_\_  
 Project Number: \_\_\_\_\_ Task #: \_\_\_\_\_ Start Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Field Personnel: J. Co/D. Gilligan Finish Date: 4-13-23 Time: 1127

**WELL INFORMATION**

Well ID: AP-5  
 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
	<u>1118</u>		<u>13.05</u>								
	<u>1121</u>	<u>.13</u>			<u>12.6</u>	<u>7.15</u>	<u>698</u>	<u>5.38</u>	<u>3.58</u>	<u>28.2</u>	
	<u>1124</u>	<u>.26</u>			<u>12.5</u>	<u>7.10</u>	<u>698</u>	<u>4.18</u>	<u>4.23</u>	<u>32.3</u>	
	<u>1127</u>	<u>.39</u>		<u>14.95</u>	<u>12.6</u>	<u>7.08</u>	<u>698</u>	<u>3.80</u>	<u>5.33</u>	<u>36.4</u>	

**NOTES (continued)**

Bladder pump clear / no turbidity / no ~~see~~ color

**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 Celsius







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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

Order No.: 23041812

Dear Shelly Hennessy:

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



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3310 Win St.  
Cuyahoga Falls, Ohio 44223  
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## 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.

---

Original

These commonly used Qualifiers and Acronyms may or may not be present in this report.

### Qualifiers

<b>U</b>	The compound was analyzed for but was not detected above the MDL.
<b>J</b>	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
<b>H</b>	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
<b>D</b>	The result is reported from a dilution.
<b>E</b>	The result exceeded the linear range of the calibration or is estimated due to interference.
<b>MC</b>	The result is below the Minimum Compound Limit.
<b>*</b>	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
<b>m</b>	Manual integration was used to determine the area response.
<b>d</b>	Manual integration in which peak was deleted
<b>N</b>	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
<b>P</b>	The second column confirmation exceeded 25% difference.
<b>C</b>	The result has been confirmed by GC/MS.
<b>X</b>	The result was not confirmed when GC/MS Analysis was performed.
<b>B</b>	The analyte was detected in the Method Blank at a concentration greater than the RL.
<b>MB+</b>	The analyte was detected in the Method Blank at a concentration greater than the MDL.
<b>G</b>	The ICB or CCB contained reportable amounts of analyte.
<b>QC-/+</b>	The CCV recovery failed low (-) or high (+).
<b>R/QDR</b>	The RPD was outside of accepted recovery limits.
<b>QL-/+</b>	The LCS or LCSD recovery failed low (-) or high (+).
<b>QLR</b>	The LCS/LCSD RPD was outside of accepted recovery limits.
<b>QM-/+</b>	The MS or MSD recovery failed low (-) or high (+).
<b>QMR</b>	The MS/MSD RPD was outside of accepted recovery limits.
<b>QV-/+</b>	The ICV recovery failed low (-) or high (+).
<b>S</b>	The spike result was outside of accepted recovery limits.
<b>W</b>	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
<b>Z</b>	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

### Acronyms

<b>ND</b>	Not Detected	<b>RL</b>	Reporting Limit
<b>QC</b>	Quality Control	<b>MDL</b>	Method Detection Limit
<b>MB</b>	Method Blank	<b>LOD</b>	Level of Detection
<b>LCS</b>	Laboratory Control Sample	<b>LOQ</b>	Level of Quantitation
<b>LCSD</b>	Laboratory Control Sample Duplicate	<b>PQL</b>	Practical Quantitation Limit
<b>QCS</b>	Quality Control Sample	<b>CRQL</b>	Contract Required Quantitation Limit
<b>DUP</b>	Duplicate	<b>PL</b>	Permit Limit
<b>MS</b>	Matrix Spike	<b>RegLvl</b>	Regulatory Limit
<b>MSD</b>	Matrix Spike Duplicate	<b>MCL</b>	Maximum Contamination Limit
<b>RPD</b>	Relative Percent Different	<b>MinCL</b>	Minimum Compound Limit
<b>ICV</b>	Initial Calibration Verification	<b>RA</b>	Reanalysis
<b>ICB</b>	Initial Calibration Blank	<b>RE</b>	Reextraction
<b>CCV</b>	Continuing Calibration Verification	<b>TIC</b>	Tentatively Identified Compound
<b>CCB</b>	Continuing Calibration Blank	<b>RT</b>	Retention Time
<b>RLC</b>	Reporting Limit Check	<b>CF</b>	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#: **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

Original



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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

Original



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# Analytical Report

(consolidated)

WO#: **23041812**

Date Reported: **5/23/2023**

**CLIENT:** TEKLAB Inc,  
**Project:** 23040094  
**Lab ID:** 23041812-001  
**Client Sample ID:** 23040094-001

**Collection Date:** 4/11/2023 12:24:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
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
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
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

<b>Qualifiers:</b>	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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Cuyahoga Falls, Ohio 44223  
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# Analytical Report

(consolidated)

WO#: **23041812**

Date Reported: **5/23/2023**

**CLIENT:** TEKLAB Inc,  
**Project:** 23040094  
**Lab ID:** 23041812-002  
**Client Sample ID:** 23040094-002

**Collection Date:** 4/12/2023 12:49:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.29	1.00	U	pCi/L	± 0.14	1	5/9/2023 12:05:00 PM
Yield	0.98					1	5/9/2023 12:05:00 PM
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-228	1.11	1.00		pCi/L	± 0.54	1	5/8/2023 2:58:00 PM
Yield	1					1	5/8/2023 2:58:00 PM

<b>Qualifiers:</b>	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,  
**Project:** 23040094  
**Lab ID:** 23041812-003  
**Client Sample ID:** 23040094-003

**Collection Date:** 4/12/2023 2:49:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
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
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>
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,  
**Project:** 23040094  
**Lab ID:** 23041812-004  
**Client Sample ID:** 23040094-004

**Collection Date:** 4/12/2023 3:26:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	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
<b>RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	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,  
**Project:** 23040094  
**Lab ID:** 23041812-005  
**Client Sample ID:** 23040094-005

**Collection Date:** 4/13/2023 10:13:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: HDJ	
Radium-226	0.57	1.00	U	pCi/L	± 0.2	1	5/10/2023 9:46:00 AM
Yield	0.98					1	5/10/2023 9:46:00 AM
<b>RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: HDJ	
Radium-228	2.32	1.00		pCi/L	± 0.96	1	5/9/2023 3:21:00 PM
Yield	0.98					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



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

(consolidated)

WO#: 23041812

Date Reported: 5/23/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23040094  
**Lab ID:** 23041812-006  
**Client Sample ID:** 23040094-006

**Collection Date:** 4/13/2023 11:27:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: HDJ	
Radium-226	0.07	1.00	U	pCi/L	± 0.15	1	5/10/2023 9:46:00 AM
Yield	0.98					1	5/10/2023 9:46:00 AM
<b>RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: HDJ	
Radium-228	0.5	1.00	U	pCi/L	± 0.67	1	5/9/2023 3:21:00 PM
Yield	0.99					1	5/9/2023 3:21:00 PM

<b>Qualifiers:</b>	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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Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
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# Analytical Report

(consolidated)

WO#: **23041812**

Date Reported: **5/23/2023**

**CLIENT:** TEKLAB Inc, **Collection Date:** 4/12/2023 11:03:00 AM  
**Project:** 23040094  
**Lab ID:** 23041812-007 **Matrix:** NON-POTABLE WATER  
**Client Sample ID:** 23040094-007

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
Radium-226	0.12	1.00	U	pCi/L	± 0.14	1	5/10/2023 9:46:00 AM
Yield	0.98					1	5/10/2023 9:46:00 AM
<b>RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
Radium-228	1.17	1.00		pCi/L	± 0.88	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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 Cuyahoga Falls, Ohio 44223  
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# Analytical Report

(consolidated)

WO#: 23041812

Date Reported: 5/23/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23040094  
**Lab ID:** 23041812-008  
**Client Sample ID:** 23040094-008

**Collection Date:** 4/17/2023 3:59:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	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
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	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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# QC SUMMARY REPORT

WO#: 23041812  
 23-May-23

**Client:** TEKLAB Inc,  
**Project:** 23040094

**BatchID:** 64709

Sample ID: <b>MB-64709</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163427</b>						
Client ID: <b>PBW</b>	Batch ID: <b>64709</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/8/2023</b>	SeqNo: <b>4346663</b>						
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: <b>LCS-64709</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163427</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>64709</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/8/2023</b>	SeqNo: <b>4346664</b>						
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: <b>RLCD-64709</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163427</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64709</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/8/2023</b>	SeqNo: <b>4346668</b>						
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

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 3310 Win St.  
 Cuyahoga Falls, Ohio 44223  
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# QC SUMMARY REPORT

WO#: 23041812  
 23-May-23

**Client:** TEKLAB Inc,  
**Project:** 23040094

**BatchID:** 64709

Sample ID: <b>23041659-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163427</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64709</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/8/2023</b>	SeqNo: <b>4346672</b>						
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		

<b>Qualifiers:</b>	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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 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: <b>MB-64709</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>PBW</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346930</b>						
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: <b>LCS-64709</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346931</b>						
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: <b>LCSD-64709</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346932</b>						
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: <b>RLC-64709</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346934</b>						
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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 3310 Win St.  
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 TEL: (330) 253-8211 FAX: (330) 253-4489  
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# QC SUMMARY REPORT

WO#: 23041812  
 23-May-23

**Client:** TEKLAB Inc,  
**Project:** 23040094

**BatchID:** 64709

Sample ID: <b>RLC-64709</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346934</b>						
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: <b>RLCD-64709</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346935</b>						
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: <b>23041658-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346936</b>						
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: <b>23041659-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346939</b>						
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

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Cuyahoga Falls, Ohio 44223  
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## QC SUMMARY REPORT

WO#: 23041812  
23-May-23

**Client:** TEKLAB Inc,  
**Project:** 23040094

**BatchID:** 64709

Sample ID: <b>23041659-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>4/28/2023</b>	RunNo: <b>163434</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64709</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4346939</b>						
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	

<b>Qualifiers:</b>	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:** 64851

Sample ID: <b>MB-64851</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163841</b>						
Client ID: <b>PBW</b>	Batch ID: <b>64851</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4362722</b>						
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: <b>LCS-64851</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163841</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>64851</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4362723</b>						
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: <b>RLC-64851</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163841</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4362726</b>						
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



Summit Environmental Technologies, Inc.  
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Cuyahoga Falls, Ohio 44223  
TEL: (330) 253-8211 FAX: (330) 253-4489  
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# QC SUMMARY REPORT

WO#: 23041812  
23-May-23

**Client:** TEKLAB Inc,  
**Project:** 23040094

**BatchID:** 64851

Sample ID: <b>RLCD-64851</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163841</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4362727</b>						
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

<b>Qualifiers:</b>	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:** 64851

Sample ID: <b>23041819-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163841</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/9/2023</b>	SeqNo: <b>4362731</b>						
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		

<b>Qualifiers:</b>	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.  
 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:** 64851

Sample ID: <b>MB-64851</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>PBW</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363196</b>						
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: <b>LCS-64851</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363197</b>						
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: <b>LCSD-64851</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363198</b>						
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: <b>RLCD-64851</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363201</b>						
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#: 23041812  
 23-May-23

