BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

ABP PROPERTIES, LLC	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 2025-001
	)	(LUST Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
Respondent.	)	

NOTICE

Don Brown, Clerk
Illinois Pollution Control Board
60 E. Van Buren St., Ste. 630
Chicago, IL 60605
don.brown@illinois.gov

Carol Webb, Hearing Officer
Illinois Pollution Control Board
1021 North Grand Avenue East
P.O. Box 19274
Springfield, IL 62794-9274
carol.webb@illinois.gov

Patrick D. Shaw
Law Office of Patrick D. Shaw
80 Bellerive Road
Springfield, IL 62704
pdshaw1law@gmail.com

PLEASE TAKE NOTICE that I have today filed with the office of the Clerk of the Pollution Control Board an **APPEARANCE,** the **ADMINISTRATIVE RECORD,** and a **CERTIFICATE OF RECORD ON APPEAL,** copies of which are herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent

Rich Kim
Assistant Counsel - Division of Legal Counsel
Special Assistant Attorney General
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
866/273-5488 (TDD)
Dated: July 24, 2024

BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

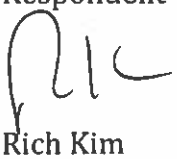
ABP PROPERTIES, LLC	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 2025-001
	)	(LUST Appeal)
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
Respondent.	)	

APPEARANCE

The undersigned, as one of its attorneys, hereby enters his Appearance on behalf of the Respondent, the Illinois Environmental Protection Agency.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent



Rich Kim
Assistant Counsel - Division of Legal Counsel
Special Assistant Attorney General
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
866/273-5488 (TDD)
richard.kim@illinois.gov
Dated: July 24, 2024

BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

ABP PROPERTIES, LLC	)	
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ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
Respondent.	)	

CERTIFICATE OF RECORD ON APPEAL

Pursuant to 35 Ill. Adm. Code 105.116(b) and 105.410, the following constitutes an index of documents comprising the record:

PAGES	DOCUMENT(S)	DATE
AR000001-AR000002	Illinois HazMat Report	October 5, 2016
AR000003-AR000229	Corrective Action Plan & Budget Amendment	October 7, 2021
AR000230–AR000237	IEPA CAP/B response letter	February 9, 2022
AR000238-AR000252	Corrective Action Budget Amendment	November 22, 2023
AR000253–AR000255	IEPA Technical Review Notes	May 17, 2024
AR000256–AR000260	IEPA decision letter	May 21, 2024

I, Scott R. Rothering, certify on information and belief that the entire record of the Respondent's decision, as defined in 35 Ill. Adm. Code 105.410(b), is hereby enclosed.

By: _____

Scott R. Rothering
Leaking Underground Storage Tank Section
Illinois Environmental Protection Agency

Date: 7/24/24

CERTIFICATE OF SERVICE

I, the undersigned attorney at law, hereby certify that on **July 24, 2024**, I served true and correct copies of an **APPEARANCE,** the **ADMINISTRATIVE RECORD,** and a **CERTIFICATE OF RECORD ON APPEAL,** via the Board's COOL system and email, upon the following named persons:

Don Brown, Clerk
Illinois Pollution Control Board
60 E. Van Buran St., Ste. 630
Chicago, IL 60605
don.brown@illinois.gov

Carol Webb, Hearing Officer
Illinois Pollution Control Board
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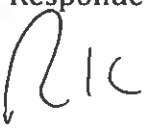
80 Bellerive Road
Springfield, IL 62704
pdshaw1law@gmail.com

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent



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richard.kim@illinois.gov

Hazardous Materials Incident Report 0530100002-Ford

ABP Properties LLC

Leaking UST Tech File

Incident #: H-2016-0917
Entered By: Kattner, Paul (IEMA) **on** 2016-10-05 11:51:36
Data Input Status: Closed
Leaking Underground Storage Tank (LUST): Yes

Caller:	Carol Rowe
Call Back #:	217/522-8001
Caller Represents:	CW3M
Hazmat Incident Type:	Leak or spill

INCIDENT LOCATION

Incident Location:	120 W. 1st St		
County:	Ford	City:	Gibson City
Primary IEMA Region:	7	Secondary IEMA Region:	Not Applicable
Full Address:	120 W. 1st St, Gibson City, IL		
Latitude:	40.456828	Longitude:	-88.37572
Milepost:	N/A	Sec:	N/A
Twp.:	N/A	Range:	N/A
Area Involved:	Fixed Facility		
Media or medium into which the release occurred:	Ground		

WEATHER INFORMATION

Temp (deg F):	70 Degrees	Wind Dir/Speed m.p.h:	S 18 MPH

MATERIALS INVOLVED

Material Name:	Gasoline	Material Type:	Liquid
CHRIS Code:	Unknown	CAS #:	Unknown
UN/NA #:	Unknown		
Is this a 302(a) Extremely Hazardous Substance?	Unknown		
Is this a RCRA Hazardous Waste?	Unknown		
Is this a RCRA regulated facility?	Unknown		
Container Type:	Under ground storage tank	Container Size:	1 X 12,000 (Gasoline), 1 X 10,000 Gallons (Gasoline) & 1 X 8,000 Gallons (Gasoline)
Amount Released:	Unknown	Rate of Release/min:	Unknown
Duration of Release:	Unknown		
Cause of Release:	Unknown, under investigation		
Estimated Spill Extent:	Unknown	Spill Extent Units:	

Date/Time Occured:	(Date/Time Unknown)
Date/Time Discovered:	2016-10-05 10:30

Number Injured:	0	Where Taken:	N/A
Number Killed:	0	# Evacuated:	0
On Scene Contact:	Matt Rieves	On Scene Phone #:	217/851-1404
Proper safety precautions to take as a result of the release, including evacuation: None			
Assistance needed from State Agencies: None			
Containment/Cleanup actions and plans: Tanks will likely be removed and soil remediated.....CW3M (Contractor) will coordinate cleanup and remediation.			

Responsible Party:	ABB Properties LLC ← ABP, Not ABB
Contact Person:	Yogi Bhardwaj
Callback Phone Number:	217/851-1404
Facility Manager:	Yogi Bhardwaj
Facility Manager Phone #:	217/851-1404
Street Address:	159 N Greenleaf St #2
City:	Gurnee State: IL Zip Code: 60031

Emergency Units Contacted	Contacted	On Scene	Agencies Contacted
ESDA			None
Fire			None
Police			None
Sheriff			None
Other			None

AGENCIES OR PERSONS NOTIFIED			
Agency	**Date/Time**	**Name of Person**	**Notification Action**
IEPA, OSFM, NRTP, & IEMA Region #7	2016-10-05 12:00	E-mailed	Report Sent

Narrative:

Follow-Up Information:

CW³M Company
Environmental Consulting Services

701 W. South Grand Avenue
Springfield, IL 62704

Phone: (217) 522-8001
Fax: (217) 522-8009

October 7, 2021

Mr. Scott Rothering, Project Manager
LUST Section, Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276

RE: LPC # 0530100002 — Ford County
120 West 1st Street
Gibson City, Illinois
Incident Number: 2016-0917
LUST Technical Reports—Corrective Action Plan and Budget Amendment

Dear Mr. Rothering:

On behalf of ABP Properties, LLC, owner of the underground storage tanks formerly at the above-referenced site, we are submitting the attached Corrective Action Plan and Budget Amendment.

In the Agency approval letter of the Corrective Action Plan (CAP), dated December 19, 2019, it was requested that additional sampling be proposed to more accurately define the extents of the engineered barrier necessary for the site. Those activities were completed along with a soil-gas vapor boring. It was determined from the analytical results of the soil-gas vapor sample that the site required additional remediation efforts. The proposal for remediation efforts are included in this CAP and Budget Amendment.

If you have any questions or require additional information, please contact Mr. Matthew Saladino or me at (217) 522-8001.

Sincerely,

Carol L. Rowe, P.G.
Senior Environmental Geologist

Enclosure

xc: Dr. Yogi Bhardwaj, *ABP Properties, LLC*
Mr. and Mrs. Brandon & Tricia Slagel
Mr. William T. Sinnott, *CW³M Company, Inc.*

CORRECTIVE ACTION PLAN & BUDGET AMENDMENT

ABP Properties, LLC

GIBSON CITY, ILLINOIS
LPC # 0530100002— Ford County
Incident Number 2016-0917

Submitted to:
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
Leaking Underground Storage Tank Section, Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

Prepared by:
CW³M COMPANY, INC.

701 South Grand Avenue West
Springfield, Illinois
(217) 522-8001

400 West Jackson, Suite C
Marion, Illinois
(618) 997-2238

OCTOBER 2021

TABLE OF CONTENTS

APPENDICES

TABLES

ACRONYMS AND ABBREVIATIONS

BETX	Benzene, Ethylbenzene, Toluene, Total Xylenes
CAP	Corrective Action Plan
CACR	Corrective Action Completion Report
CUOs	Clean-up Objectives
CW³M	CW³M Company, Inc.
CWS	Community Water Supply
ELUC	Environmental Land Use Control
IEMA	Illinois Emergency Management Agency
IEPA	Illinois Environmental Protection Agency
Ill. Adm. Code	Illinois Administrative Code
ISGS	Illinois State Geological Survey
ISWS	Illinois State Water Survey
mg/kg	Milligrams/kilograms
mg/L	Milligrams/Liter
MTBE	Methyl-Tert-Butyl-Ether
OSFM	Illinois Office of the State Fire Marshal
PNAs	Polynuclear Aromatic Hydrocarbons
PVC	Polyvinyl Chloride
SICR	Site Investigation Completion Report
SIP	Site Investigation Plan
SWAP	Source Water Assessment Program
TACO	Tiered Approach to Corrective Action Objectives
UST	Underground Storage Tank
WCR	Well Completion Report

1. SITE HISTORY/EXECUTIVE SUMMARY

1.1 GENERAL

This proposed Corrective Action Plan (CAP) and Budget Amendment has been prepared in accordance with the requirements of the 35 Illinois Administrative Code (Ill. Adm. Code) 734. The Illinois Environmental Protection Agency (IEPA) Corrective Action Plan Form is included in this document as Appendix A.

The 20-Day Certification was submitted to the IEPA on October 25, 2016 (CW³M, 2016a). The 45-Day Report was submitted to the Agency on December 2, 2016 (CW³M, 2016b) and was approved by the Agency on January 26, 2017 (IEPA, 2017). A Stage 3 Site Investigation Plan (SIP) and Budget was submitted to the Agency on December 22, 2017 (CW³M, 2017) and was approved with modifications on April 10, 2018 (IEPA, 2018a). A Stage 3 SIP Budget Amendment was submitted to the Agency on April 20, 2018 (CW³M, 2018) and was rejected by the IEPA in a review letter dated July 18, 2018 (IEPA, 2018b). The Site Investigation Completion Report (SICR) was submitted on March 5, 2019 (CW³M, 2019a) and approved on June 13, 2019 (IEPA, 2019a). A CAP and Budget was submitted on August 22, 2019 (CW³M, 2019b) and approved with modifications by the IEPA on December 19, 2019 (IEPA, 2019b). A CAP and Budget Amendment was submitted to the Agency on January 9, 2020 (CW³M, 2020) and approved by the IEPA on May 5, 2020 (IEPA, 2020).

This report is certified by an Illinois Licensed Professional Engineer. The geological investigation and site investigation were performed under the direction of an Illinois Licensed Professional Geologist and completed in accordance with the Professional Geologist Licensing Act and its Rules for Administration.