**Client:** TEKLAB Inc,  
**Project:** 23040094

**BatchID:** 64851

Sample ID: <b>RLCD-64851</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363201</b>						
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: <b>23041815-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363202</b>						
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: <b>23041819-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363205</b>						
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: <b>23041990-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363207</b>						
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  
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: <b>23041990-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/1/2023</b>	RunNo: <b>163869</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>64851</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>5/10/2023</b>	SeqNo: <b>4363207</b>						
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	

<b>Qualifiers:</b>	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:** 65044

Sample ID: <b>MB-65044</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/11/2023</b>	RunNo: <b>163963</b>						
Client ID: <b>PBW</b>	Batch ID: <b>65044</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/16/2023</b>	SeqNo: <b>4366735</b>						
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: <b>LCS-65044</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/11/2023</b>	RunNo: <b>163963</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>65044</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/16/2023</b>	SeqNo: <b>4366736</b>						
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: <b>LCSD-65044</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/11/2023</b>	RunNo: <b>163963</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>65044</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/16/2023</b>	SeqNo: <b>4366737</b>						
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

Original



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 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:** 65044

Sample ID: <b>RLCD-65044</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>5/11/2023</b>	RunNo: <b>163963</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>65044</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>5/16/2023</b>	SeqNo: <b>4366740</b>						
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						

<b>Qualifiers:</b>	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) 344-1004

Are the samples chilled? YES  NO  With:  Ice  Blue Ice  Preserved in:  (fill) **23041812** QC Level:  1  2

**Teklab Inc**  
5445 Horseshoe Lake Road  
Collinsville, IL 62234

Project#: 23040094

Contact: Shelly Hennessey  
Standard TAT

Requested Due Date: Billing/PO: 84257

Cooler Temp:  Sampler: Tracy Carroll/TEKLAB

Phone: (618) 344-1004

Email: shennessey@teklabinc.com

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...

**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	PH	CPM	228	226	228	226	228	226	228	226	228	226	228
	23040094-001	4/11/23 1224	HNO3	Groundwater	7	23	✓										
	23040094-002	4/12/23 1249	HNO3	Groundwater	7	27	✓										
	23040094-003	4/12/23 1449	HNO3	Groundwater	7	31	✓										
	23040094-004	4/12/23 1526	HNO3	Groundwater	7	36	✓										
	23040094-005	4/13/23 1013	HNO3	Groundwater	7	24	✓										
	23040094-006	4/13/23 1127	HNO3	Groundwater	7	33	✓										
	23040094-007	4/12/23 1103	HNO3	Groundwater	7	21	✓										
	23040094-008	4/17/23 1559	HNO3	Groundwater	7	27	✓										
	23040094-009	4/12/23 1212	HNO3	Groundwater	7	32	✓										
	23040094-010	4/17/23 1521	HNO3	Groundwater	7	39	✓										
	23040094-011	4/12/23 1350	HNO3	Groundwater	7	41	✓										

\*Relinquished By: *SMU* Date/Time: 4/18/23

Received By: *[Signature]* Date/Time: 04/26/23 1310

13.1 + 0.1 = 13.2 Fed. x 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)





# Sample Log-In Check List

Client Name: **TEK-IL-62234-A**

Work Order Number: **23041812**

RcptNo: **1**

Logged by:	<b>Anthony W. Britton</b>	<b>4/26/2023 1:10:00 PM</b>	<i>Anthony Britton</i>
Completed By:	<b>Anthony W. Britton</b>	<b>4/26/2023 4:55:12 PM</b>	<i>Anthony Britton</i>
Reviewed By:	<b>Jennifer Woolf</b>	<b>4/26/2023 6:42:30 PM</b>	<i>Jennifer Woolf</i>

### Chain of Custody

- Were seals intact? Yes  No  Not Present
- Is Chain of Custody complete? Yes  No  Not Present
- How was the sample delivered? FedEx

### Log In

- Coolers are present? Yes  No  NA
- Was an attempt made to cool the samples? Yes  No  NA
- Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- Sample(s) in proper container(s)? Yes  No
- Sufficient sample volume for indicated test(s)? Yes  No
- Are samples (except VOA and ONG) properly preserved? Yes  No
- Was preservative added to bottles? Yes  No  NA
- Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes  No  No VOA Vials
- Were any sample containers received broken? Yes  No
- Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
- Are matrices correctly identified on Chain of Custody? Yes  No
- Is it clear what analyses were requested? Yes  No
- Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No

### Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

- Additional remarks:

### Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	13.2	Good	Not Present			

**THIRD QUARTER 2023 ANALYTICAL REPORT AND FIELD NOTES**

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  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

---

**Client:** City Water, Light & Power

**Work Order:** 23070002

**Client Project:** Ash Pond Monitoring Wells

**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

**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)

**Client:** City Water, Light & Power

**Work Order:** 23070002

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 16-Aug-23

### Qualifiers

- # - Unknown hydrocarbon
- C - RL shown is a Client Requested Quantitation Limit
- H - Holding times exceeded
- J - Analyte detected below quantitation limits
- ND - Not Detected at the Reporting Limit
- S - Spike Recovery outside recovery limits
- X - Value exceeds Maximum Contaminant Level
- B - Analyte detected in associated Method Blank
- E - Value above quantitation range
- I - Associated internal standard was outside method criteria
- M - Manual Integration used to determine area response
- R - RPD outside accepted recovery limits
- T - TIC(Tentatively identified compound)

**Client:** City Water, Light & Power  
**Client Project:** Ash Pond Monitoring Wells

**Work Order:** 23070002  
**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

**Collinsville Air**

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**Email** EHurley@teklabinc.com

**Springfield**

**Address** 3920 Pintail Dr  
Springfield, IL 62711-9415  
**Phone** (217) 698-1004  
**Fax** (217) 698-1005  
**Email** KKlostermann@teklabinc.com

**Chicago**

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

**Kansas City**

**Address** 8421 Nieman Road  
Lenexa, KS 66214  
**Phone** (913) 541-1998  
**Fax** (913) 541-1998  
**Email** jhriley@teklabinc.com



## Accreditations

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power

**Work Order:** 23070002

**Client Project:** Ash Pond Monitoring Wells

**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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23070002-001  
 Matrix: GROUNDWATER

Work Order: 23070002  
 Report Date: 16-Aug-23

Client Sample ID: RW-3

Collection Date: 07/06/2023 12:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		3.3	NTU	1	07/06/2023 12:23	R332756
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		56.5	°F	1	07/06/2023 12:23	R332756
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.13		1	07/06/2023 12:23	R332756
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		437	µmhos/cm @25C	1	07/06/2023 12:23	R332756
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		290	mg/L	2.5	07/07/2023 15:00	R331380
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		22	mg/L	1	07/24/2023 14:05	R333047
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.27	mg/L	1	07/11/2023 12:53	R331398
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		28	mg/L	1	07/24/2023 14:06	R333070
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<i>Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<i>LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>								
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/11/2023 15:26	208286
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-226	*	0		See Attached	pci/L	1	07/24/2023 15:18	R335080



# Laboratory Results

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power  
**Client Project:** Ash Pond Monitoring Wells  
**Lab ID:** 23070002-001  
**Matrix:** GROUNDWATER

**Work Order:** 23070002  
**Report Date:** 16-Aug-23  
**Client Sample ID:** RW-3  
**Collection Date:** 07/06/2023 12:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-228	*	0		See Attached	pci/L	1	07/24/2023 15:18	R335080



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23070002-002  
 Matrix: GROUNDWATER

Work Order: 23070002  
 Report Date: 16-Aug-23

Client Sample ID: AP-1

Collection Date: 07/07/2023 11:08

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		504.29	ft	1	07/07/2023 11:08	R332756
Depth to water	*	-5.00		7.92	ft	1	07/07/2023 11:08	R332756
Depth to water from measuring point	*	0		10.19	ft	1	07/07/2023 11:08	R332756
Elevation of groundwater surface	*	0		525.18	ft	1	07/07/2023 11:08	R332756
Measuring Point Elevation	*	0		535.37	ft	1	07/07/2023 11:08	R332756
Measuring Point Height Above Land Surface	*	0		2.27	ft	1	07/07/2023 11:08	R332756
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		6.8	NTU	1	07/07/2023 11:08	R332756
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		57.7	°F	1	07/07/2023 11:08	R332756
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.51		1	07/07/2023 11:08	R332756
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1810	µmhos/cm @25C	1	07/07/2023 11:08	R332756
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		1190	mg/L	1	07/11/2023 10:29	R331470
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		443	mg/L	20	07/24/2023 14:31	R333047
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.24	mg/L	1	07/11/2023 12:55	R331398
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8		36	mg/L	2	07/24/2023 14:27	R333070
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Barium	NELAP	0.0025		0.271	mg/L	1	07/11/2023 18:28	208261
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	07/11/2023 18:28	208261
Boron	NELAP	0.200		22.5	mg/L	10	07/12/2023 20:37	208261
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	07/11/2023 18:28	208261
Calcium	NELAP	0.100	B	285	mg/L	1	07/11/2023 18:28	208261
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	07/11/2023 18:28	208261
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	07/11/2023 18:28	208261
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/11/2023 18:28	208261
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	07/11/2023 18:28	208261
<i>Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 2:11	208261
Arsenic	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 2:11	208261
Lithium	*	0.0030		0.0109	mg/L	5	07/17/2023 11:53	208261
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 2:11	208261
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	07/12/2023 2:11	208261
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/11/2023 15:29	208286
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23070002-003  
 Matrix: GROUNDWATER

Work Order: 23070002  
 Report Date: 16-Aug-23

Client Sample ID: AP-2

Collection Date: 07/07/2023 12:31

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		2.3	NTU	1	07/07/2023 12:31	R332756
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		56.3	°F	1	07/07/2023 12:31	R332756
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.40		1	07/07/2023 12:31	R332756
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1390	µmhos/cm @25C	1	07/07/2023 12:31	R332756
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		1600	mg/L	2.5	07/11/2023 10:29	R331470
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		795	mg/L	20	07/24/2023 14:39	R333047
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.20	mg/L	1	07/11/2023 12:58	R331398
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8		54	mg/L	2	07/26/2023 19:46	R333204
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<i>Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/11/2023 15:31	208286
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23070002-004  
 Matrix: GROUNDWATER

Work Order: 23070002  
 Report Date: 16-Aug-23

Client Sample ID: AP-3

Collection Date: 07/07/2023 13:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		5.2	NTU	1	07/07/2023 13:16	R332756
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		58.5	°F	1	07/07/2023 13:16	R332756
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.53		1	07/07/2023 13:16	R332756
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1230	µmhos/cm @25C	1	07/07/2023 13:16	R332756
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		990	mg/L	2.5	07/11/2023 10:29	R331470
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	100		467	mg/L	10	07/24/2023 14:48	R333047
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.21	mg/L	1	07/11/2023 13:00	R331398
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8		51	mg/L	2	07/24/2023 14:43	R333070
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<i>Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/11/2023 15:33	208286
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23070002-005  
 Matrix: GROUNDWATER

Work Order: 23070002  
 Report Date: 16-Aug-23

Client Sample ID: AP-4

Collection Date: 07/07/2023 11:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		492.46	ft	1	07/07/2023 11:42	R332756
Depth to water	*	-5.00		5.81	ft	1	07/07/2023 11:42	R332756
Depth to water from measuring point	*	0		8.95	ft	1	07/07/2023 11:42	R332756
Elevation of groundwater surface	*	0		546.65	ft	1	07/07/2023 11:42	R332756
Measuring Point Elevation	*	0		555.60	ft	1	07/07/2023 11:42	R332756
Measuring Point Height Above Land Surface	*	0		3.14	ft	1	07/07/2023 11:42	R332756
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		16	NTU	1	07/07/2023 11:42	R332756
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		70.5	°F	1	07/07/2023 11:42	R332756
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.86		1	07/07/2023 11:42	R332756
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		875	µmhos/cm @25C	1	07/07/2023 11:42	R332756
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		560	mg/L	2.5	07/11/2023 10:30	R331470
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		< 10	mg/L	1	07/24/2023 14:50	R333047
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.14	mg/L	1	07/11/2023 13:03	R331398
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		13	mg/L	1	07/24/2023 14:51	R333070
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Barium	NELAP	0.0025		0.396	mg/L	1	07/11/2023 18:33	208261
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	07/11/2023 18:33	208261
Boron	NELAP	0.0200		0.0845	mg/L	1	07/12/2023 20:36	208261
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	07/11/2023 18:33	208261
Calcium	NELAP	0.100	B	132	mg/L	1	07/11/2023 18:33	208261
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	07/11/2023 18:33	208261
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	07/11/2023 18:33	208261
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/11/2023 18:33	208261
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	07/11/2023 18:33	208261
<i>Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 3:24	208261
Arsenic	NELAP	0.0010		0.0239	mg/L	5	07/12/2023 3:24	208261
Lithium	*	0.0030		0.0078	mg/L	5	07/17/2023 12:37	208261
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 3:24	208261
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	07/12/2023 3:24	208261
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/11/2023 15:35	208286
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23070002-006  
 Matrix: GROUNDWATER

Work Order: 23070002  
 Report Date: 16-Aug-23

Client Sample ID: AP-5

Collection Date: 07/07/2023 13:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		552.63	ft	1	07/07/2023 13:12	R332756
Depth to water	*	-5.00		11.78	ft	1	07/07/2023 13:12	R332756
Depth to water from measuring point	*	0		14.08	ft	1	07/07/2023 13:12	R332756
Elevation of groundwater surface	*	0		569.82	ft	1	07/07/2023 13:12	R332756
Measuring Point Elevation	*	0		583.90	ft	1	07/07/2023 13:12	R332756
Measuring Point Height Above Land Surface	*	0		2.30	ft	1	07/07/2023 13:12	R332756
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		1.7	NTU	1	07/07/2023 13:12	R332756
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		55.0	°F	1	07/07/2023 13:12	R332756
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.16		1	07/07/2023 13:12	R332756
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		653	µmhos/cm @25C	1	07/07/2023 13:12	R332756
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		400	mg/L	1	07/11/2023 10:30	R331470
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		43	mg/L	1	07/24/2023 14:59	R333047
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.31	mg/L	1	07/11/2023 13:06	R331398
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		4	mg/L	1	07/24/2023 14:59	R333070
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Barium	NELAP	0.0025		0.0461	mg/L	1	07/11/2023 18:44	208261
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	07/11/2023 18:44	208261
Boron	NELAP	0.0200		0.0323	mg/L	1	07/15/2023 16:20	208261
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	07/11/2023 18:44	208261
Calcium	NELAP	0.100	BS	96.3	mg/L	1	07/11/2023 18:44	208261
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	07/11/2023 18:44	208261
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	07/11/2023 18:44	208261
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/11/2023 18:44	208261
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	07/11/2023 18:44	208261
<i>Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<i>Matrix spike control limits for are not applicable due to high sample/spike ratio.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 3:41	208261
Arsenic	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 3:41	208261
Lithium	*	0.0030		0.0046	mg/L	5	07/18/2023 8:56	208261
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 3:41	208261
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	07/12/2023 3:41	208261
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/12/2023 8:24	208286
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-226	*	0		See Attached	pci/L	1	07/26/2023 16:09	R335080



# Laboratory Results

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power  
**Client Project:** Ash Pond Monitoring Wells  
**Lab ID:** 23070002-006  
**Matrix:** GROUNDWATER

**Work Order:** 23070002  
**Report Date:** 16-Aug-23  
**Client Sample ID:** AP-5  
**Collection Date:** 07/07/2023 13:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-228	*	0		See Attached	pci/L	1	07/26/2023 16:09	R335080



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23070002-007  
 Matrix: GROUNDWATER

Work Order: 23070002  
 Report Date: 16-Aug-23

Client Sample ID: AP-6

Collection Date: 07/06/2023 13:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		498.20	ft	1	07/06/2023 13:30	R332756
Depth to water	*	-5.00		7.06	ft	1	07/06/2023 13:30	R332756
Depth to water from measuring point	*	0		9.48	ft	1	07/06/2023 13:30	R332756
Elevation of groundwater surface	*	0		528.34	ft	1	07/06/2023 13:30	R332756
Measuring Point Elevation	*	0		537.82	ft	1	07/06/2023 13:30	R332756
Measuring Point Height Above Land Surface	*	0		2.42	ft	1	07/06/2023 13:30	R332756
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		3.7	NTU	1	07/06/2023 13:30	R332756
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		55.9	°F	1	07/06/2023 13:30	R332756
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.06		1	07/06/2023 13:30	R332756
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		407	µmhos/cm @25C	1	07/06/2023 13:30	R332756
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		268	mg/L	1	07/07/2023 15:00	R331380
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		22	mg/L	1	07/24/2023 15:20	R333047
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.26	mg/L	1	07/11/2023 13:07	R331398
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		28	mg/L	1	07/24/2023 15:20	R333070
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Barium	NELAP	0.0025		0.0844	mg/L	1	07/11/2023 18:34	208261
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	07/11/2023 18:34	208261
Boron	NELAP	0.0200		0.0753	mg/L	1	07/12/2023 20:44	208261
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	07/11/2023 18:34	208261
Calcium	NELAP	0.100	B	49.0	mg/L	1	07/11/2023 18:34	208261
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	07/11/2023 18:34	208261
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	07/11/2023 18:34	208261
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/11/2023 18:34	208261
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	07/11/2023 18:34	208261
<i>Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 3:30	208261
Arsenic	NELAP	0.0010		0.0040	mg/L	5	07/12/2023 3:30	208261
Lithium	*	0.0030		< 0.0030	mg/L	5	07/17/2023 12:41	208261
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	07/12/2023 3:30	208261
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	07/12/2023 3:30	208261
<i>LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>								
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/11/2023 15:49	208286
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-226	*	0		See Attached	pci/L	1	07/25/2023 15:30	R335080



# Laboratory Results

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power  
**Client Project:** Ash Pond Monitoring Wells  
**Lab ID:** 23070002-007  
**Matrix:** GROUNDWATER

**Work Order:** 23070002  
**Report Date:** 16-Aug-23  
**Client Sample ID:** AP-6  
**Collection Date:** 07/06/2023 13:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
Radium-228	*	0		See Attached	pci/L	1	07/25/2023 15:30	R335080



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23070002-008  
 Matrix: GROUNDWATER

Work Order: 23070002  
 Report Date: 16-Aug-23

Client Sample ID: AP-7

Collection Date: 07/07/2023 12:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		11	NTU	1	07/07/2023 12:23	R332756
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		59.2	°F	1	07/07/2023 12:23	R332756
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.28		1	07/07/2023 12:23	R332756
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		586	µmhos/cm @25C	1	07/07/2023 12:23	R332756
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		300	mg/L	2.5	07/11/2023 10:30	R331470
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		20	mg/L	1	07/24/2023 15:28	R333047
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.34	mg/L	1	07/11/2023 13:09	R331398
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		39	mg/L	1	07/24/2023 15:28	R333070
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<i>Sample result(s) for Ca exceed 10 times the method blank contamination. Data is reportable per the TNI Standard.</i>								
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/11/2023 15:51	208286
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Receiving Check List

<http://www.teklabinc.com/>

Client: City Water, Light & Power

Work Order: 23070002

Client Project: Ash Pond Monitoring Wells

Report Date: 16-Aug-23

Carrier: Tracy Carroll

Received By: ANC

Completed by:

*Allison Coler*

Reviewed by:

*Ellie Hopkins*

On:

10-Jul-23

Allison Colin

On:

10-Jul-23

Ellie Hopkins

Pages to follow: Chain of custody

Extra pages included

- 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. - acoln - 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. - acoln - 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

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: <u>City Water, Light &amp; Power</u> Address: <u>3100 Stevenson Drive, 2nd Floor Maintenance Building</u> City/State/Zip: <u>Springfield IL 62712</u> Contact: <u>Eric Staley</u> Phone: <u>(217) 757-8610</u> Email: <u>eric.staley@cwlp.com</u> Fax: _____				Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>5.2 °C</u> Preserved in: <input checked="" type="checkbox"/> LAB <input type="checkbox"/> FIELD <u>FOR LAB USE ONLY #1</u> LAB NOTES: <u>PH 90719</u> <u>Added HND3(90404) to AP2, AP3, AP4, AP8, AP9, AP10, AP12</u> Client Comments: <u>ANC 7/10/23</u>															
Are these samples known to be involved in litigation? If yes, a surcharge will apply: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Permit on file				*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 <u>Ash Pond Monitoring Wells</u>		SAMPLE COLLECTOR'S NAME <u>Justin Cole Carroll</u>		# and Type of Containers		INDICATE ANALYSIS REQUESTED													
RESULTS REQUESTED <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other _____ <input type="checkbox"/> 3 Day (50% Surcharge)		BILLING INSTRUCTIONS		UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity	
Lab Use Only	Sample ID	Date/Time Sampled	Matrix																
	<u>23070002-001</u>	<u>RW-3</u>	<u>Groundwater</u>	<u>1</u>	<u>2</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>002</u>	<u>AP-1</u>	<u>Groundwater</u>	<u>7/7/23</u>	<u>1108</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>003</u>	<u>AP-2</u>	<u>Groundwater</u>	<u>1231</u>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>004</u>	<u>AP-3</u>	<u>Groundwater</u>	<u>1316</u>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>005</u>	<u>AP-4</u>	<u>Groundwater</u>	<u>7-7-23</u>	<u>1142</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>006</u>	<u>AP-5</u>	<u>Groundwater</u>	<u>7-7-23</u>	<u>1312</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>007</u>	<u>AP-6</u>	<u>Groundwater</u>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>008</u>	<u>AP-7</u>	<u>Groundwater</u>	<u>7-7-23</u>	<u>1223</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>009</u>	<u>AP-8</u>	<u>Groundwater</u>	<u>7/7/23</u>	<u>1039</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>010</u>	<u>AP-9</u>	<u>Groundwater</u>	<u>7-7-23</u>	<u>1240</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	<u>011</u>	<u>AP-10</u>	<u>Groundwater</u>	<u>7/7/23</u>	<u>1147</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Relinquished By		Date/Time		Received By				Date/Time											
<u>Justin Cole Carroll</u>		<u>7/7/23 1644</u>		<u>Alison De...</u>				<u>7/7/23 1044</u>											

\*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

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 TI (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 Galt TCarroll

RESULTS REQUESTED:  Standard  1-2 Day (100% Surcharge)  Other  3 Day (50% Surcharge)  
 BILLING INSTRUCTIONS:

# 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						
1	2								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
1	2								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
1	2								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
1	2								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						

Lab Use Only	Sample ID	Date/Time Sampled	Matrix
23070002-012	AP-11	7-7-23 / 1434	Groundwater
013	AP-12	↓ / 1416	Groundwater
014	AP-13	↓ / 1347	Groundwater
015	AP-14	↓ / 1121	Groundwater
			Groundwater
			Groundwater
			Groundwater
			Groundwater
			Groundwater
			Groundwater
			Groundwater

Relinquished By	Date/Time	Received By	Date/Time
<u>Justin Carroll</u>	<u>7/7/23 1644</u>	<u>Allison</u>	<u>7/7 1644</u>

\*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>

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



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## 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.