1.2 SITE LOCATION

The site, known as ABP Properties, LLC, is located at 120 West 1st Street, Gibson City, Ford County, Illinois 60936. The site is in the SE ¼ of the SE ¼ of the SW ¼ of Section 14, Township 23 North of the Centralia Baseline and Range 7 East of the Third Principal Meridian.

1.3 UNDERGROUND STORAGE TANK INFORMATION

A permit for the removal of three underground storage tanks (USTs) was approved by the Office of the State Fire Marshal (OSFM) on October 13, 2016 (OSFM, 2016), however during the uncovering of Tank 7 on November 14, 2016, an additional 560-gallon heating oil tank was discovered on-site. Therefore, a new request for a permit for removal was promptly submitted, including the additional tank, and was approved by the OSFM. Tank and piping

removal activities were conducted by Midwest Petroleum on November 15 and November 16, 2016. OSFM Tank Specialist Herman Taylor and CW³M Company, Inc. (CW³M) personnel were on-site to oversee the removal of the USTs.

B.K. Jackson Bulldozing & Excavating, under supervision of CW³M personnel, were on site from November 14 through November 18, 2016, November 21 through November 23, 2016, and November 28 through November 29, 2016 to complete early action activities, including removal of contaminated backfill material and replacement of clean fill to the UST excavation area. As the OSFM Field Specialists have been instructed not to make the official determination of the release in the field, the source of release has been determined in consult with the OSFM Field Specialist using the best professional judgment of the condition of tank, piping, and soil conditions.

Table 1-1. Underground Storage Tank Summary

Tank Number	Tank Volume (gallons)	Tank Contents	Incident Number	Release Information	Current Status
1	4,000	Gasoline	-	Unknown	Removed 6/18/86
2	4,000	Gasoline	-	Unknown	Removed 6/18/86
3	6,000	Gasoline	-	Unknown	Removed 6/18/86
4	6,000	Gasoline	-	Unknown	Removed 6/18/86
5	6,000	Gasoline	-	Unknown	Removed 6/18/86
6	1,000	Kerosene	-	Unknown	Removed 6/18/86
7	12,000	Gasoline	2016-0917	Overfilling/Piping Leaks	Removed 11/15/2016
8	10,000	Gasoline	2016-0917	Overfilling/Piping Leaks	Removed 11/16/16
9	8,000	Gasoline	2016-0917	Overfilling/Piping Leaks	Removed 11/16/16
10	560	Heating Oil	2016-0917	Tank Leaks	Removed 11/15/16

1.4 EARLY ACTION SUMMARY

Following Illinois Emergency Management Agency (IEMA) notification of the release, Dr. Bhardwaj requested that CW³M proceed with reporting requirements and early action activities in accordance with 35 Ill Adm. Code § 734.

While on-site from November 16, 2016 to November 23, 2016, CW³M obtained early action samples while conducting early action activities. Details of the early action excavation and sample results were included in the 45-Day Report (CW³M, 2016b). A table summarizing the analytical results is included in Appendix G.

1.5 SITE INVESTIGATION SUMMARY

1.5.1 First Round of Sampling

On March 7, 2017, CW³M personnel were on-site to initiate Stage 1 investigation activities. Five monitoring wells (MW-1 through MW-5) and three soil borings (SB-1 through SB-3) were advanced as part of the plume delineation activities. Following IEPA Stage 1 sampling protocol, soil samples were also collected from four of the monitoring well locations: MW-1 through MW-4. Samples from these monitoring well locations and the three soil boring locations were solely analyzed for benzene, ethylbenzene, toluene, and total xylenes (BETX) and methyl-tert-butyl-ether (MTBE) due to no Clean-up Objectives (CUOs) being exceeded for any polynuclear aromatic hydrocarbons (PNAs) during the early action stage. Soil analytical results from the Stage 1 investigation indicated that the CUO for benzene at MW-4 at the 2.5-foot depth had been exceeded. Therefore, the soil plume remained undefined to the north of the property.

CW³M personnel returned to the site on March 9, 2017 to sample and survey the newly installed monitoring wells. The wells were surveyed and groundwater was sampled for BETX and MTBE; CW³M personnel then returned to the site on October 13, 2017 to collect PNA samples from each of the wells, which was omitted during the initial groundwater sampling event. Groundwater analytical results from the Stage 1 investigation indicated that the CUO for benzene at MW-2 had been exceeded, as well as the CUOs for benzene and ethylbenzene being exceeded at MW-5. Additionally, the CUO for naphthalene at MW-4 had been exceeded. Therefore, the groundwater plume remained undefined to the north and south of the property. Soil boring logs and well completion reports (WCRs) are included in Appendix F. A table summarizing the analytical results is included in Appendix G.

1.5.2 Off-site Access Activities

It was determined that the next step for the site would be performing the Stage 3 site investigation. Therefore, access needed to be sought for adjacent off-site properties.

On April 11, 2018, a certified letter was sent to Steve Arends, requesting access to his property located at 715 S. Sangamon Avenue to allow access for an off-site investigation. The letter was delivered on April 19, 2018, to which a response was never made from Mr. Arends.

Therefore, a letter including language required by 35 Ill. Adm. Code 724.350b) was sent to Mr. Arends on June 1, 2018. The letter was delivered on June 4, 2018. To date, no response to this letter has been received. Therefore, access has been considered denied.

On April 18, 2018, a letter was sent to McDonald's – Gibson City, requesting access to their property located at 801 S. Sangamon Avenue to allow access for an off-site investigation. A response to this letter was never made from McDonald's.

Therefore, on June 1, 2018, a certified letter including language required by 35 Ill. Adm. Code 724.350b) was sent to McDonald's – Gibson City. The letter was delivered on June 4, 2018. Mr. Jack Millan of the McDonald's Restaurant Office, owner of the McDonald's in Gibson City, responded via telephone on June 7, 2018, requesting access license agreements be sent to him.

Access agreements were sent to Mr. Millan in a certified letter on June 8, 2018. The letter was delivered on June 11, 2018. To date, no response to this letter has been received, therefore, access has been considered denied.

In accordance with 35 Ill. Adm. Code 734.350, affidavits will be prepared and included in the Corrective Action Completion Report (CACR), documenting the attempts to obtain access from the properties. Copies of the correspondences sent to the off-site properties were included in the SICR (CW³M, 2019).

1.5.3 Second Round of Sampling

While access to off-site properties was ultimately denied, the soil borings on-site were drilled. On August 8, 2018, CW³M personnel were on-site to initiate Stage 3 investigation activities. One soil boring (SB-4) was advanced as part of the plume delineation activities. Samples from this soil boring location were solely analyzed for BETX and MTBE due to no CUOs being exceeded for any PNAs during the early action stage. Soil analytical results from the Stage 3 investigation indicated that the CUO for benzene at SB-4 at the 7.5-foot depth had been exceeded. An additional soil boring was also drilled adjacent to MW-3 to determine the Tiered Approach to Corrective Action Objectives (TACO) site-specific

parameters. Soil boring logs are included in Appendix F. A table summarizing the analytical results is included in Appendix G.

1.6 CORRECTIVE ACTION EXECUTIVE SUMMARY

Tables comparing soil analytical results to the most stringent Tier 1 Remediation Objectives are included in Appendix G. The soil contamination plume was considered defined at the conclusion of the Stage 3 investigation due to denial of access to off-site to the north of the site. The soil contamination plume remains on-site to the south, east, and west while spanning across the subject's property off-site to the north. Drawing 0009 in Appendix B depicts the limits of the soil contamination plume.

Tables comparing groundwater analytical results to the most stringent Tier 1 Remediation Objectives are included in Appendix G. The groundwater contamination plume was considered defined at the conclusion of the Stage 3 investigation due to denial of access to both the north and south of the site. The groundwater contamination plume remains on-site to the east and west while spanning across the subject's property into the right-of-way of 1st Street as well as onto the property to the north. Drawing 0010 in Appendix B depicts the limits of the groundwater contamination plume.

On February 12, 2020, CW³M personnel were on-site to initiate corrective action activities. Three soil borings (CA-1, CA-2, and CA-3) were advanced in order to determine the area requiring an engineered barrier. Samples from these soil boring locations were solely analyzed for benzene as that was the only contaminant that would require the engineered barrier as a form of remediation. A soil gas-vapor boring was also drilled adjacent to early action sample 3 to determine if the vapor intrusion pathway required additional remediation efforts. Soil boring logs are included in Appendix F. Analytical results and a table summarizing the results are included in Appendix G.

The soil gas-vapor sample results indicate that additional remediation efforts are required to address that pathway of contamination on-site.

2. REMEDIATION OBJECTIVES

2.1 DETERMINATION OF CLEAN-UP OBJECTIVES

In accordance with 35 Ill. Adm. Code 734.410, remediation objectives were determined in accordance with 35 Ill. Adm. Code § 742. One of the clean soil boring locations (MW-3) was sampled for the TACO parameters. The site-specific physical parameters are listed in the following table.

Hydraulic Conductivity (K), = 2.77×10^{-3} cm/sec
Soil bulk density (ρ_b), = 1.233 g/cm^3
Soil particle density (ρ_s), = 2.634 g/cm^3
Moisture content (w), = 0.22
Organic carbon content (f_{oc}) = 0.0343
Soil Classification = Sand

In order to determine the hydraulic conductivity, a slug test was performed during the pre-corrective action stage. The test was performed by lowering a "slug" constructed of polyvinyl chloride (PVC) into MW-3. When the slug is lowered into the well, the groundwater is displaced by the volume of the slug. As the water within the well equilibrates, water depth changes are recorded in relation to the time interval that has passed since the test was initiated.

The hydraulic conductivity calculations are based on the total well depth, screen length and radius, initial water depth, and the water depth change over time. The depth-to-water changes over time are plotted on a semi-logarithmic graph and the curve is evaluated. The slope of the straight-line portion of the curve, along with the other slug test data, is used to calculate the hydraulic conductivity.

Velocity is calculated using the hydraulic conductivity results determined at the site, as well as the hydraulic gradient. The hydraulic gradient is found by calculating the change in gradient between the most up-gradient well and the down-gradient well in the direction of flow, then dividing this answer by the distance in feet between the two wells. Formula R24, ($U_{gw} = K \bullet i$) of 35 Ill. Adm. Code § 742 Appendix C, Table C.

2.2 SOIL AND GROUNDWATER OBJECTIVES

Soil analytical results were compared to the TACO Residential Tier 1 and TACO Industrial-Commercial Tier 2 CUOs (with the groundwater pathway removed) in milligrams per kilogram (parts per million) (mg/kg). The calculations of the Tier 2 CUOs are included in Appendix E of this CAP. The site is currently zoned and used as a commercial property and plans to remain as such in the future.

Table 2-1. Soil Remediation Objectives

Parameter	TACO Tier 1 Clean-up Objectives (mg/kg)	TACO Industrial/Commercial Tier 2 Clean-up Objectives w/ Groundwater pathway removed (mg/kg)
Benzene	0.03	4.18
Ethylbenzene	13.0	58.0
Toluene	12.0	592.77
Total Xylenes	5.6	80.74
MTBE	0.32	297.28
Acenaphthene	570	-
Acenaphytylene	30	-
Anthracene	12,000	-
Benzo(a)anthracene	0.9	-
Benzo(a)pyrene	0.09	-
Benzo(b)fluoranthene	0.9	-
Benzo(g,h,i)perylene	160	-
Benzo(k)fluoranthene	9.0	-
Chrysene	88.0	-
Dibenz(a,h)anthracene	0.09	-
Fluoranthene	3,100	-
Fluorene	560	-
Indeno(1,2,3-cd)pyrene	0.9	-
Naphthalene	1.8	2.79
Phenanthrene	280	-
Pyrene	2,300	-

CW³M will consider the groundwater at this site to be Class I unless demonstrated otherwise pursuant to 35 Ill. Adm. Code § 620.210. According to the Illinois Pollution Control Board, three Class III Groundwater contributing areas exist; however, they are in McHenry, Monroe and St. Clair Counties in northern and western Illinois. Groundwater investigation sample results would be compared to the TACO Tier 1 Clean-up Objectives in milligrams per liter (mg/L).

Table 2-2. Groundwater Remediation Objectives

Parameter	TACO Tier 1 Clean-up Objective (mg/L)
Benzene	0.005
Ethylbenzene	0.7
Toluene	1.0
Total Xylenes	10.0
MTBE	0.07
Acenaphthene	0.42
Acenaphtylene	0.010
Anthracene	2.1
Benzo(a)anthracene	0.00013
Benzo(a)pyrene	0.0002
Benzo(b)fluoranthene	0.00018
Benzo(g,h,i)perylene	0.00076
Benzo(k)fluoranthene	0.00017
Chrysene	0.0015
Dibenz(a,h)anthracene	0.0003
Fluoranthene	0.28
Fluorene	0.28
Indeno(1,2,3-cd)pyrene	0.00043
Naphthalene	0.14
Phenanthrene	0.0064
Pyrene	0.21

3. CORRECTIVE ACTION PLAN

Based upon the analytical data from the soil and groundwater samples collected to date, it is apparent that soil contamination is present at multiple early action sample locations, as well as MW-4 and SB-4. Due to denial of off-site access, the soil contamination plume has been defined; it spans off-site to the north onto the property owned by Mr. Steve Arends. Groundwater contamination is present at MW-2, MW-4, and MW-5. Due to denial of off-site access, the groundwater contamination plume has been defined; it spans off-site to the Arends property, as well as to the south into the right-of-way of 1st Street. All site investigation details were presented in the SICR (CW³M, 2019a). From corrective action activities, it is apparent that the formation of soil-gas vapors exceeding CUOs is occurring at sample location SV-1.

The following CAP and Budget has been prepared by CW³M Company, Inc., as their recommendation for the most appropriate and economical approach to the remediation of the contamination at the ABP Properties, LLC site in Gibson City, Illinois. Tier 2 CUOs were developed using various parameters to help determine the most beneficial and feasible outcome.

Upon the determination of the TACO Tier 2 CUOs, it is apparent that with the acceptance of Tier 2 Industrial-Commercial CUOs for the site, soil contamination existing which exceeds Tier 2 CUOs are for the following:

- Tier 2 Industrial-Commercial Inhalation CUO at early action samples 1 and 3 for the indicator contaminant benzene
- Tier 2 Construction Worker Inhalation CUO at early action sample 3 for the indicator contaminant benzene and ethylbenzene
- Tier 2 Construction Worker Inhalation CUO at early action samples 2 and 3 for the indicator contaminant total xylenes

Upon the determination of the analytical results obtained from the soil-gas vapor boring, SV-1, it was determined that the Indoor Industrial/Commercial vapor CUO for benzene and ethylbenzene have been exceeded on-site. Therefore, these exceedances will need to be addressed with the removal of the soil contamination causing the vapors to form. The following table depicts the Industrial/Commercial soil-gas vapor sample exceedances at sample location SV-1.

Table 3-1. TACO Tier 1 Soil Gas Exceedances

Parameter	TACO Tier 1 Soil Gas Industrial/ Commercial CUO (in mg/m³)	SV-1 Analytical Results (in mg/m³)
Benzene	2.8	161.63
Ethylbenzene	9.3	43.44

Prior to the proposed excavation, a waste characterization sample will be be collected within the excavation area for landfill authorization parameters. This sample will allow for the management and disposal of the contaminated soil. During the collection of this sample, two additional soil borings are proposed on-site. One soil boring is proposed on-site north of MW-4 closer to the property line. This boring could potentially remove the need for an off-site Environmental Land Use Control (ELUC) and the costs associated with one. The second proposed soil boring is on-site northwest of the existing station building. This boring would further delineate soil contamination on-site. Both additional soil borings will be advanced to a depth of 10 feet, with soil samples being collected in the 0-5 foot and 5-10 foot intervals for BETX, MTBE, and PNA indicator contaminants. Since the minimum cost associated with drilling will be met with the waste characterization sample, these two additional samples would only add analytical costs while potentially removing the costs associate with obtaining an ELUC from the unresponsive off-site party to the north. Drilling for these proposed borings will be associated with the first round trip from the site.

Due to the location of the proposed excavation, the existing canopy on-site will need to be removed. The structural supports of the canopy exist within the excavation area, thus there would be no reasonably safe method for an excavation that would allow the canopy to remain. The associated costs with the canopy removal are included in Appendix D. The costs associated with the excavation and canopy removal will be attributed with the second roundtrip from the site.

The proposed extent of the excavation will be to the depth of groundwater at 10 feet, encompassing the soil contamination causing the soil-gas vapors to form. The extent of the excavation will also remove the soil contamination exceeding Tier 2 Industrial-Commercial / Construction Worker Inhalation CUOs, as well as MW-5. A replacement well will be installed at MW-5 and sampled for BETX, MTBE, and PNAs after excavation activities. This replacement well will add a second minimum for drilling costs. The following table lists the details of the proposed excavation as show in Appendix B as Drawing 0013:

Table 3-2. Proposed Excavation Summary Data

Area (ft²)	Excavation Depth (ft)	Volume (ft³)	Volume (yds³)	Volume (yds³) [w/1.05 bulking]
1,794	0-10	17,940	664.44	697.66
			Total:	**697.66**

After the proposed excavation of contaminated soil is deemed complete, the excavation wall and floor will be sampled to confirm that the soil contamination has been removed from the site. These ten proposed sample locations are in Drawing 0017 of Appendix B. Samples will be collected for every 20 feet of the excavation walls for a total of eight wall samples. Floor samples will be obtained at the base of the excavation at a depth of 10 feet for a total of two floor samples. All samples will be collected and analyzed for BETX, MTBE, and PNA contaminants.

Once the analytical results return from the proposed excavation, all remaining soil contamination on-site will be reevaluated. The location of highest contamination will be selected and a new soil-gas vapor sample will be advanced at that location. This soil-gas vapor boring will be drilled and sampled along with the advancement of the replacement well for MW-5. These activities will be associated with the third roundtrip from the site.

The fourth roundtrip from the site will be to sample the replacement well at MW-5 for BETX, MTBE, and PNAs indicator contaminants

Following the proposed excavation, concrete replacement will occur for the area removed during the early action tank pull and for this proposed excavation. The area from early action activities requiring concrete replacement is calculated to be 1,708 ft^2 while the proposed excavation will require 1,794 ft^2 of concrete replacement.

In summary:

- One waste characterization sample will be collected for landfill authorization parameters and two soil borings will be advanced to further determine the soil contamination plume on-site. The two soil borings will have samples collected in the 0-5 and 5-10 foot intervals for BETX, MTBE, and PNA indicator contaminants. This will be the first round trip from the site as well as the first drilling minimum.
- The existing canopy will be removed to safely allow for the proposed excavation.
- The proposed excavation will occur to the depth of groundwater at 10 feet. Eight wall samples and two floor samples will be collected and analyzed for BETX, MTBE, and PNA indicator contaminants. Excavation activities will be attributed to the second roundtrip from the site.
- Once analytical results return from the excavation, an additional soil-gas vapor boring will be advanced on-site at the location of the highest contamination on-site. While on-site for advancement of this boring, the replacement well at MW-5 will be installed. Costs associated with these borings will add a second drilling minimum and the third roundtrip from the site.
- The replacement well at MW-5 will be sampled for BETX, MTBE, and PNA indicator contaminants. This will add the fourth roundtrip from the site.
- Concrete replacement totaling 3,502 ft^2 will occur for early action excavation and for this proposed corrective action excavation.

The attached CAP Budget includes the preparation of this report, additional soil borings with samples, canopy removal, an excavation with floor and wall sampling, a replacement well with sampling, a soil-gas vapor boring, and concrete replacement for the early action tank pull. If necessary, a following CAP and Budget Amendment will contain the results of the proposed activities and any additional remediation efforts required for closure for the site. If no additional CAP and Budget is necessary, a CACR will be submitted detailing the results all of the remediation efforts and restrictions for the site

3.1 CURRENT AND PROJECTED USES OF THE SITE

The site is currently vacant and lies on the south side of Gibson City on 1st Street and is surrounded by both commercial properties and residential properties. The future use of the site is likely to be commercial.

3.2 INSTITUTIONAL CONTROLS PROPOSED

A groundwater ordinance was proposed to address the potential for any groundwater contamination caused by the ABP Properties, LLC release. This ordinance was proposed to the City of Gibson City prior to the knowledge of the required excavation. Notification letters will be sent to all properties included in the proposed ordinance; copies of the correspondence will be included in the CACR. This ordinance request was submitted to the City of Gibson City and was recently passed. A copy of Ordinance #2020-O-10 is included in Appendix I to determine if it meets the required conditions for use as a remediation effort. A sealed copy of the groundwater ordinance along with a clerk certification letter stating that the ordinance is still true and just will be included with the forthcoming CACR. Should future sampling activities require an amended groundwater ordinance, one shall be submitted to the City of Gibson City for ratification, then to the IEPA for approval.

Copies of the correspondences sent to the off-site properties were included in the SICR (CW³M, 2019). Included in the correspondences are the certified letters demonstrating that the northern property had received the letter, but no response has been received from that owner. Therefore, the additional borings on-site to the north are proposed to potentially remove the need for an off-site ELUC.

The need for any further institutional controls will be addressed following corrective action soil sampling and impending excavation.

3.3 WATER SUPPLY WELL SURVEY

A survey of water supply wells for the purpose of identifying and locating all community water supply (CWS) wells within 2,500 feet of the UST systems and all potable water supply

wells within 200 feet of the UST systems has been completed. The Illinois State Water Survey (ISWS), the Illinois State Geological Survey (ISGS) and the IEPA Division of Public Water Supplies were contacted via the Source Water Assessment Program (SWAP) online.

The ISGS, ISWS, and IEPA Division of Public Water Supplies were accessed online on July 19, 2017 (EPA.STATE.IL.US, 2017). The response indicated that three ISGS wells are located within 2,500 feet of the site. There is currently a localized groundwater ordinance for Gibson City, which includes the site and surrounding properties.

Table 3-3. Water Supply Well Information

Well ID	Type	Distance from USTs (*feet*)	Setback Zone (*feet*)
21048	ISGS	1,397	200
20985	ISGS	1,800	200
21009	ISGS	1,800	200

3.4 CLOSURE

Once the soil contamination causing the soil-gas vapors to form are removed and the additional sampling is completed, an additional CAP and Budget Amendment will be submitted detailing all activities proposed in this plan. A follow-up CAP and Budget Amendment will include any additional remediation efforts required for closure of the site. If no additional CAP and Budget Amendment is required, a CACR will be submitted to the IEPA detailing all of the remediation efforts and accompanying restrictions for the site. The closure report will be accompanied by a certification from an Illinois Registered Professional Engineer.