---

Original

These commonly used Qualifiers and Acronyms may or may not be present in this report.

### Qualifiers

<b>U</b>	The compound was analyzed for but was not detected above the MDL.
<b>J</b>	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
<b>H</b>	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
<b>D</b>	The result is reported from a dilution.
<b>E</b>	The result exceeded the linear range of the calibration or is estimated due to interference.
<b>MC</b>	The result is below the Minimum Compound Limit.
<b>*</b>	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
<b>m</b>	Manual integration was used to determine the area response.
<b>d</b>	Manual integration in which peak was deleted
<b>N</b>	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
<b>P</b>	The second column confirmation exceeded 25% difference.
<b>C</b>	The result has been confirmed by GC/MS.
<b>X</b>	The result was not confirmed when GC/MS Analysis was performed.
<b>B</b>	The analyte was detected in the Method Blank at a concentration greater than the RL.
<b>MB+</b>	The analyte was detected in the Method Blank at a concentration greater than the MDL.
<b>G</b>	The ICB or CCB contained reportable amounts of analyte.
<b>QC-/+</b>	The CCV recovery failed low (-) or high (+).
<b>R/QDR</b>	The RPD was outside of accepted recovery limits.
<b>QL-/+</b>	The LCS or LCSD recovery failed low (-) or high (+).
<b>QLR</b>	The LCS/LCSD RPD was outside of accepted recovery limits.
<b>QM-/+</b>	The MS or MSD recovery failed low (-) or high (+).
<b>QMR</b>	The MS/MSD RPD was outside of accepted recovery limits.
<b>QV-/+</b>	The ICV recovery failed low (-) or high (+).
<b>S</b>	The spike result was outside of accepted recovery limits.
<b>W</b>	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
<b>Z</b>	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

### Acronyms

<b>ND</b>	Not Detected	<b>RL</b>	Reporting Limit
<b>QC</b>	Quality Control	<b>MDL</b>	Method Detection Limit
<b>MB</b>	Method Blank	<b>LOD</b>	Level of Detection
<b>LCS</b>	Laboratory Control Sample	<b>LOQ</b>	Level of Quantitation
<b>LCSD</b>	Laboratory Control Sample Duplicate	<b>PQL</b>	Practical Quantitation Limit
<b>QCS</b>	Quality Control Sample	<b>CRQL</b>	Contract Required Quantitation Limit
<b>DUP</b>	Duplicate	<b>PL</b>	Permit Limit
<b>MS</b>	Matrix Spike	<b>RegLvl</b>	Regulatory Limit
<b>MSD</b>	Matrix Spike Duplicate	<b>MCL</b>	Maximum Contamination Limit
<b>RPD</b>	Relative Percent Different	<b>MinCL</b>	Minimum Compound Limit
<b>ICV</b>	Initial Calibration Verification	<b>RA</b>	Reanalysis
<b>ICB</b>	Initial Calibration Blank	<b>RE</b>	Reextraction
<b>CCV</b>	Continuing Calibration Verification	<b>TIC</b>	Tentatively Identified Compound
<b>CCB</b>	Continuing Calibration Blank	<b>RT</b>	Retention Time
<b>RLC</b>	Reporting Limit Check	<b>CF</b>	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#: **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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 Cuyahoga Falls, Ohio 44223  
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# 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.  
 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



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 Cuyahoga Falls, Ohio 44223  
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# Analytical Report

(consolidated)

WO#: 23070747

Date Reported: 8/15/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23070002  
**Lab ID:** 23070747-001  
**Client Sample ID:** 23070002-001

**Collection Date:** 7/6/2023 12:23:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	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
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	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

<b>Qualifiers:</b>	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,  
**Project:** 23070002  
**Lab ID:** 23070747-002  
**Client Sample ID:** 23070002-002

**Collection Date:** 7/7/2023 11:08:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	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
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: HDJ
Radium-228	ND	1.00		pCi/L	± 0.63	1	7/24/2023 3:18:00 PM
Yield	1.00					1	7/24/2023 3:18:00 PM

<b>Qualifiers:</b>	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,  
**Project:** 23070002  
**Lab ID:** 23070747-003  
**Client Sample ID:** 23070002-003

**Collection Date:** 7/7/2023 12:31:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	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
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	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

<b>Qualifiers:</b>	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,  
**Project:** 23070002  
**Lab ID:** 23070747-004  
**Client Sample ID:** 23070002-004

**Collection Date:** 7/7/2023 1:16:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	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
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	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,  
**Project:** 23070002  
**Lab ID:** 23070747-005  
**Client Sample ID:** 23070002-005

**Collection Date:** 7/7/2023 11:42:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: HDJ
Radium-226	ND	1.00		pCi/L	± 0.12	1	7/25/2023 9:25:00 AM
Yield	1.00					1	7/25/2023 9:25:00 AM
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: HDJ
Radium-228	1.12	1.00		pCi/L	± 0.88	1	7/24/2023 3:18:00 PM
Yield	1.00					1	7/24/2023 3:18:00 PM

<b>Qualifiers:</b>	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,  
**Project:** 23070002  
**Lab ID:** 23070747-006  
**Client Sample ID:** 23070002-006

**Collection Date:** 7/7/2023 1:12:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: HDJ
Radium-226	ND	1.00		pCi/L	± 0.05	1	7/27/2023 10:01:00 AM
Yield	1.00					1	7/27/2023 10:01:00 AM
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: HDJ
Radium-228	ND	1.00		pCi/L	± 0.4	1	7/26/2023 4:09:00 PM
Yield	1.00					1	7/26/2023 4:09:00 PM

<b>Qualifiers:</b>	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,  
**Project:** 23070002  
**Lab ID:** 23070747-007  
**Client Sample ID:** 23070002-007

**Collection Date:** 7/6/2023 1:30:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>					<b>E903.0</b>	<b>E903-904</b>	Analyst: HDJ
Radium-226	ND	1.00		pCi/L	± 0.04	1	7/26/2023 10:02:00 AM
Yield	1.00					1	7/26/2023 10:02:00 AM
<b>RADIUM-228 (EPA 904.0)</b>					<b>E904.0</b>	<b>E903-904</b>	Analyst: HDJ
Radium-228	ND	1.00		pCi/L	± 0.49	1	7/25/2023 3:30:00 PM
Yield	0.930					1	7/25/2023 3:30:00 PM

<b>Qualifiers:</b>	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,  
**Project:** 23070002  
**Lab ID:** 23070747-008  
**Client Sample ID:** 23070002-008

**Collection Date:** 7/7/2023 12:23:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>		<b>E903-904</b>	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
<b>RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>		<b>E903-904</b>	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

<b>Qualifiers:</b>	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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 TEL: (330) 253-8211 FAX: (330) 253-4489  
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# QC SUMMARY REPORT

WO#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 66938

Sample ID: <b>MB-66938</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167890</b>						
Client ID: <b>PBW</b>	Batch ID: <b>66938</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>4506021</b>						
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: <b>LCSD-66938</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167890</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>66938</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>4506023</b>						
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: <b>RLC-66938</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167890</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>4506025</b>						
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: <b>RLCD-66938</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167890</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>4506026</b>						
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: <b>23070595-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167890</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>4506027</b>						
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: <b>23070596-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167890</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>4506030</b>						
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: <b>23070597-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167890</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/24/2023</b>	SeqNo: <b>4506032</b>						
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		

<b>Qualifiers:</b>	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: <b>MB-66938</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>PBW</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506087</b>						
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: <b>LCS-66938</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506088</b>						
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: <b>LCSD-66938</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506089</b>						
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: <b>RLC-66938</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506091</b>						
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#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 66938

Sample ID: <b>RLC-66938</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506091</b>						
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: <b>RLCD-66938</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506092</b>						
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: <b>23070595-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506093</b>						
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: <b>23070596-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506096</b>						
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

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# QC SUMMARY REPORT

WO#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 66938

Sample ID: <b>23070596-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506096</b>						
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: <b>23070597-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/17/2023</b>	RunNo: <b>167894</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>66938</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506098</b>						
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: <b>MB-67011</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167896</b>						
Client ID: <b>PBW</b>	Batch ID: <b>67011</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506126</b>						
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: <b>LCS-67011</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167896</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>67011</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506127</b>						
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: <b>RLCD-67011</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167896</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506131</b>						
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

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: <b>23071031-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167896</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506132</b>						
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: <b>23071032-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167896</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506135</b>						
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: <b>23070816-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167896</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/25/2023</b>	SeqNo: <b>4506137</b>						
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.  
 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: <b>MB-67011</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>
Client ID: <b>PBW</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506168</b>
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: <b>LCS-67011</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>
Client ID: <b>LCSW</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506169</b>
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: <b>LCSD-67011</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>
Client ID: <b>LCSS02</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506170</b>
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: <b>RLC-67011</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506172</b>
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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 Cuyahoga Falls, Ohio 44223  
 TEL: (330) 253-8211 FAX: (330) 253-4489  
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# QC SUMMARY REPORT

WO#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 67011

Sample ID: <b>RLC-67011</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506172</b>						
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: <b>RLCD-67011</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506173</b>						
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: <b>23071031-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506174</b>						
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: <b>23071032-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506177</b>						
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

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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#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 67011

Sample ID: <b>23071032-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506177</b>						
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: <b>23070816-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/19/2023</b>	RunNo: <b>167898</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67011</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4506179</b>						
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
  - J Analyte detected below quantitation limits
  - ND Not Detected
  - PL Permit Limit
  - E Value above quantitation range
  - M Manual Integration used to determine area response
  - OG1
  - R RPD outside accepted recovery limits
  - H Holding times for preparation or analy
  - MC Value is below Minimum Compound
  - P Second column confirmation exceeds
  - RL Reporting Detection Limit

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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#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 67083

Sample ID: <b>MB-67083</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168035</b>						
Client ID: <b>PBW</b>	Batch ID: <b>67083</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4510072</b>						
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: <b>LCS-67083</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168035</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>67083</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4510073</b>						
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: <b>RLC-67083</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168035</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67083</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4510076</b>						
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