4. REFERENCES

CW³M, 2016a. CW³M Company, Inc. *20-Day Certification.* Gibson City, Illinois, October 25, 2016.

CW³M, 2016b. CW³M Company, Inc. *45-Day Report.* ABP Properties, LLC, Gibson City, Illinois, December 2, 2016.

CW³M, 2017. CW³M Company, Inc. *Stage 3 Site Investigation Plan and Budget.* ABP Properties, LLC, Gibson City, Illinois, December 22, 2017.

CW³M, 2018. CW³M Company, Inc. *Stage 3 Site Investigation Plan Budget Amendment.* ABP Properties, LLC, Gibson City, Illinois, April 20, 2018.

CW³M, 2019a. CW³M Company, Inc. *Site Investigation Completion Report.* ABP Properties, LLC, Gibson City, Illinois, March 5, 2019.

CW³M, 2019b. CW³M Company, Inc. *Corrective Action Plan and Budget.* ABP Properties, LLC, Gibson City, Illinois, August 22, 2019.

CW³M, 2020. CW³M Company, Inc. *Corrective Action Plan and Budget Amendment.* ABP Properties, LLC, Gibson City, Illinois, January 9, 2020.

IEPA, 2017. Illinois Environmental Protection Agency, *45-Day Report Correspondence,* ABP Properties LLC, Gibson City, Illinois, January 26, 2017.

IEPA, 2018a. Illinois Environmental Protection Agency, *Stage 3 Site Investigation Plan and Budget Correspondence,* ABP Properties LLC, Gibson City, Illinois, April 10, 2018.

IEPA, 2018b. Illinois Environmental Protection Agency, *Stage 3 Site Investigation Plan Budget Amendment Correspondence,* ABP Properties LLC, Gibson City, Illinois, July 18, 2018.

IEPA, 2019a. Illinois Environmental Protection Agency, *Site Investigation Completion Report Correspondence,* ABP Properties LLC, Gibson City, Illinois, June 13, 2019.

IEPA, 2019b. Illinois Environmental Protection Agency, *Corrective Action Plan and Budget Correspondence,* ABP Properties LLC, Gibson City, Illinois, December 19, 2019.

IEPA, 2020. Illinois Environmental Protection Agency, *Corrective Action Plan and Budget Amendment Correspondence,* ABP Properties LLC, Gibson City, Illinois, May 5, 2020.

EPA.STATE.IL.US, 2017. Source Water Assessment Program, *Water Well Survey Map* www.maps.epa.state.il.us, accessed July 19, 2017.

OSFM, 2016. Illinois Office of the State Fire Marshal, Permit for Removal of Underground Storage Tanks(s), ABP Properties, LLC, Gibson City, Illinois, October 13, 2016.

APPENDIX A

CORRECTIVE ACTION PLAN FORM

CORRECTIVE ACTION PLAN AND BUDGET AMENDMENT ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

The Agency is authorized to require this information under Section 4 and Title XVI of the Environmental Protection Act (415 ILCS 5/4, 5/57 – 57.17). Failure to disclose this information may result in a civil penalty of not to exceed $50,000.00 for the violation and an additional civil penalty of not to exceed $10,000.00 for each day during which the violation continues (415 ILCS 5/42). Any person who knowingly makes a false material statement or representation, orally or in writing, in any label, manifest, record, report, permit, or license, or other document filed, maintained or used for the purpose of compliance with Title XVI commits a Class 4 felony. Any second or subsequent offense after conviction hereunder is a Class 3 felony (415 ILCS 5/44 and 57.17). This form has been approved by the Forms Management Center.

Leaking Underground Storage Tank Program
Corrective Action Plan

A. Site Identification

IEMA Incident # (6- or 8-digit): 20160917 IEPA LPC# (10-digit): 0530100002

Site Name: ABP Properties, LLC

Site Address (Not a P.O. Box): 120 West 1st Street

City: Gibson City County: Ford ZIP Code: 60936

B. Site Information

1. Will the owner or operator seek reimbursement from the Underground Storage Tank Fund? ☑ Yes ○ No
2. If yes, is the budget attached? ☑ Yes ○ No
3. Is this an amended plan? ☑ Yes ○ No
4. Identify the material(s) released: Gasoline, Heating Oil
5. This Corrective Action Plan is submitted pursuant to:
   - ○ a. 35 Ill. Adm. Code 731.166
   - ○ b. 35 Ill. Adm. Code 732.404
   - ☑ c. 35 Ill. Adm. Code 734.335

C. Proposed Methods of Remediation

1. Soil To Be Determined after proposed Excavation
2. Groundwater Groundwater Ordinance

D. Soil and Groundwater Investigation Results

(for incidents subject to 35 Ill. Adm. Code 731 only or 732 that were classified using Method One or Two, if not previously provided)

Provide the following:

1. Description of investigation activities performed to define the extents of soil and/or groundwater contamination;
2. Analytical results, chain-of-custody forms, and laboratory certifications;
3. Tables comparing analytical results to applicable remediation objectives;

4. Boring logs;
5. Monitoring well logs; and
6. Site maps meeting the requirements of 35 Ill. Adm. Code 732.110(a) or 734.440 and showing:
    a. Soil sample locations;
    b. Monitoring well locations; and
    c. Plumes of soil and groundwater contamination.

E. Technical Information - Corrective Action Plan

Provide the following:

1. Executive summary identifying the objectives of the corrective action plan and the technical approach to be utilized to meet such objectives;
    a. The major components (e.g., treatment, containment, removal) of the corrective action plan;
    b. The scope of the problems to be addressed by the proposed corrective action; and
    c. A schedule for implementation and completion of the plan;
2. Identification of the remediation objectives proposed for the site;
3. A description of the remedial technologies selected:
    a. The feasibility of implementing the remedial technologies;
    b. Whether the remedial technologies will perform satisfactorily and reliably until the remediation objectives are achieved; and
    c. A schedule of when the technologies are expected to achieve the applicable remediation objectives;
4. A confirmation sampling plan that describes how the effectiveness of the corrective action activities will be monitored during their implementation and after their completion;
5. A description of the current and projected future uses of the site;
6. A description of engineered barriers or institutional controls that will be relied upon to achieve remediation objectives:
    a. an assessment of their long-term reliability;
    b. operating and maintenance plans; and
    c. maps showing area covered by barriers and institutional controls;
7. The water supply well survey:
    a. Map(s) showing locations of community water supply wells and other potable wells and the setback zone for each well;
    b. Map(s) showing regulated recharge areas and wellhead protection areas;
    c. Map(s) showing the current extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives;
    d. Map(s) showing the modeled extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives;
    e. Tables listing the setback zone for each community water supply well and other potable water supply wells;
    f. A narrative identifying each entity contacted to identify potable water supply wells, the name and title of each person contacted, and any field observations associated with any wells identified; and
    g. A certification from a Licensed Professional Engineer or Licensed Professional Geologist that the survey was conducted in accordance with the requirements and that documentation submitted includes information obtained as a result of the survey (certification of this plan satisfies this requirement);

8. Appendices:
    a. References and data sources report that are organized; and
    b. Field logs, well logs, and reports of laboratory analyses;
9. Site map(s) meeting the requirements of 35 Ill. Adm. Code 732.110(a) or 734.440;
10. Engineering design specifications, diagrams, schematics, calculations, manufacturer's specifications, etc.;
11. A description of bench/pilot studies;
12. Cost comparison between proposed method of remediation and other methods of remediation;
13. For the proposed Tier 2 or 3 remediation objectives, provide the following:
    a. The equations used;
    b. A discussion of how input variables were determined;
    c. Map(s) depicting distances used in equations; and
    d. Calculations; and
14. Provide documentation to demonstrate the following for alternative technologies:
    a. The proposed alternative technology has a substantial likelihood of successfully achieving compliance with all applicable regulations and remediation objectives;
    b. The proposed alternative technology will not adversely affect human health and safety or the environment;
    c. The owner or operator will obtain all Illinois EPA permits necessary to legally authorize use of the alternative technology;
    d. The owner or operator will implement a program to monitor whether the requirements of subsection (14)(a) have been met;
    e. Within one year from the date of Illinois EPA approval, the owner or operator will provide to the Illinois EPA monitoring program results establishing whether the proposed alternative technology will successfully achieve compliance with the requirements of subsection (14)(a); and
    f. Demonstration that the cost of alternative technology will not exceed the cost of conventional technology and is not substantially higher than at least two other alternative technologies, if available and technically feasible.

F. Exposure Pathway Exclusion

Provide the following:

1. A description of the tests to be performed in determining whether the following requirements will be met:
    a. Attenuation capacity of the soil will not be exceeded for any of the organic contaminants;
    b. Soil saturation limit will not be exceeded for any of the organic contaminants;
    c. Contaminated soils do not exhibit any of the reactivity characteristics of hazardous waste per 35 Ill. Adm. Code 721.123;
    d. Contaminated soils do not exhibit a pH $\leq$ 2.0 or $\geq$ 12.5; and
    e. Contaminated soils which contain arsenic, barium, cadmium, chromium, lead, mercury, or selenium (or their associated salts) do not exhibit any of the toxicity characteristics of hazardous waste per 35 Ill. Adm. Code 721.124.
2. A discussion of how any exposure pathways are to be excluded.

G. Signatures

All plans, budgets, and reports must be signed by the owner or operator and list the owner's or operator's full name, address, and telephone number.

UST Owner or Operator

Name ABP Properties, LLC
Contact Dr. Yogi Bhardwaj
Address 159 N. Greenleaf St #2, PO Box 8374
City Gurnee
State Illinois
Zip Code 60031
Phone
Signature
Date 8/6/21

Consultant

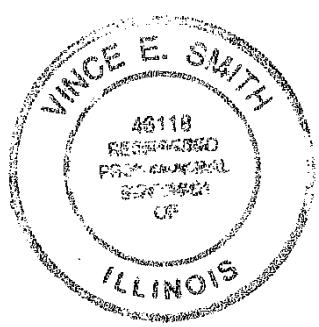
Company CWM Company, Inc.
Contact Carol Rowe, P.G.
Address 701 West South Grand Avenue
City Springfield
State Illinois
Zip Code 62704
Phone (217) 522-8001
Signature
Date October 7/2021
Email CWM@CWMCompany.com

I certify under penalty of law that all activities that are the subject of this plan were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this plan and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in this plan has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 731, 732 or 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Illinois EPA, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].

Licensed Professional Engineer or Geologist

Name Vince E. Smith
Company CWM Company, Inc.
Address 701 West South Grand Avenue
City Springfield
State Illinois
Zip Code 62704
Phone 217-522-8001
Ill. Registration No. 062-046118
License Expiration Date 11/30/21
Signature
Date 8/30/21

L.P.E. or L.P.G. Seal



APPENDIX B

SITE MAPS AND ILLUSTRATIONS

CORRECTIVE ACTION PLAN AND BUDGET AMENDMENT
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS

INDEX OF DRAWINGS

Drawing Number	Description	File Name
0001A	Site Location Map	SiteMap.doc
0001F	Topographic Map	TopoMap.doc
0002	Site Map	Site.dwg
0003	Soil Boring Location Map	SBLoc.dwg
0004	Monitoring Well Location Map	MWLoc.dwg
0005	Monitoring Well Elevation Map	MWElev.dwg
0006	Groundwater Flow Map (March 2017)	GW0317.dwg
0007A	Soil Contamination Values Map (0-5 Feet)	Sval0-5.dwg
0007B	Soil Contamination Values Map (5-10 Feet)	Sval5-10.dwg
0008	Groundwater Contamination Values Map	GWcont.dwg
0009	Soil Contamination Plume Map	SPlume.dwg
0010	Groundwater Contamination Plume Map	GWPlume.dwg
0011	TACO Parameters Map	TACO.dwg
0012	Proposed Soil Boring / Monitoring Well Replacement Map	PSB-RMW.dwg
0013	Proposed Excavation Location Map	PExcav.dwg
0014	Concrete Replacement Location Map	Concrete.dwg
0015	R-26 Modeling Map	R26.dwg
0016	Groundwater Ordinance Map	GWOrd.dwg
0017	Proposed Excavation Soil Sampling Location Map	PSS.dwg

CW³M Company, Inc. 701 South Grand Avenue West Springfield, IL 62704 (217)-522-8001	**Site Location Map** 120 W. 1st Street Gibson City, Illinois	Drawn By: MJS Reviewed By: CLR Drawing 0001A SiteMap.doc

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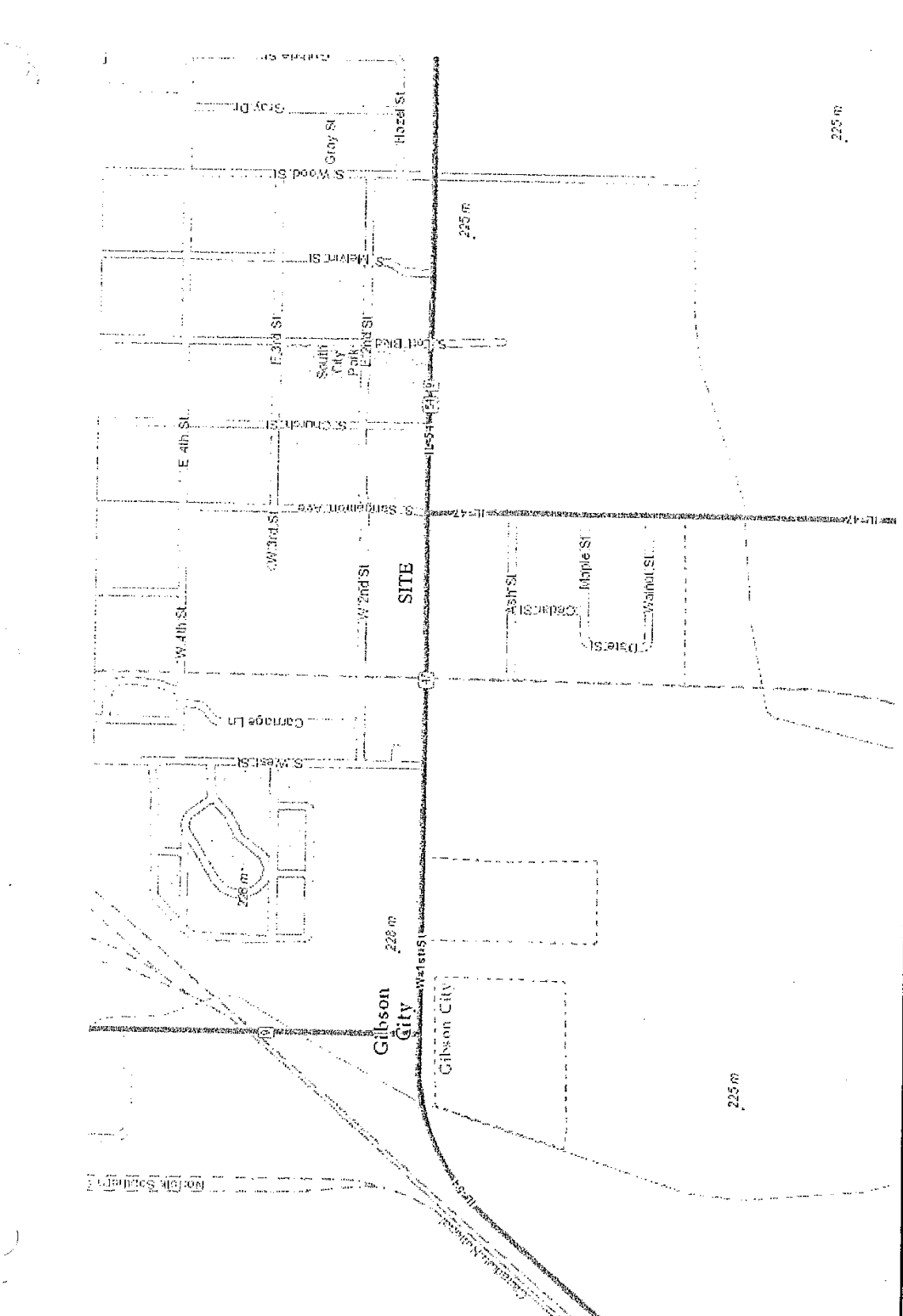
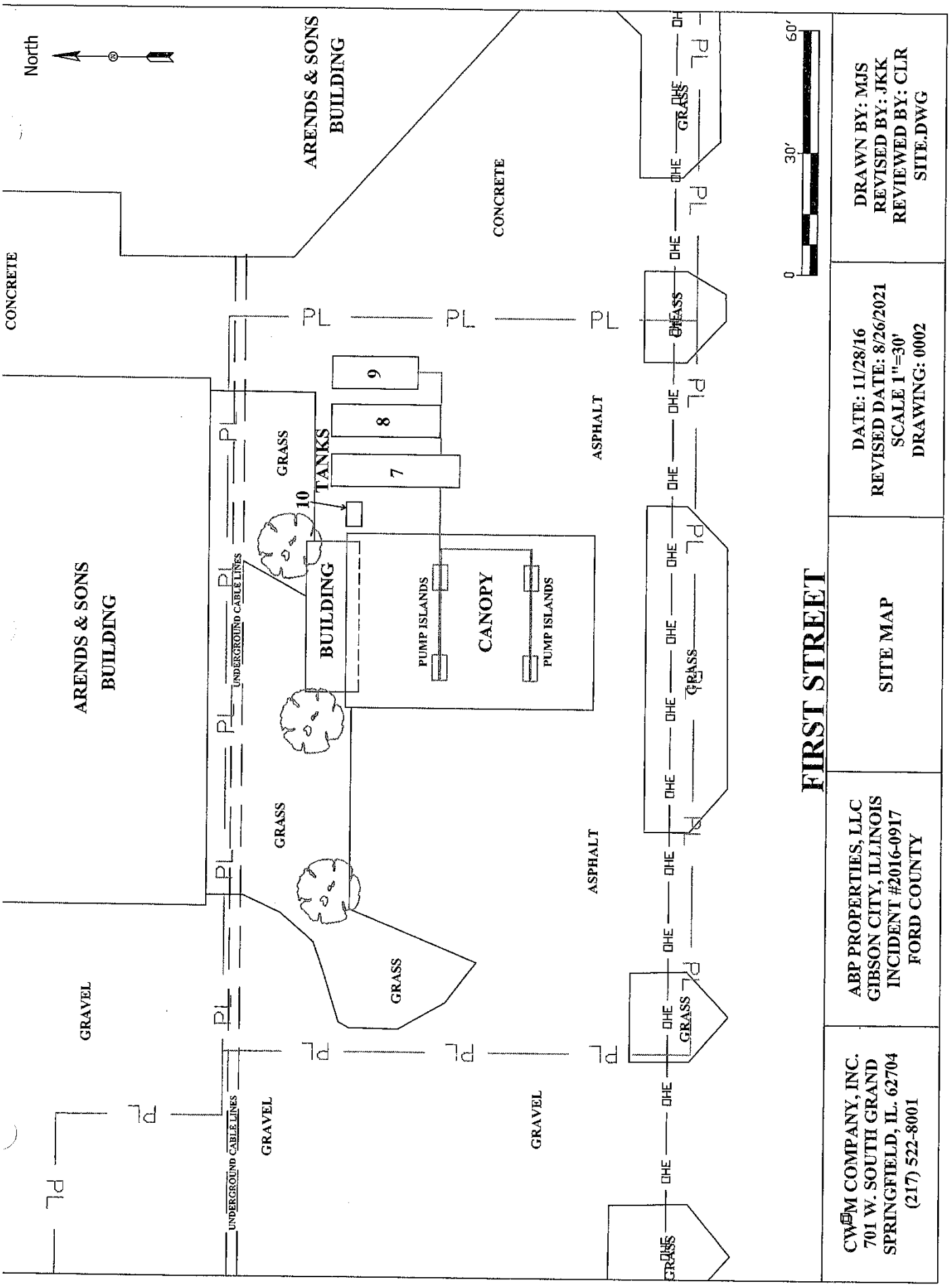


CW³M Company, Inc. 701 South Grand Avenue West Springfield, IL 62704 (217)-522-8001	**Topographic Map** 120 W. 1st Street Gibson City, Illinois	Drawn By: MJS Reviewed By: CLR Drawing 0001F TopoMap.doc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ARENDS & SONS BUILDING
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BUILDING
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CANOPY
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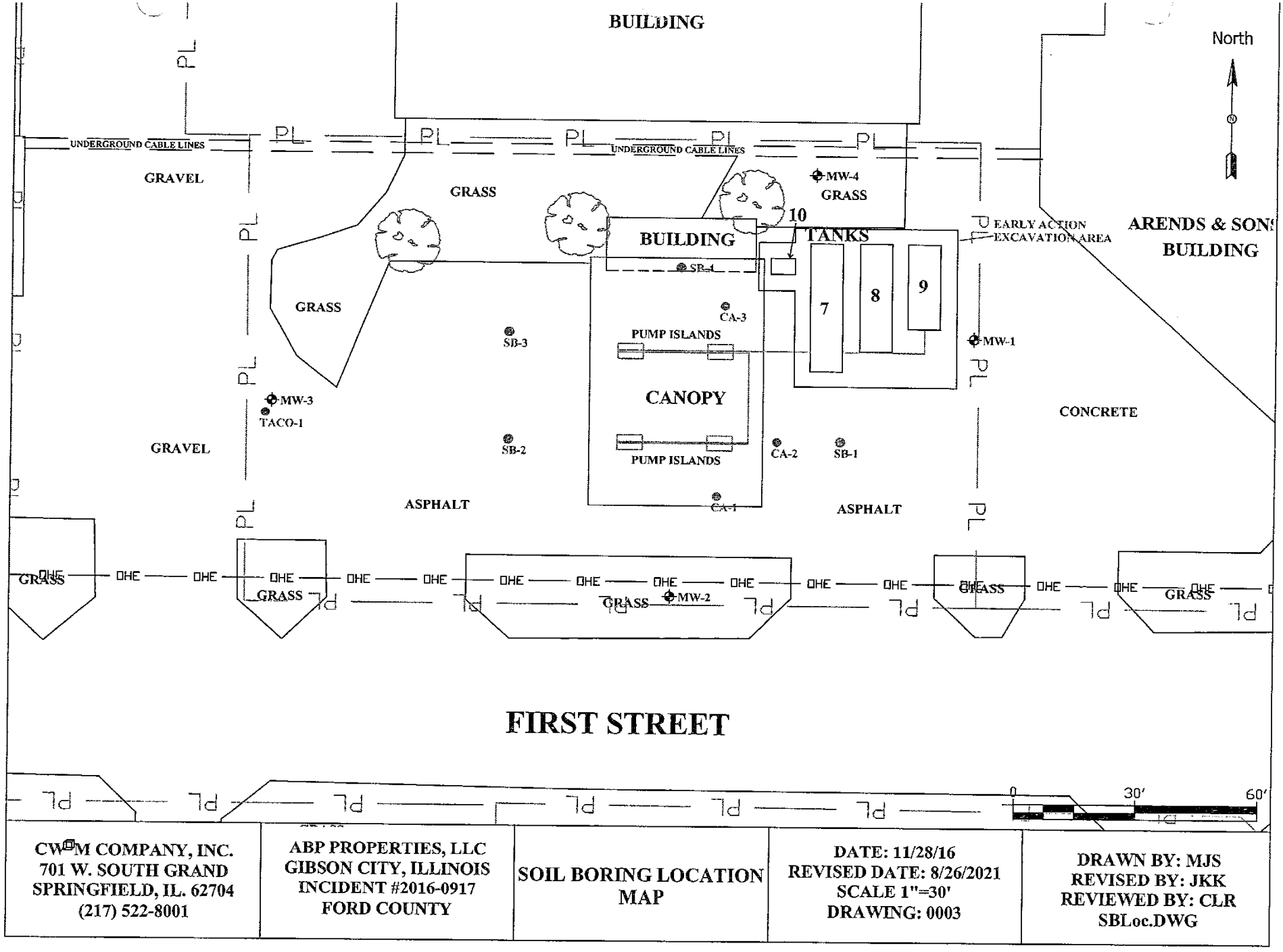
CWEM COMPANY, INC.
701 W. SOUTH GRAND
SPRINGFIELD, IL. 62704
(217) 522-8001
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS
INCIDENT #2016-0917
FORD COUNTY
SITE MAP
DATE: 11/28/16
REVISED DATE: 8/26/2021
SCALE 1"=30'
DRAWING: 0002
DRAWN BY: MJS
REVISED BY: JKK
REVIEWED BY: CLR
SITE.DWG