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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#: 23070747  
15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 67083

Sample ID: <b>23071034-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168035</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67083</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>7/26/2023</b>	SeqNo: <b>4510107</b>						
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		

<b>Qualifiers:</b>	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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 3310 Win St.  
 Cuyahoga Falls, Ohio 44223  
 TEL: (330) 253-8211 FAX: (330) 253-4489  
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# QC SUMMARY REPORT

WO#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 67083

Sample ID: <b>MB-67083</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168045</b>						
Client ID: <b>PBW</b>	Batch ID: <b>67083</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/27/2023</b>	SeqNo: <b>4510502</b>						
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: <b>LCSD-67083</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168045</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>67083</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/27/2023</b>	SeqNo: <b>4510504</b>						
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: <b>RLC-67083</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168045</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67083</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/27/2023</b>	SeqNo: <b>4510506</b>						
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: <b>RLCD-67083</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168045</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67083</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/27/2023</b>	SeqNo: <b>4510507</b>						
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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 TEL: (330) 253-8211 FAX: (330) 253-4489  
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# QC SUMMARY REPORT

WO#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 67083

Sample ID: <b>RLCD-67083</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168045</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67083</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/27/2023</b>	SeqNo: <b>4510507</b>						
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: <b>23071033-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168045</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67083</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/27/2023</b>	SeqNo: <b>4510508</b>						
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: <b>23071096-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>7/21/2023</b>	RunNo: <b>168045</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67083</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>7/27/2023</b>	SeqNo: <b>4510518</b>						
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:** 67719

Sample ID: <b>23072069-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>8/10/2023</b>	RunNo: <b>169062</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67719</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>8/14/2023</b>	SeqNo: <b>4541097</b>						
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: <b>23072069-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>8/10/2023</b>	RunNo: <b>169062</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67719</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>8/14/2023</b>	SeqNo: <b>4541099</b>						
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



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:** 67719

Sample ID: <b>MB-67719</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>8/10/2023</b>	RunNo: <b>169062</b>						
Client ID: <b>PBW</b>	Batch ID: <b>67719</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>8/14/2023</b>	SeqNo: <b>4541078</b>						
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: <b>LCS-67719</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>8/10/2023</b>	RunNo: <b>169062</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>67719</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>8/14/2023</b>	SeqNo: <b>4541079</b>						
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: <b>LCSD-67719</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>8/10/2023</b>	RunNo: <b>169062</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>67719</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>8/14/2023</b>	SeqNo: <b>4541080</b>						
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

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#: 23070747  
 15-Aug-23

**Client:** TEKLAB Inc,  
**Project:** 23070002

**BatchID:** 67719

Sample ID: <b>RLC-67719</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>8/10/2023</b>	RunNo: <b>169062</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67719</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>8/14/2023</b>	SeqNo: <b>4541082</b>						
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: <b>23080067-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>8/10/2023</b>	RunNo: <b>169062</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>67719</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>8/14/2023</b>	SeqNo: <b>4541084</b>						
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

**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

Project# 23070002

Contact: Shelly Hennessy Email: shennessy@teklabinc.com

Requested Due Date: NTAT Billing/PO: 34677

QC Level: 2

Sampler:      Cooler Temp:     

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 LC SN 710123

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
	23070002-001	7/6/23 12.23	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-002	7/7/23 11.08	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-003	7/7/23 12.31	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-004	7/7/23 13.16	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-005	7/7/23 11.42	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-006	7/7/23 13.12	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-007	7/6/23 13.30	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-008	7/7/23 12.23	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-009	7/7/23 10.39	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-010	7/7/23 12.40	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	23070002-011	7/7/23 11.47	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

\*Relinquished By Shelly Hennessy Date/Time 7/10/23 Received By V. Ger Date/Time 7/12/23 1700

23470.0 =  
23.4  
PMU  
COUW

TWO DOF RECEIVED, NO COU

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.  
 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:	<b>Christina N. Gemma</b>	<b>7/12/2023 12:00:00 PM</b>	 <i>C. Gemma</i> <small>Cuyahoga Falls</small>
Completed By:	<b>Jacqueline Rasile</b>	<b>7/13/2023 1:07:43 AM</b>	
Reviewed By:	<b>Jennifer Woolf</b>	<b>7/13/2023 6:52:05 PM</b>	

### 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:  
 confirmed with client second bottle labeled -001 is the -004 bottle  
 Two 001 bottles rec'd, no 004 bottle.

### Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	23.4	Good	Not Present			

**FOURTH QUARTER 2023 ANALYTICAL REPORT AND FIELD NOTES**

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  
Project Manager  
(618)344-1004 ex 36  
[SHennessy@teklabinc.com](mailto:SHennessy@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

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**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

**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)

**Client:** City Water, Light & Power

**Work Order:** 23101164

**Client Project:** Ash Pond Monitoring Wells

**Report Date:** 27-Nov-23

### Qualifiers

- # - Unknown hydrocarbon
- C - RL shown is a Client Requested Quantitation Limit
- H - Holding times exceeded
- J - Analyte detected below quantitation limits
- ND - Not Detected at the Reporting Limit
- S - Spike Recovery outside recovery limits
- X - Value exceeds Maximum Contaminant Level
- B - Analyte detected in associated Method Blank
- E - Value above quantitation range
- I - Associated internal standard was outside method criteria
- M - Manual Integration used to determine area response
- R - RPD outside accepted recovery limits
- T - TIC(Tentatively identified compound)

**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

**Collinsville Air**

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**Email** EHurley@teklabinc.com

**Springfield**

**Address** 3920 Pintail Dr  
Springfield, IL 62711-9415  
**Phone** (217) 698-1004  
**Fax** (217) 698-1005  
**Email** KKlostermann@teklabinc.com

**Chicago**

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

**Kansas City**

**Address** 8421 Nieman Road  
Lenexa, KS 66214  
**Phone** (913) 541-1998  
**Fax** (913) 541-1998  
**Email** jhriley@teklabinc.com



## Accreditations

<http://www.teklabinc.com/>

**Client:** City Water, Light & Power

**Work Order:** 23101164

**Client Project:** Ash Pond Monitoring Wells

**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



## Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23101164-001  
 Matrix: GROUNDWATER

Work Order: 23101164  
 Report Date: 27-Nov-23  
 Client Sample ID: RW-3  
 Collection Date: 10/25/2023 12:34

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		8.6	NTU	1	10/25/2023 12:34	R338505
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		60.3	°F	1	10/25/2023 12:34	R338505
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.31		1	10/25/2023 12:34	R338505
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		632	µmhos/cm @25C	1	10/25/2023 12:34	R338505
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	100		340	mg/L	5	10/30/2023 11:49	R338538
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		16	mg/L	1	10/27/2023 19:42	R338425
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.44	mg/L	1	11/02/2023 14:55	R338693
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		31	mg/L	1	10/27/2023 19:41	R338455
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<i>PQL recovered outside upper control limits for Sb. Sample results are below the reporting limit. Data is reportable per the TNI Standard.</i>								
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	10/31/2023 13:26	213968
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23101164-002  
 Matrix: GROUNDWATER

Work Order: 23101164  
 Report Date: 27-Nov-23

Client Sample ID: AP-1

Collection Date: 10/26/2023 12:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		504.29	ft	1	10/26/2023 12:22	R338505
Depth to water	*	-5.00		9.15	ft	1	10/26/2023 12:22	R338505
Depth to water from measuring point	*	0		11.42	ft	1	10/26/2023 12:22	R338505
Elevation of groundwater surface	*	0		523.95	ft	1	10/26/2023 12:22	R338505
Measuring Point Elevation	*	0		535.37	ft	1	10/26/2023 12:22	R338505
Measuring Point Height Above Land Surface	*	0		2.27	ft	1	10/26/2023 12:22	R338505
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		12	NTU	1	10/26/2023 12:22	R338505
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		59.7	°F	1	10/26/2023 12:22	R338505
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.71		1	10/26/2023 12:22	R338505
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1710	µmhos/cm @25C	1	10/26/2023 12:22	R338505
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		1360	mg/L	2.5	10/31/2023 10:18	R338603
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		740	mg/L	20	10/30/2023 13:41	R338498
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.26	mg/L	1	11/02/2023 13:54	R338693
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8		53	mg/L	2	11/01/2023 13:44	R338688
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Barium	NELAP	0.0025		0.262	mg/L	1	10/31/2023 17:39	213879
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	10/31/2023 17:39	213879
Boron	NELAP	0.200		21.7	mg/L	10	11/01/2023 13:01	213879
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	10/31/2023 17:39	213879
Calcium	NELAP	0.100		229	mg/L	1	10/31/2023 17:39	213879
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 17:39	213879
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 17:39	213879
Lead	NELAP	0.0150		< 0.0150	mg/L	1	10/31/2023 17:39	213879
Lithium	NELAP	0.0050		0.0085	mg/L	1	10/31/2023 17:39	213879
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	10/31/2023 17:39	213879
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 9:31	213879
Arsenic	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 9:31	213879
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 9:31	213879
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	11/01/2023 9:31	213879
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	10/31/2023 14:41	213968
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23101164-003  
 Matrix: GROUNDWATER

Work Order: 23101164  
 Report Date: 27-Nov-23

Client Sample ID: AP-2

Collection Date: 10/26/2023 13:05

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		15	NTU	1	10/26/2023 13:05	R338505
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		61.9	°F	1	10/26/2023 13:05	R338505
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.57		1	10/26/2023 13:05	R338505
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1380	µmhos/cm @25C	1	10/26/2023 13:05	R338505
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		1020	mg/L	1	10/31/2023 10:25	R338603
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		380	mg/L	20	10/30/2023 13:50	R338498
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.27	mg/L	1	11/02/2023 14:58	R338693
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8		40	mg/L	2	10/30/2023 13:44	R338509
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	10/31/2023 14:43	213968
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23101164-004  
 Matrix: GROUNDWATER

Work Order: 23101164  
 Report Date: 27-Nov-23

Client Sample ID: AP-3

Collection Date: 10/26/2023 13:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		11	NTU	1	10/26/2023 13:25	R338505
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		64.8	°F	1	10/26/2023 13:25	R338505
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.69		1	10/26/2023 13:25	R338505
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		1290	µmhos/cm @25C	1	10/26/2023 13:25	R338505
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		1080	mg/L	2.5	10/31/2023 10:26	R338603
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	200		495	mg/L	20	11/02/2023 12:38	R338709
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.25	mg/L	1	11/02/2023 14:02	R338693
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8	S	57	mg/L	2	10/30/2023 14:08	R338509
<i>Matrix spike did not recover within control limits due to matrix interference.</i>								
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	10/31/2023 14:45	213968
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



## Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23101164-005  
 Matrix: GROUNDWATER