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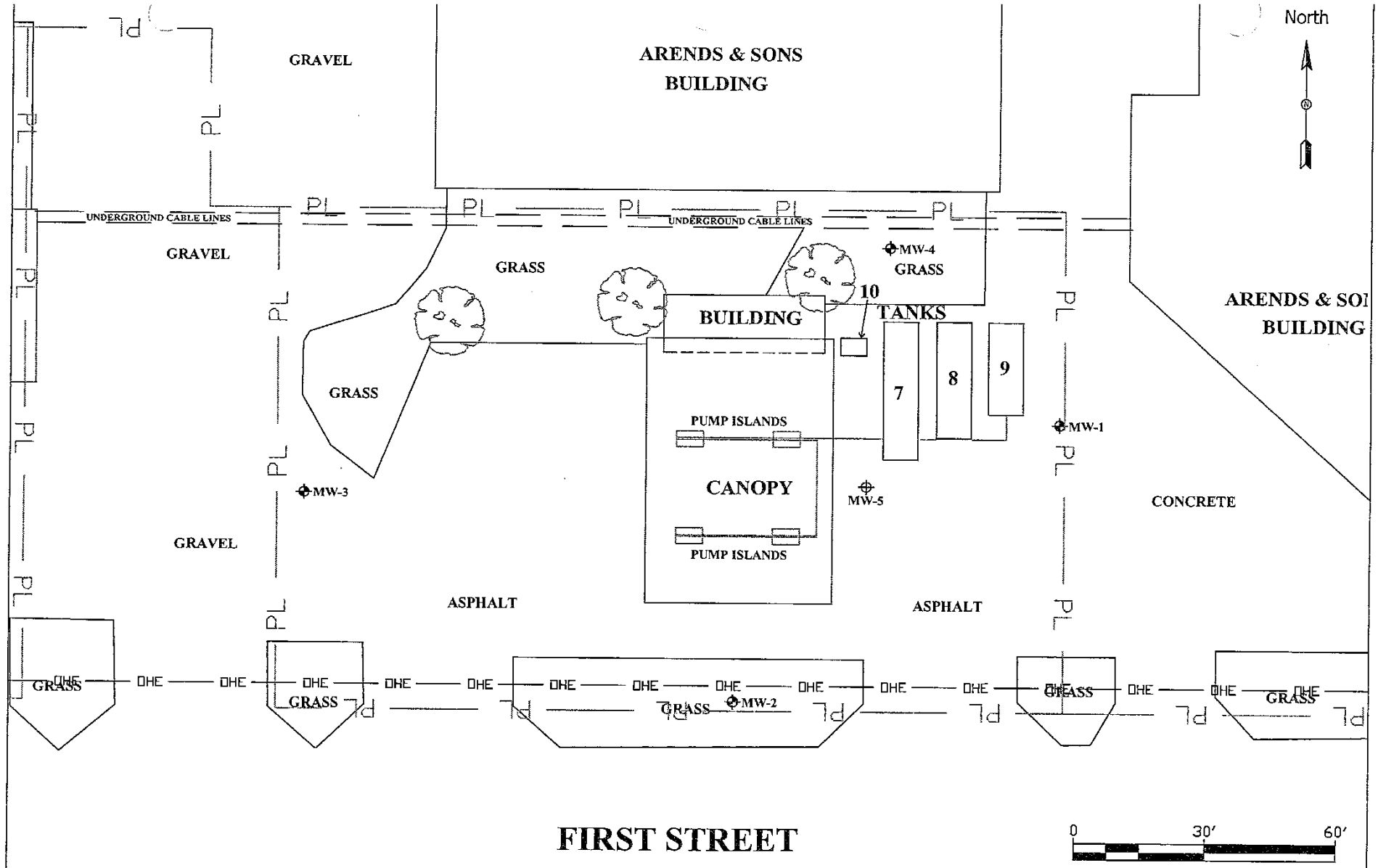
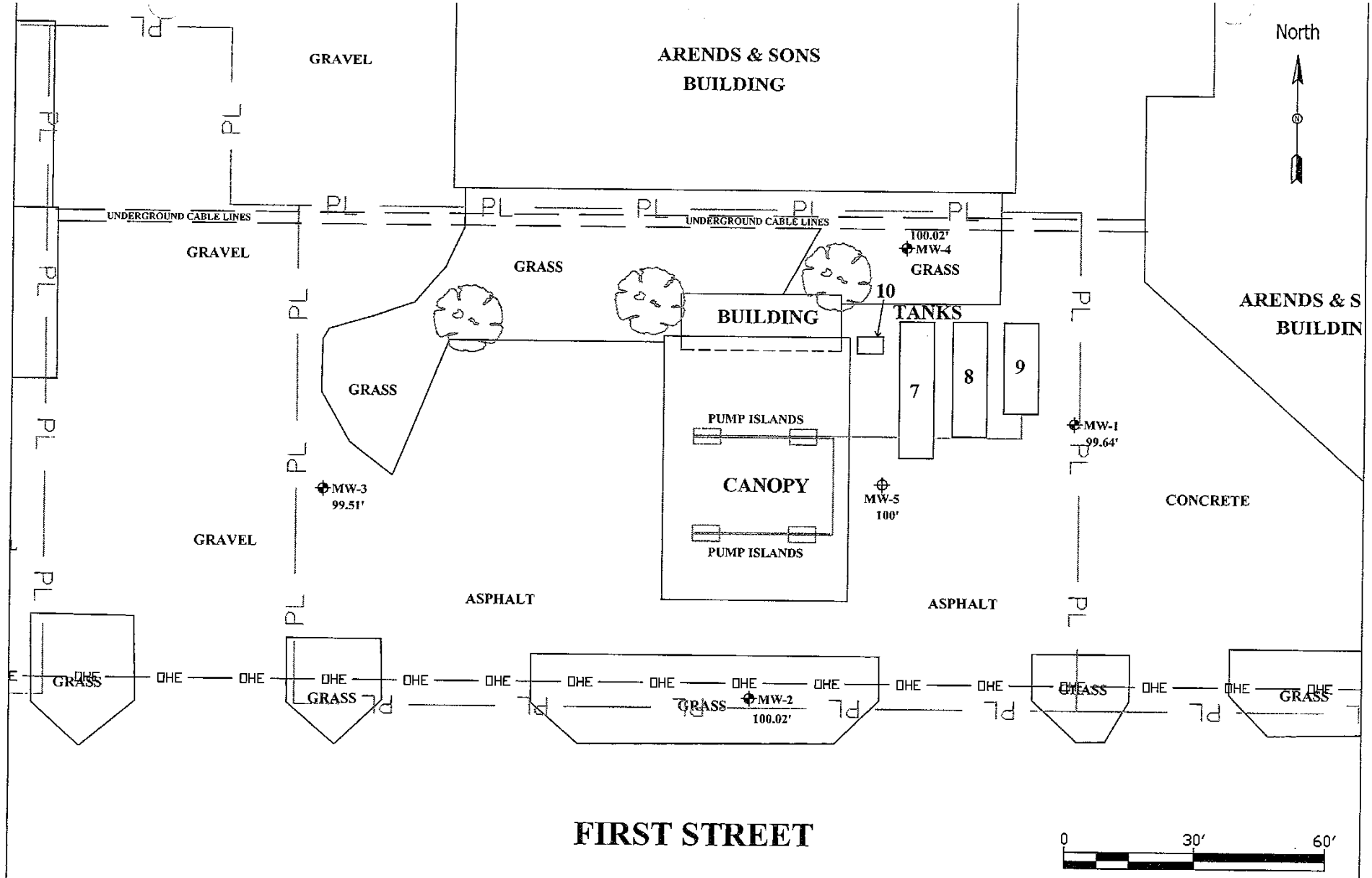


CW M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	MONITORING WELL LOCATION MAP	DATE: 6/8/15 REVISED DATE: 8/26/2021 SCALE 1"=30' DRAWING: 0004	DRAWN BY: MJS REVISED BY: JKK REVIEWED BY: CLR MWLoc.DWG



CWM COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	MONITORING WELL ELEVATION MAP	DATE: 6/8/15 REVISED DATE: 8/26/2021 SCALE 1"=30' DRAWING: 0005	DRAWN BY: MJS REVISED BY: JKK REVIEWED BY: CLR MWElev.DWG