Work Order: 23101164  
 Report Date: 27-Nov-23

Client Sample ID: AP-4

Collection Date: 10/26/2023 14:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		492.46	ft	1	10/26/2023 14:06	R338505
Depth to water	*	-5.00		7.65	ft	1	10/26/2023 14:06	R338505
Depth to water from measuring point	*	0		10.79	ft	1	10/26/2023 14:06	R338505
Elevation of groundwater surface	*	0		544.81	ft	1	10/26/2023 14:06	R338505
Measuring Point Elevation	*	0		555.60	ft	1	10/26/2023 14:06	R338505
Measuring Point Height Above Land Surface	*	0		3.14	ft	1	10/26/2023 14:06	R338505
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		8.8	NTU	1	10/26/2023 14:06	R338505
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		66.4	°F	1	10/26/2023 14:06	R338505
<b>SW-846 9040B</b>								
pH, Field	*	1.00		6.99		1	10/26/2023 14:06	R338505
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		866	µmhos/cm @25C	1	10/26/2023 14:06	R338505
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	50		420	mg/L	2.5	10/31/2023 10:26	R338603
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		< 10	mg/L	1	10/30/2023 14:29	R338498
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.16	mg/L	1	11/02/2023 15:00	R338693
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		14	mg/L	1	10/30/2023 14:29	R338509
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Barium	NELAP	0.0025		0.381	mg/L	1	10/31/2023 17:50	213879
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	10/31/2023 17:50	213879
Boron	NELAP	0.0200		0.0841	mg/L	1	11/01/2023 12:57	213879
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	10/31/2023 17:50	213879
Calcium	NELAP	0.100		118	mg/L	1	10/31/2023 17:50	213879
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 17:50	213879
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 17:50	213879
Lead	NELAP	0.0150		< 0.0150	mg/L	1	10/31/2023 17:50	213879
Lithium	NELAP	0.0050		0.0051	mg/L	1	10/31/2023 17:50	213879
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	10/31/2023 17:50	213879
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 11:03	213879
Arsenic	NELAP	0.0010		0.0225	mg/L	5	11/01/2023 11:03	213879
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 11:03	213879
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	11/01/2023 11:03	213879
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	10/31/2023 14:47	213968
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23101164-006  
 Matrix: GROUNDWATER

Work Order: 23101164  
 Report Date: 27-Nov-23

Client Sample ID: AP-5

Collection Date: 10/26/2023 14:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		552.63	ft	1	10/26/2023 14:44	R338505
Depth to water	*	-5.00		15.87	ft	1	10/26/2023 14:44	R338505
Depth to water from measuring point	*	0		18.17	ft	1	10/26/2023 14:44	R338505
Elevation of groundwater surface	*	0		565.73	ft	1	10/26/2023 14:44	R338505
Measuring Point Elevation	*	0		583.90	ft	1	10/26/2023 14:44	R338505
Measuring Point Height Above Land Surface	*	0		2.30	ft	1	10/26/2023 14:44	R338505
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		2.0	NTU	1	10/26/2023 14:44	R338505
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		57.9	°F	1	10/26/2023 14:44	R338505
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.17		1	10/26/2023 14:44	R338505
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		653	µmhos/cm @25C	1	10/26/2023 14:44	R338505
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		396	mg/L	1	10/31/2023 10:26	R338603
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		45	mg/L	1	10/30/2023 14:38	R338498
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.37	mg/L	1	11/02/2023 16:05	R338693
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		5	mg/L	1	10/30/2023 14:37	R338509
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Barium	NELAP	0.0025		0.0471	mg/L	1	10/31/2023 18:12	213879
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	10/31/2023 18:12	213879
Boron	NELAP	0.0200		0.0455	mg/L	1	10/31/2023 18:12	213879
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	10/31/2023 18:12	213879
Calcium	NELAP	0.100		90.7	mg/L	1	10/31/2023 18:12	213879
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 18:12	213879
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 18:12	213879
Lead	NELAP	0.0150		< 0.0150	mg/L	1	10/31/2023 18:12	213879
Lithium	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 18:12	213879
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	10/31/2023 18:12	213879
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 11:37	213879
Arsenic	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 11:37	213879
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 11:37	213879
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	11/01/2023 11:37	213879
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	10/31/2023 14:50	213968
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23101164-007  
 Matrix: GROUNDWATER

Work Order: 23101164  
 Report Date: 27-Nov-23

Client Sample ID: AP-6

Collection Date: 10/26/2023 9:09

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
Bottom of well elevation	*	0		498.20	ft	1	10/26/2023 9:09	R338505
Depth to water	*	-5.00		7.64	ft	1	10/26/2023 9:09	R338505
Depth to water from measuring point	*	0		10.06	ft	1	10/26/2023 9:09	R338505
Elevation of groundwater surface	*	0		527.76	ft	1	10/26/2023 9:09	R338505
Measuring Point Elevation	*	0		537.82	ft	1	10/26/2023 9:09	R338505
Measuring Point Height Above Land Surface	*	0		2.42	ft	1	10/26/2023 9:09	R338505
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		9.5	NTU	1	10/26/2023 9:09	R338505
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		59.4	°F	1	10/26/2023 9:09	R338505
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.17		1	10/26/2023 9:09	R338505
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		609	µmhos/cm @25C	1	10/26/2023 9:09	R338505
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		322	mg/L	1	10/31/2023 12:05	R338603
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		13	mg/L	1	10/30/2023 15:01	R338498
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.50	mg/L	1	11/02/2023 15:01	R338693
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	4		33	mg/L	1	10/30/2023 15:01	R338509
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Barium	NELAP	0.0025		0.160	mg/L	1	10/31/2023 17:54	213879
Beryllium	NELAP	0.0005		< 0.0005	mg/L	1	10/31/2023 17:54	213879
Boron	NELAP	0.0200		0.214	mg/L	1	10/31/2023 17:54	213879
Cadmium	NELAP	0.0020		< 0.0020	mg/L	1	10/31/2023 17:54	213879
Calcium	NELAP	0.100		65.8	mg/L	1	10/31/2023 17:54	213879
Chromium	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 17:54	213879
Cobalt	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 17:54	213879
Lead	NELAP	0.0150		< 0.0150	mg/L	1	10/31/2023 17:54	213879
Lithium	NELAP	0.0050		< 0.0050	mg/L	1	10/31/2023 17:54	213879
Molybdenum	NELAP	0.0100		< 0.0100	mg/L	1	10/31/2023 17:54	213879
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
Antimony	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 11:09	213879
Arsenic	NELAP	0.0010		0.0183	mg/L	5	11/01/2023 11:09	213879
Selenium	NELAP	0.0010		< 0.0010	mg/L	5	11/01/2023 11:09	213879
Thallium	NELAP	0.0020		< 0.0020	mg/L	5	11/01/2023 11:09	213879
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	10/31/2023 14:57	213968
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Laboratory Results

<http://www.teklabinc.com/>

Client: City Water, Light & Power  
 Client Project: Ash Pond Monitoring Wells  
 Lab ID: 23101164-008  
 Matrix: GROUNDWATER

Work Order: 23101164  
 Report Date: 27-Nov-23

Client Sample ID: AP-7

Collection Date: 10/26/2023 13:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>FIELD ELEVATION MEASUREMENTS</b>								
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
<b>STANDARD METHODS 2130 B FIELD</b>								
Turbidity	*	1.0		7.8	NTU	1	10/26/2023 13:58	R338505
<b>STANDARD METHODS 2550 B FIELD</b>								
Temperature	*	0		58.1	°F	1	10/26/2023 13:58	R338505
<b>SW-846 9040B</b>								
pH, Field	*	1.00		7.15		1	10/26/2023 13:58	R338505
<b>SW-846 9050A</b>								
Spec. Conductance, Field	*	1.00		478	µmhos/cm @25C	1	10/26/2023 13:58	R338505
<b>STANDARD METHODS 2540 C (TOTAL) 1997, 2011</b>								
Total Dissolved Solids	NELAP	20		352	mg/L	1	10/31/2023 12:06	R338603
<b>SW-846 9036 (TOTAL)</b>								
Sulfate	NELAP	10		15	mg/L	1	10/30/2023 15:04	R338498
<b>SW-846 9214 (TOTAL)</b>								
Fluoride	NELAP	0.10		0.53	mg/L	1	11/02/2023 13:57	R338693
<b>SW-846 9251 (TOTAL)</b>								
Chloride	NELAP	8		60	mg/L	2	11/01/2023 14:16	R338688
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
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
<b>SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)</b>								
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
<b>SW-846 7470A (TOTAL)</b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	10/31/2023 14:59	213968
<b>EPA 903.0/904.0, RADIUM 226/228</b>								
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



# Receiving Check List

<http://www.teklabinc.com/>

Client: City Water, Light & Power

Work Order: 23101164

Client Project: Ash Pond Monitoring Wells

Report Date: 27-Nov-23

Carrier: Justin Colp

Received By: HAW

Completed by:

Reviewed by:

On:

26-Oct-23

Timothy W. Mathis

On:

27-Oct-23

Ellie Hopkins

Pages to follow: Chain of custody

Extra pages included

- 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

CHAIN OF CUSTODY

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 4.8 °C
Preserved in: [ ] LAB [X] FIELD FOR LAB USE ONLY
LAB NOTES: plw 9079-05 10-26-23
KTE # 1116123

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 TI (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

# and Type of Containers INDICATE ANALYSIS REQUESTED

RESULTS REQUESTED: [X] Standard [ ] 1-2 Day (100% Surcharge) [ ] Other [ ] 3 Day (50% Surcharge)
BILLING INSTRUCTIONS

Table with columns for analysis types (UNP, HNO3, NaOH, H2SO4, HCL, MeOH, NaHSO4, TSP, Other, Field parameters\*) and rows for sample IDs (001-110) with checkmarks indicating requested analyses.

Table with columns: Lab Use Only, Sample ID, Date/Time Sampled, Matrix. Contains sample data for IDs 001 through 110.