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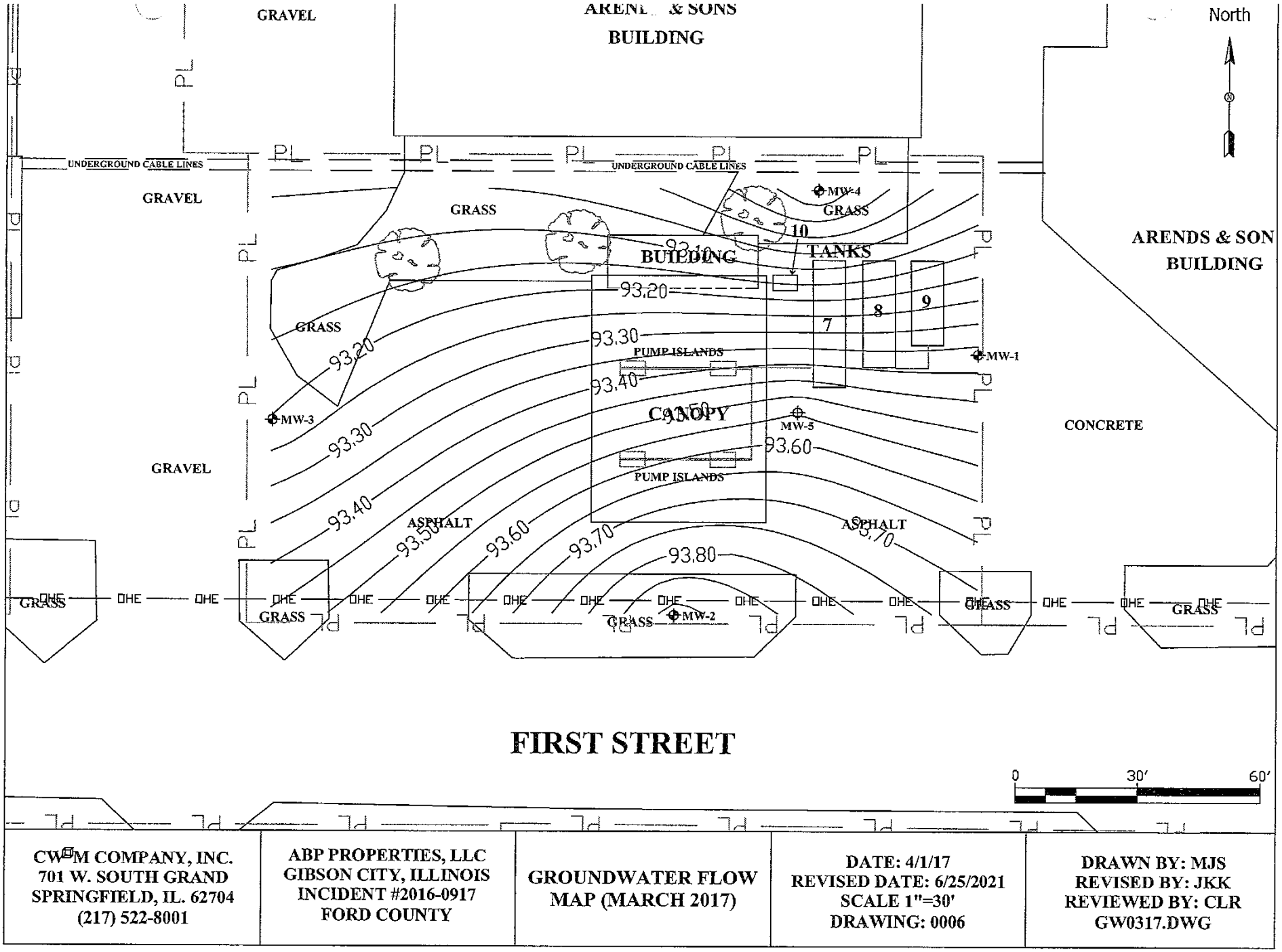

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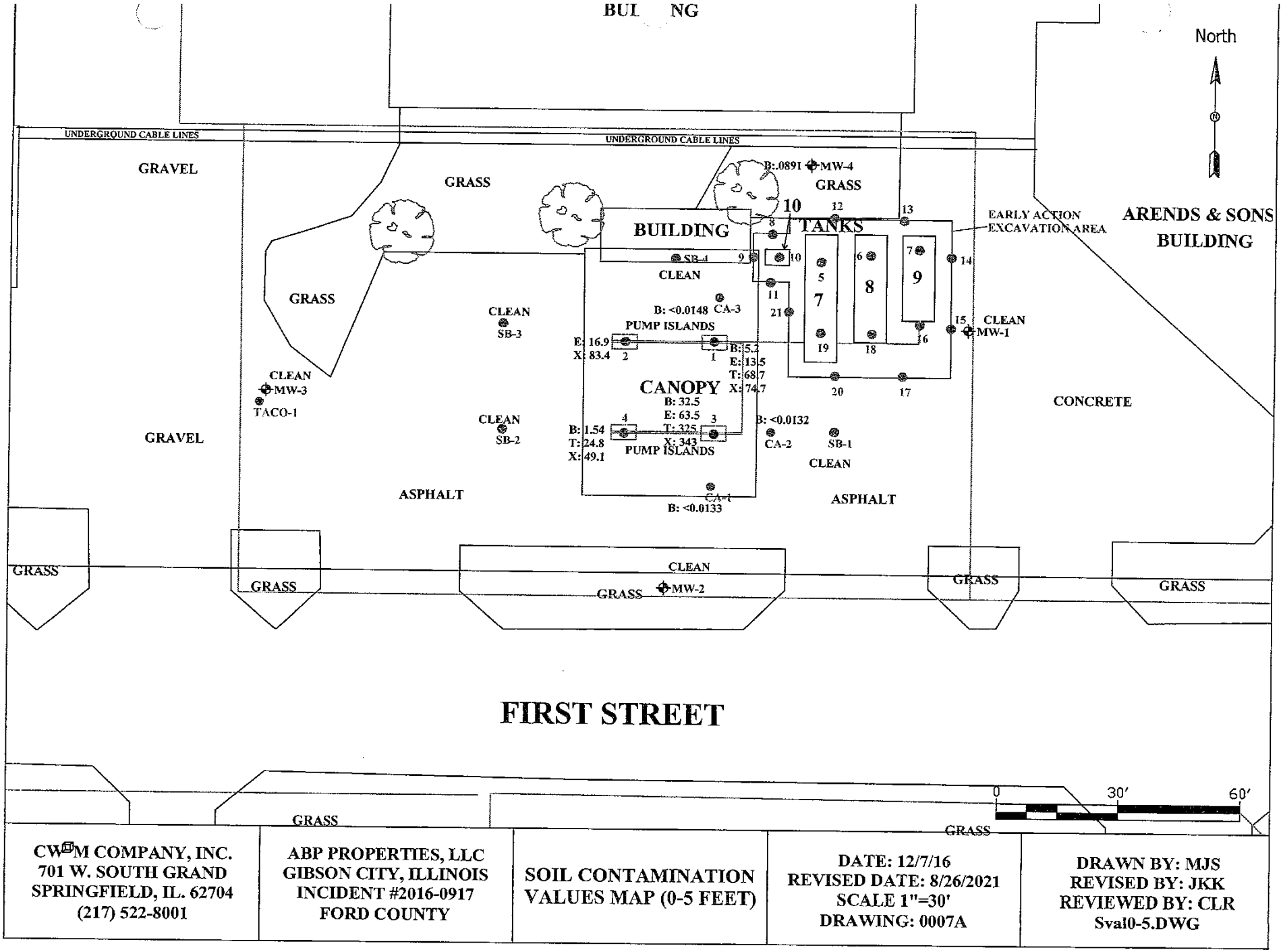

CWM COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	SOIL CONTAMINATION VALUES MAP (0-5 FEET)	DATE: 12/7/16 REVISED DATE: 8/26/2021 SCALE 1"=30' DRAWING: 0007A	DRAWN BY: MJS REVISED BY: JKK REVIEWED BY: CLR Sval0-5.DWG

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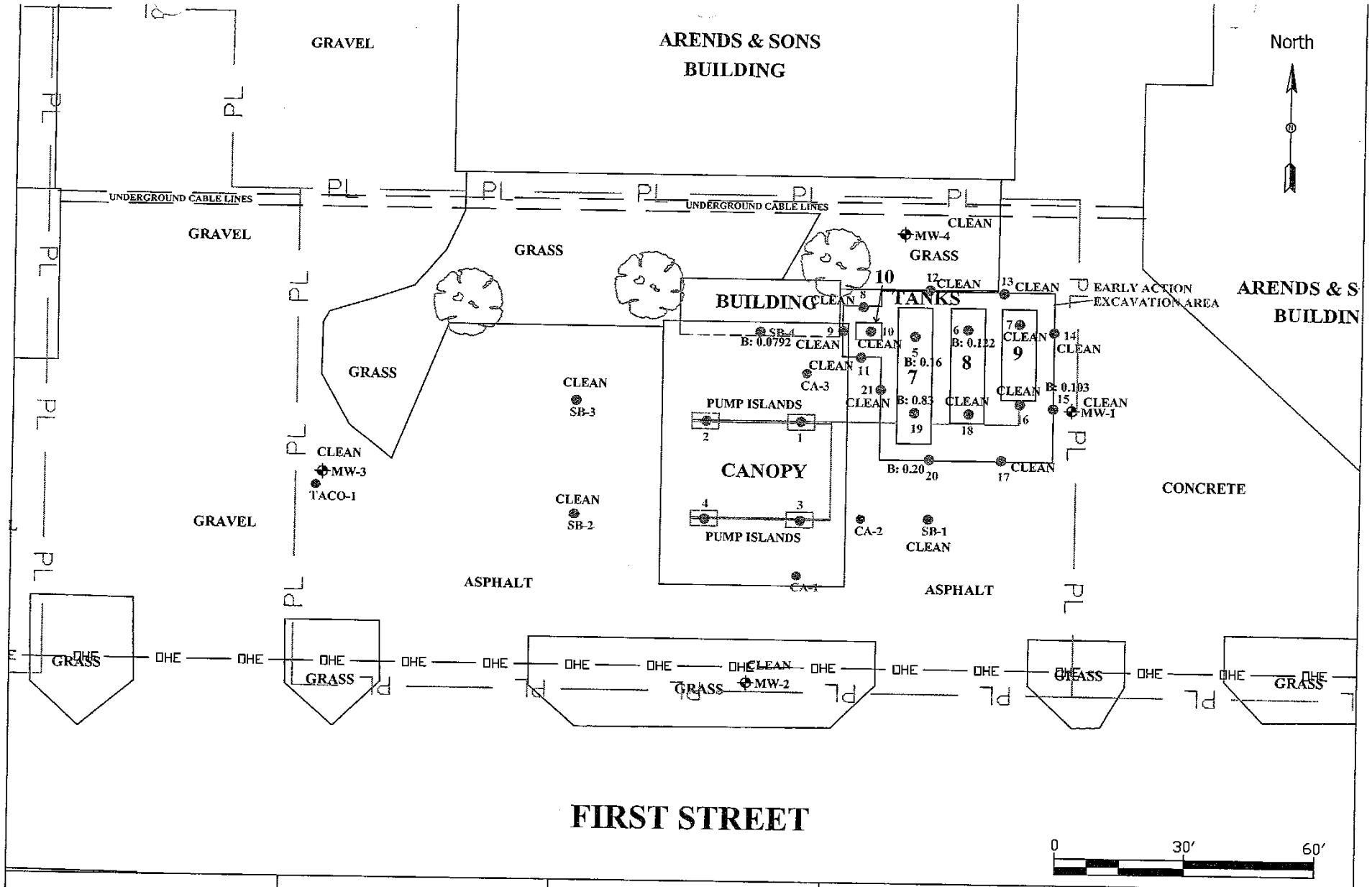