Relinquished By: J. Colp Date/Time: 10-25-23 1715
Received By: [Signature] Date/Time: 10/26/23 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

Handwritten signature/initials: C 10-21-23

# CHAIN OF CUSTODY

TEKLAB INC, 5445 Horseshoe Lake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-1005

Client: <u>City Water, Light &amp; Power</u> Address: <u>3100 Stevenson Drive, 2nd Floor Maintenance Building</u> City/State/Zip: <u>Springfield IL 62712</u> Contact: <u>Eric Staley</u> Phone: <u>(217) 757-8610</u> Email: <u>eric.staley@cwlp.com</u> Fax: _____				Samples on: <input checked="" type="checkbox"/> ICE <input type="checkbox"/> BLUE ICE <input type="checkbox"/> NO ICE <u>2d</u> °C Preserved in: <input type="checkbox"/> LAB <input checked="" type="checkbox"/> FIELD <u>FOR LAB USE ONLY</u> LAB NOTES: <u>9079</u> <u>OTE SA 11/6/23</u> <u>own</u> <u>10/27/23</u>														
Are these samples known to be involved in litigation? If yes, a surcharge will apply: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are these samples known to be hazardous? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are there any required reporting limits to be met on the requested analysis?. If yes, please provide limits in the comment section: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 <u>Ash Pond Monitoring Wells</u>		SAMPLE COLLECTOR'S NAME <u>Justin Gb</u>		# and Type of Containers		INDICATE ANALYSIS REQUESTED												
RESULTS REQUESTED <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 12 Day (100% Surcharge) <input type="checkbox"/> Other _____ <input type="checkbox"/> 3 Day (50% Surcharge)		BILLING INSTRUCTIONS		UNP	HNO3	NaOH	H2SO4	HCL	MeOH	NaHSO4	TSP	Other	Field parameters*	Cl F SO4 TDS (T)	Metals (T)**	Radium-226	Radium-228	Field Turbidity
Lab Use Only	Sample ID	Date/Time Sampled	Matrix															
	<u>23101164-001</u>	<u>RW-3</u>	<u>Groundwater</u>	<u>1</u>	<u>2</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>002</u>	<u>AP-1</u>	<u>Groundwater</u>	<u>10-26-23</u>	<u>1222</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>003</u>	<u>AP-2</u>	<u>Groundwater</u>	<u>1305</u>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>004</u>	<u>AP-3</u>	<u>Groundwater</u>	<u>* 138525</u>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>005</u>	<u>AP-4</u>	<u>Groundwater</u>	<u>1406</u>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>006</u>	<u>AP-5</u>	<u>Groundwater</u>	<u>1444</u>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>007</u>	<u>AP-6</u>	<u>Groundwater</u>	<u>0909</u>									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>008</u>	<u>AP-7</u>	<u>Groundwater</u>	<u>10-26-23</u>	<u>1358</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>009</u>	<u>AP-8</u>	<u>Groundwater</u>	<u>10-26-23</u>	<u>0930</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>010</u>	<u>AP-9</u>	<u>Groundwater</u>	<u>10-26-23</u>	<u>1446</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<u>011</u>	<u>AP-10</u>	<u>Groundwater</u>	<u>10-26-23</u>	<u>1243</u>								<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Relinquished By		Date/Time		Received By				Date/Time										
<u>[Signature]</u>		<u>10-26-23 17:07</u>		<u>[Signature]</u>				<u>10/26/23 1707</u>										

\*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 Sampling Event: CWLP- 4Q 2023

LIMS Workorder: 23101164

Technician(s): JC, BG

Groundwater Sampling Summary

CWLP- 4Q 2023

WO Sample	Well ID	Program/ Sample Type	Weather				Well Condition				
			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 Sampling Event: CWLP- 4Q 2023

LIMS Workorder: 23101164

Technician(s): JC, BG

Groundwater Sampling Summary

CWLP- 4Q 2023

WO Sample	Well ID	GW Level Measurement				Purge Activities							
		Sampler Initials	Date/Time	DTW (ft)	DTB (ft)	Sampler Initials	Purge Date				Sampling Device	Well Diameter (in)	Actual Volume Purged (L)
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 Sampling 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 Sampling 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 wrong 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 Sampling 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 Sampling 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 ( $\mu\text{S}/\text{cm}$ )	Sp Cond ( $\mu\text{mhos}/\text{cm @25C}$ )	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 Sampling 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 ( $\mu\text{S}/\text{cm}$ )	Sp Cond ( $\mu\text{mhos}/\text{cm}$ @25C)	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-1	10/26/2023	12:16	11.42	15.8	60.4	6.76	1,608.0	1,608.0	2.81	14.64	-74.6
AP-1	10/26/2023	12:19	11.42	15.6	60.1	6.72	1,676.8	1,676.8	1.73	9.9	-93.3
AP-1	10/26/2023	12:22	11.42	15.4	59.7	6.71	1,710.9	1,710.9	1.31	11.94	-103.3

Site Sampling 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 ( $\mu\text{S}/\text{cm}$ )	Sp Cond ( $\mu\text{mhos}/\text{cm}$ @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 Sampling 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 ( $\mu\text{S}/\text{cm}$ )	Sp Cond ( $\mu\text{mhos}/\text{cm}$ @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 Sampling 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 ( $\mu\text{S}/\text{cm}$ )	Sp Cond ( $\mu\text{mhos}/\text{cm @25C}$ )	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-4	10/26/2023	14:00	10.79	19.3	66.7	7.51	826.2	826.2	3.93	21.58	-44.8
AP-4	10/26/2023	14:03	10.79	19.0	66.2	7.06	856.2	856.2	2.63	14.79	-68.6
AP-4	10/26/2023	14:06	10.79	19.1	66.4	6.99	865.9	865.9	1.78	8.84	-91.3

Site Sampling 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 ( $\mu\text{S}/\text{cm}$ )	Sp Cond ( $\mu\text{mhos}/\text{cm @25C}$ )	ODO (mg/L)	Turbidity (NTU)	ORP (mV)
AP-5	10/26/2023	14:38	18.17	14.5	58.1	7.25	649.9	649.9	3.96	2.79	-2.9
AP-5	10/26/2023	14:41	18.17	14.4	57.9	7.20	649.3	649.3	3	2.62	-2.6
AP-5	10/26/2023	14:44	18.17	14.4	57.9	7.17	652.7	652.7	2.61	2.05	-2.3

Site Sampling 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-6	10/26/2023	9:03	10.06	14.9	58.8	7.24	581.3	581.3	3.13	2.84	-46.4
AP-6	10/26/2023	9:06	10.06	14.8	58.6	7.19	599.7	599.7	2.14	6.25	-89.1
AP-6	10/26/2023	9:09	10.06	15.2	59.4	7.17	609.4	609.4	1.75	9.52	-101.5

Site Sampling 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 ( $\mu\text{S}/\text{cm}$ )	Sp Cond ( $\mu\text{mhos}/\text{cm @25C}$ )	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



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

Order No.: 23110120

Dear Shelly Hennessy:

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,

A handwritten signature in black ink that reads 'Jennifer M. Woolf'.

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#: 23110120  
Date: 11/22/2023

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**CLIENT:** TEKLAB Inc,  
**Project:** 23101164

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### 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.

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Original



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**

- |   |  |
|---|--|
| <b>ND</b> Not Detected                          | <b>RL</b> Reporting Limit                        |
| <b>QC</b> Quality Control                       | <b>MDL</b> Method Detection Limit                |
| <b>MB</b> Method Blank                          | <b>LOD</b> Level of Detection                    |
| <b>LCS</b> Laboratory Control Sample            | <b>LOQ</b> Level of Quantitation                 |
| <b>LCSD</b> Laboratory Control Sample Duplicate | <b>PQL</b> Practical Quantitation Limit          |
| <b>QCS</b> Quality Control Sample               | <b>CRQL</b> Contract Required Quantitation Limit |
| <b>DUP</b> Duplicate                            | <b>PL</b> Permit Limit                           |
| <b>MS</b> Matrix Spike                          | <b>RegLvl</b> Regulatory Limit                   |
| <b>MSD</b> Matrix Spike Duplicate               | <b>MCL</b> Maximum Contamination Limit           |
| <b>RPD</b> Relative Percent Different           | <b>MinCL</b> Minimum Compound Limit              |
| <b>ICV</b> Initial Calibration Verification     | <b>RA</b> Reanalysis                             |
| <b>ICB</b> Initial Calibration Blank            | <b>RE</b> Reextraction                           |
| <b>CCV</b> Continuing Calibration Verification  | <b>TIC</b> Tentatively Identified Compound       |
| <b>CCB</b> Continuing Calibration Blank         | <b>RT</b> Retention Time                         |
| <b>RLC</b> Reporting Limit Check                | <b>CF</b> 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#: 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

Original



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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

Original



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# Analytical Report

(consolidated)

WO#: 23110120

Date Reported: 11/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23101164  
**Lab ID:** 23110120-001  
**Client Sample ID:** 23101164-001

**Collection Date:** 10/25/2023 12:35:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION</b>			Analyst: <b>CXS</b>
Radium-226/Radium-228	1.09	2.00	U	pCi/L	± 0.750	1	11/15/2023 7:54:51 AM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
Radium-226	0.19	1.00	U	pCi/L	± 0.0700	1	11/13/2023 10:53:00 AM
Yield	1					1	11/13/2023 10:53:00 AM
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
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 test



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 TEL: (330) 253-8211 FAX: (330) 253-4489  
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# Analytical Report

(consolidated)

WO#: 23110120

Date Reported: 11/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23101164  
**Lab ID:** 23110120-002  
**Client Sample ID:** 23101164-002

**Collection Date:** 10/26/2023 12:22:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION</b>		Analyst: <b>CXS</b>	
Radium-226/Radium-228	0.85	2.00	U	pCi/L	± 0.630	1	11/15/2023 7:54:51 AM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>		<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.5	1.00	U	pCi/L	± 0.120	1	11/13/2023 10:53:00 AM
Yield	0.93					1	11/13/2023 10:53:00 AM
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>		<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-228	0.35	1.00	U	pCi/L	± 0.510	1	11/10/2023 3:00:00 PM
Yield	0.96					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



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# Analytical Report

(consolidated)

WO#: 23110120

Date Reported: 11/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23101164  
**Lab ID:** 23110120-003  
**Client Sample ID:** 23101164-003

**Collection Date:** 10/26/2023 1:05:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION</b>			Analyst: <b>CXS</b>
Radium-226/Radium-228	0.42	2.00	U	pCi/L	± 0.610	1	11/15/2023 7:54:51 AM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
Radium-226	0.17	1.00	U	pCi/L	± 0.0700	1	11/13/2023 10:53:00 AM
Yield	0.99					1	11/13/2023 10:53:00 AM
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
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



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# Analytical Report

(consolidated)

WO#: 23110120

Date Reported: 11/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23101164  
**Lab ID:** 23110120-004  
**Client Sample ID:** 23101164-004

**Collection Date:** 10/26/2023 1:35:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION</b>			Analyst: <b>CXS</b>
Radium-226/Radium-228	0.65	2.00	U	pCi/L	± 0.670	1	11/15/2023 7:54:51 AM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
Radium-226	0.17	1.00	U	pCi/L	± 0.0700	1	11/13/2023 10:53:00 AM
Yield	1					1	11/13/2023 10:53:00 AM
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>	<b>E903-904</b>	Analyst: <b>HDJ</b>	
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	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



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# Analytical Report

(consolidated)

WO#: 23110120

Date Reported: 11/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23101164  
**Lab ID:** 23110120-005  
**Client Sample ID:** 23101164-005

**Collection Date:** 10/26/2023 2:06:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION</b>			Analyst: <b>CXS</b>
Radium-226/Radium-228	1.58	2.00	U	pCi/L	± 0.800	1	11/15/2023 7:54:51 AM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>		<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.49	1.00	U	pCi/L	± 0.110	1	11/13/2023 10:53:00 AM
Yield	1					1	11/13/2023 10:53:00 AM
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>		<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-228	1.09	1.00		pCi/L	± 0.690	1	11/10/2023 3:00:00 PM
Yield	1					1	11/10/2023 3:00:00 PM

<b>Qualifiers:</b>	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



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# Analytical Report

(consolidated)

WO#: 23110120

Date Reported: 11/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23101164  
**Lab ID:** 23110120-006  
**Client Sample ID:** 23101164-006

**Collection Date:** 10/26/2023 2:44:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION</b> Analyst: <b>CXS</b>			
Radium-226/Radium-228	1.26	2.00	U	pCi/L	± 0.760	1	11/15/2023 7:54:51 AM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0 E903-904</b> Analyst: <b>HDJ</b>			
Radium-226	0.15	1.00	U	pCi/L	± 0.0600	1	11/13/2023 10:53:00 A
Yield	1					1	11/13/2023 10:53:00 A
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0 E903-904</b> Analyst: <b>HDJ</b>			
Radium-228	1.11	1.00		pCi/L	± 0.700	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



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# Analytical Report

(consolidated)

WO#: 23110120

Date Reported: 11/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23101164  
**Lab ID:** 23110120-007  
**Client Sample ID:** 23101164-007

**Collection Date:** 10/26/2023 9:09:00 AM

**Matrix:** NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION</b>		Analyst: <b>CXS</b>	
Radium-226/Radium-228	0.52	2.00	U	pCi/L	± 0.570	1	11/15/2023 7:54:51 AM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>		<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.15	1.00	U	pCi/L	± 0.0600	1	11/13/2023 10:53:00 AM
Yield	1					1	11/13/2023 10:53:00 AM
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>		<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-228	0.37	1.00	U	pCi/L	± 0.510	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



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# Analytical Report

(consolidated)

WO#: 23110120

Date Reported: 11/22/2023

**CLIENT:** TEKLAB Inc,  
**Project:** 23101164  
**Lab ID:** 23110120-008  
**Client Sample ID:** 23101164-008

**Collection Date:** 10/26/2023 1:58:00 PM

**Matrix:** NON-POTABLE WATER

Analyses	Result	RL	Qual	Units	Uncertainty	DF	Date Analyzed
<b>RAD226/228 COMBINED RADIUM (EPA903+904)</b>				<b>CALCULATION</b>		Analyst: <b>CXS</b>	
Radium-226/Radium-228	0.8	2.00	U	pCi/L	± 0.770	1	11/15/2023 7:54:51 AM
<b>RAD226/228 RADIUM-226 (EPA 903.0)</b>				<b>E903.0</b>		<b>E903-904</b>	Analyst: <b>HDJ</b>
Radium-226	0.33	1.00	U	pCi/L	± 0.100	1	11/13/2023 10:53:00 AM
Yield	0.98					1	11/13/2023 10:53:00 AM
<b>RAD226/228 RADIUM-228 (EPA 904.0)</b>				<b>E904.0</b>		<b>E903-904</b>	Analyst: <b>HDJ</b>
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 test



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## QC SUMMARY REPORT

WO#: 23110120  
 22-Nov-23

**Client:** TEKLAB Inc,  
**Project:** 23101164

**BatchID:** 70288

Sample ID: <b>23110093-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174559</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/10/2023</b>	SeqNo: <b>4721762</b>						
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  
 ND Not Detected  
 RL Reporting Detection Limit

J Analyte detected below quantitation limits  
 PL Permit Limit  
 U Samples with CalcVal < MDL

M Manual Integration used to determine area respons  
 R RPD outside accepted recovery limits  
 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: <b>MB-70288</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174559</b>						
Client ID: <b>PBW</b>	Batch ID: <b>70288</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/10/2023</b>	SeqNo: <b>4721756</b>						
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: <b>LCS-70288</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174559</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>70288</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/10/2023</b>	SeqNo: <b>4721757</b>						
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: <b>LCSD-70288</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174559</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>70288</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/10/2023</b>	SeqNo: <b>4721758</b>						
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  
 ND Not Detected  
 RL Reporting Detection Limit  
 J Analyte detected below quantitation limits  
 PL Permit Limit  
 U Samples with CalcVal < MDL  
 M Manual Integration used to determine area respons  
 R RPD outside accepted recovery limits  
 W Sample container temperature is out of limit as spec



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 TEL: (330) 253-8211 FAX: (330) 253-4489  
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## QC SUMMARY REPORT

WO#: 23110120  
 22-Nov-23

**Client:** TEKLAB Inc,  
**Project:** 23101164

**BatchID:** 70288

Sample ID: <b>RLCD-70288</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174559</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/10/2023</b>	SeqNo: <b>4721761</b>						
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: <b>23110191-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174559</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/10/2023</b>	SeqNo: <b>4721783</b>						
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  
 ND Not Detected  
 RL Reporting Detection Limit  
 J Analyte detected below quantitation limits  
 PL Permit Limit  
 U Samples with CalcVal < MDL  
 M Manual Integration used to determine area respons  
 R RPD outside accepted recovery limits  
 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: <b>23110093-002AMS</b>	SampType: <b>MS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721797</b>						
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  
 ND Not Detected  
 RL Reporting Detection Limit

J Analyte detected below quantitation limits  
 PL Permit Limit  
 U Samples with CalcVal < MDL

M Manual Integration used to determine area respons  
 R RPD outside accepted recovery limits  
 W Sample container temperature is out of limit as spec



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#: 23110120  
 22-Nov-23

Client: TEKLAB Inc,  
 Project: 23101164

BatchID: 70288

Sample ID: <b>MB-70288</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>PBW</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721791</b>						
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: <b>LCS-70288</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721792</b>						
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: <b>LCSD-70288</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721793</b>						
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: <b>RLC-70288</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721795</b>						
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  
 ND Not Detected  
 RL Reporting Detection Limit  
 J Analyte detected below quantitation limits  
 PL Permit Limit  
 U Samples with CalcVal < MDL  
 M Manual Integration used to determine area respons  
 R RPD outside accepted recovery limits  
 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: <b>RLC-70288</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721795</b>						
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: <b>RLCD-70288</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721796</b>						
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: <b>23110190-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721816</b>						
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: <b>23110191-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721818</b>						
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  
 ND Not Detected  
 RL Reporting Detection Limit  
 J Analyte detected below quantitation limits  
 PL Permit Limit  
 U Samples with CalcVal < MDL  
 M Manual Integration used to determine area respons  
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# QC SUMMARY REPORT

WO#: 23110120  
 22-Nov-23

**Client:** TEKLAB Inc,  
**Project:** 23101164

**BatchID:** 70288

Sample ID: <b>23110191-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/7/2023</b>	RunNo: <b>174560</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70288</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/13/2023</b>	SeqNo: <b>4721818</b>						
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  
 ND Not Detected  
 RL Reporting Detection Limit

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M Manual Integration used to determine area respons  
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 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: <b>23110328-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174694</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70385</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/14/2023</b>	SeqNo: <b>4725143</b>						
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: <b>23110328-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174694</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70385</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/14/2023</b>	SeqNo: <b>4725145</b>						
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  
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 RL Reporting Detection Limit

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## QC SUMMARY REPORT

WO#: 23110120  
 22-Nov-23

**Client:** TEKLAB Inc,  
**Project:** 23101164

**BatchID:** 70385

Sample ID: <b>MB-70385</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174694</b>						
Client ID: <b>PBW</b>	Batch ID: <b>70385</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/14/2023</b>	SeqNo: <b>4725103</b>						
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: <b>LCS-70385</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174694</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>70385</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/14/2023</b>	SeqNo: <b>4725104</b>						
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: <b>RLC-70385</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-228_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174694</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70385</b>	TestNo: <b>E904.0</b>	<b>E903-904</b>	Analysis Date: <b>11/14/2023</b>	SeqNo: <b>4725107</b>						
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  
 ND Not Detected  
 RL Reporting Detection Limit

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## QC SUMMARY REPORT

WO#: 23110120  
 22-Nov-23

**Client:** TEKLAB Inc,  
**Project:** 23101164

**BatchID:** 70385

Sample ID: <b>23110328-001ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174727</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70385</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/15/2023</b>	SeqNo: <b>4726100</b>						
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: <b>23110328-002ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174727</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70385</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/15/2023</b>	SeqNo: <b>4726102</b>						
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	

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# QC SUMMARY REPORT

WO#: 23110120  
 22-Nov-23

**Client:** TEKLAB Inc,  
**Project:** 23101164

**BatchID:** 70385

Sample ID: <b>MB-70385</b>	SampType: <b>MBLK</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174727</b>						
Client ID: <b>PBW</b>	Batch ID: <b>70385</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/15/2023</b>	SeqNo: <b>4726091</b>						
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: <b>LCS-70385</b>	SampType: <b>LCS</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174727</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>70385</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/15/2023</b>	SeqNo: <b>4726092</b>						
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: <b>LCSD-70385</b>	SampType: <b>LCSD</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174727</b>						
Client ID: <b>LCSS02</b>	Batch ID: <b>70385</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/15/2023</b>	SeqNo: <b>4726093</b>						
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: <b>RLC-70385</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174727</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70385</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/15/2023</b>	SeqNo: <b>4726095</b>						
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  
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 RL Reporting Detection Limit  
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 PL Permit Limit  
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 M Manual Integration used to determine area respons  
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## QC SUMMARY REPORT

WO#: 23110120  
 22-Nov-23

**Client:** TEKLAB Inc,  
**Project:** 23101164

**BatchID:** 70385

Sample ID: <b>RLC-70385</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174727</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70385</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/15/2023</b>	SeqNo: <b>4726095</b>						
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: <b>RLCD-70385</b>	SampType: <b>RLC</b>	TestCode: <b>Radium-226_</b>	Units: <b>pCi/L</b>	Prep Date: <b>11/9/2023</b>	RunNo: <b>174727</b>						
Client ID: <b>BatchQC</b>	Batch ID: <b>70385</b>	TestNo: <b>E903.0</b>	<b>E903-904</b>	Analysis Date: <b>11/15/2023</b>	SeqNo: <b>4726096</b>						
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:**  
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 RL Reporting Detection Limit

J Analyte detected below quantitation limits  
 PL Permit Limit  
 U Samples with CalcVal < MDL

M Manual Integration used to determine area respons  
 R RPD outside accepted recovery limits  
 W Sample container temperature is out of limit as spec

**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:

Project#

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:  Email:   
Requested Due Date:  Billing/PO:

Phone:  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												
	23101164-001	10/25/23 1235	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-002	10/26/23 1222	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-003	10/26/23 1305	Unpres <b>HNO3</b>	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-004	10/26/23 1335	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-005	10/26/23 1406	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-006	10/26/23 1444	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-007	10/26/23 0909	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-008	10/26/23 1358	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-009	10/26/23 0930	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-010	10/26/23 1446	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
	23101164-011	10/26/23 1243	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												

*CPM*  
25  
21  
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31  
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18  
18  
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27  
15

*Relinquished By	Date/Time	Received By	Date/Time
<i>[Signature]</i>		<i>Jackie Davis</i>	11-1-23 11:45

23110120

**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:

Project#

Comments:   
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:  Email:   
Requested Due Date:  Billing/PO:

Phone:  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 1152	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	23101164-013	10/26/23 1120	HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	23101164-014	10/26/23 1033	Unpres HNO3	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	23101164-015	10/26/23 1351	Unpres	Groundwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Unpres	Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CPM  
11  
5  
20

*Relinquished By	Date/Time	Received By	Date/Time
			11-1-23/1145

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)

# 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	<i>Jacqueline Rasile</i>
Completed By:	Jacqueline Rasile	11/2/2023 11:10:56 AM	<i>Jacqueline Rasile</i>
Reviewed By:	Jennifer Woolf	11/2/2023 1:45:17 PM	<i>Jennifer M. Woolf</i>

**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? 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

**Cooler Information**

Cooler No	Temp °C	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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	13.6	Good	Not Present			
3	17.7	Good	Not Present			