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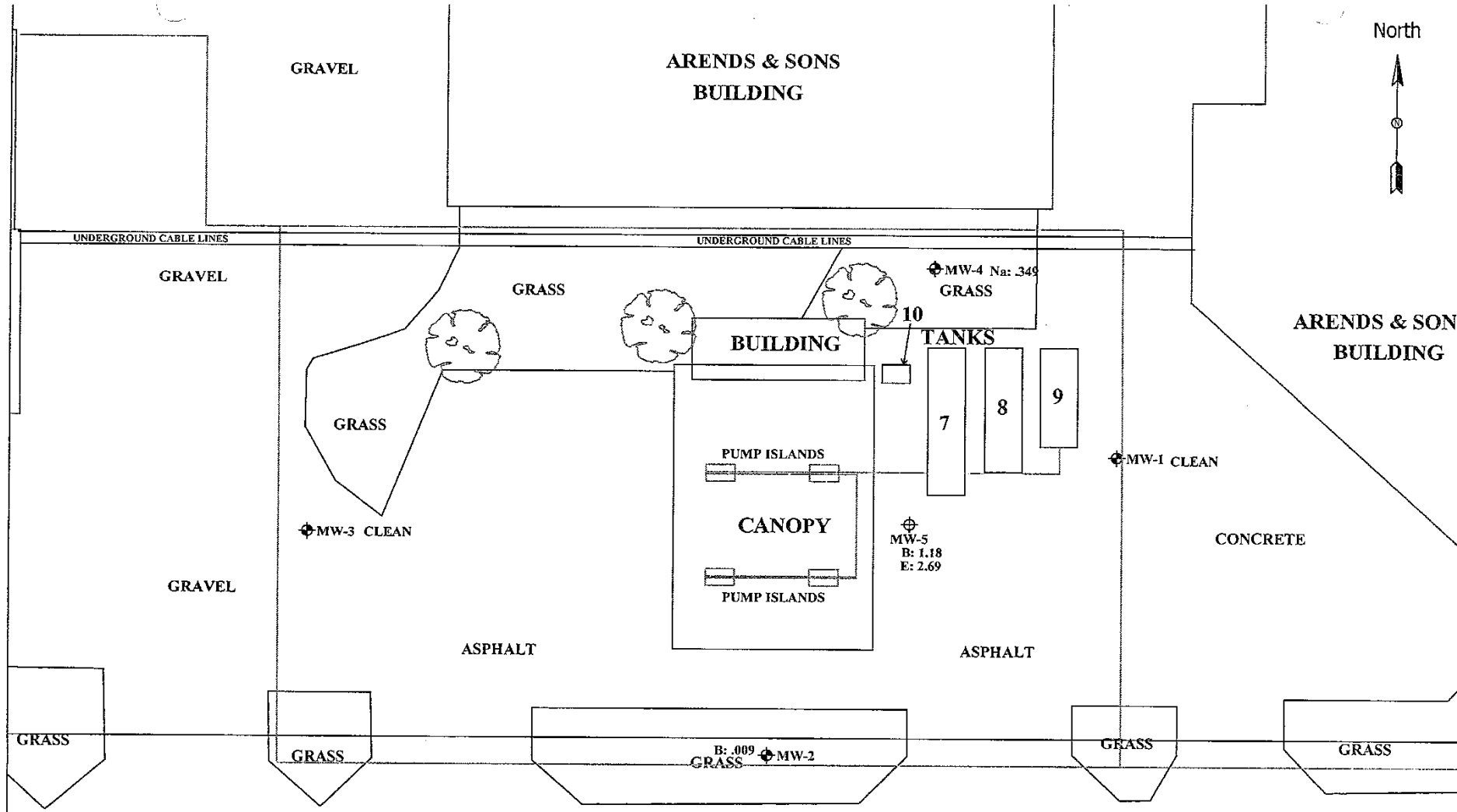

CWM COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	GROUNDWATER CONTAMINATION VALUES MAP	DATE: 12/7/16 REVISED DATE: 8/26/2021 SCALE 1"=30' DRAWING: 0008	DRAWN BY: MJS REVISED BY: JKK REVIEWED BY: CLR GWcont.DWG

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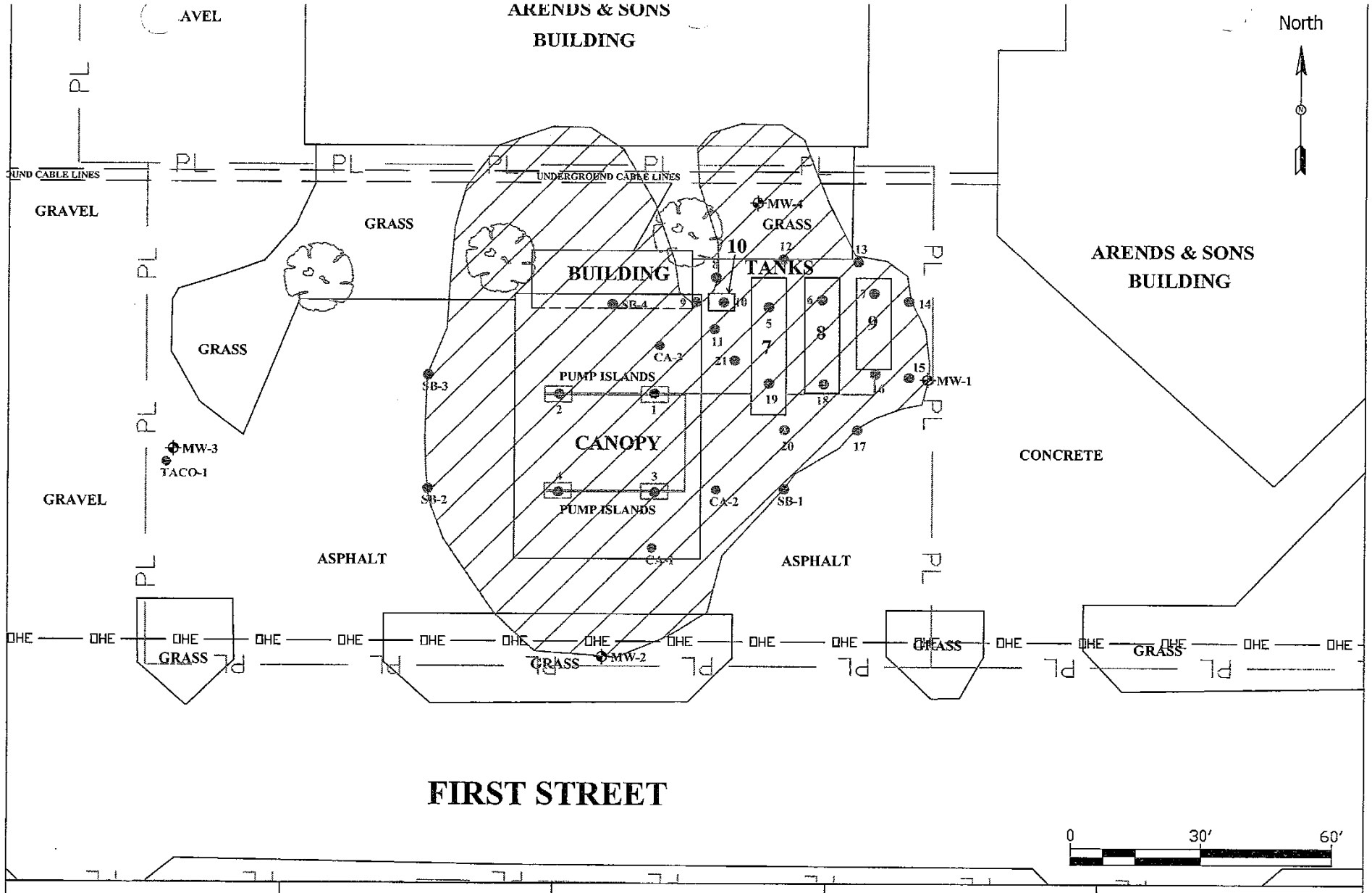
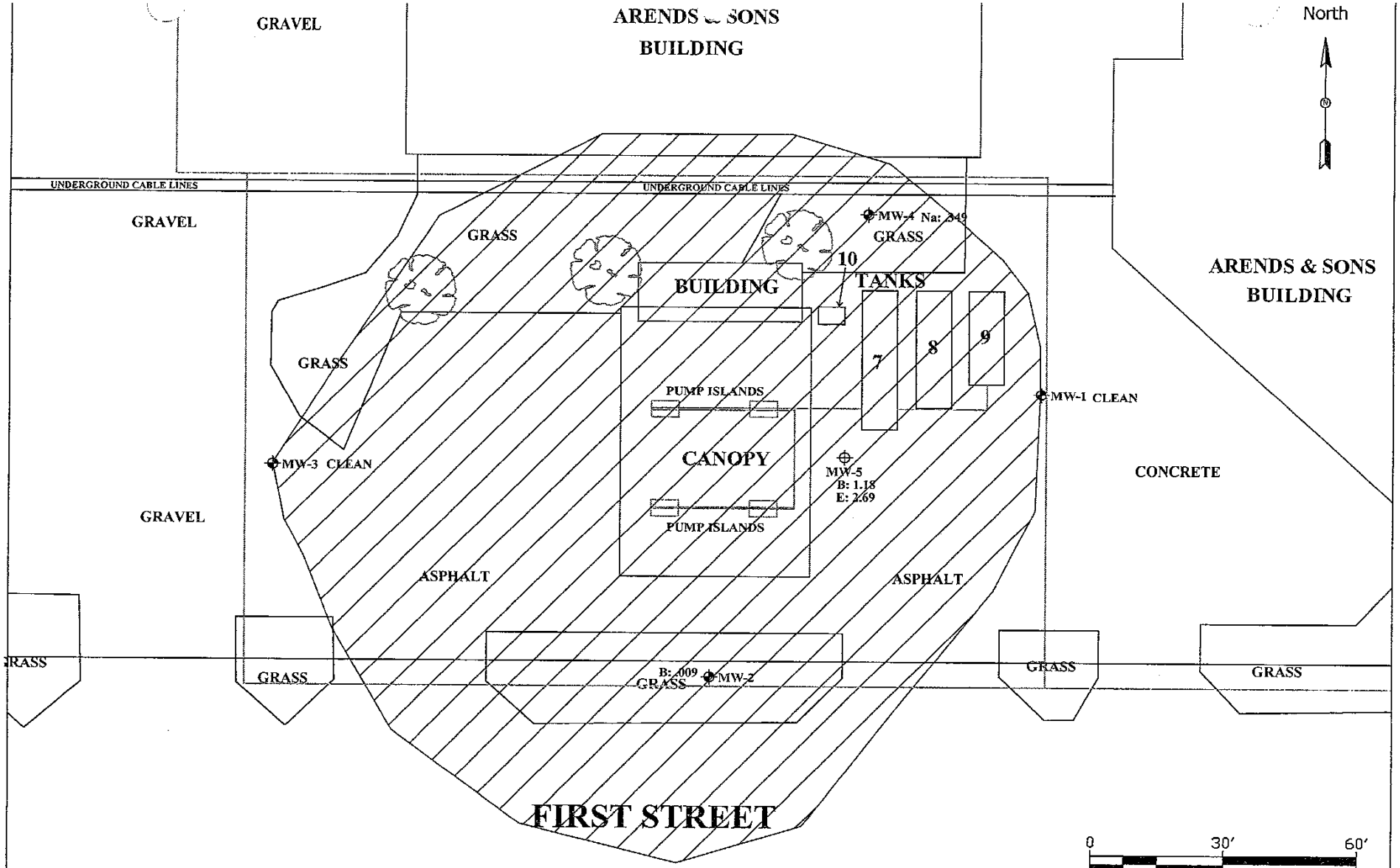


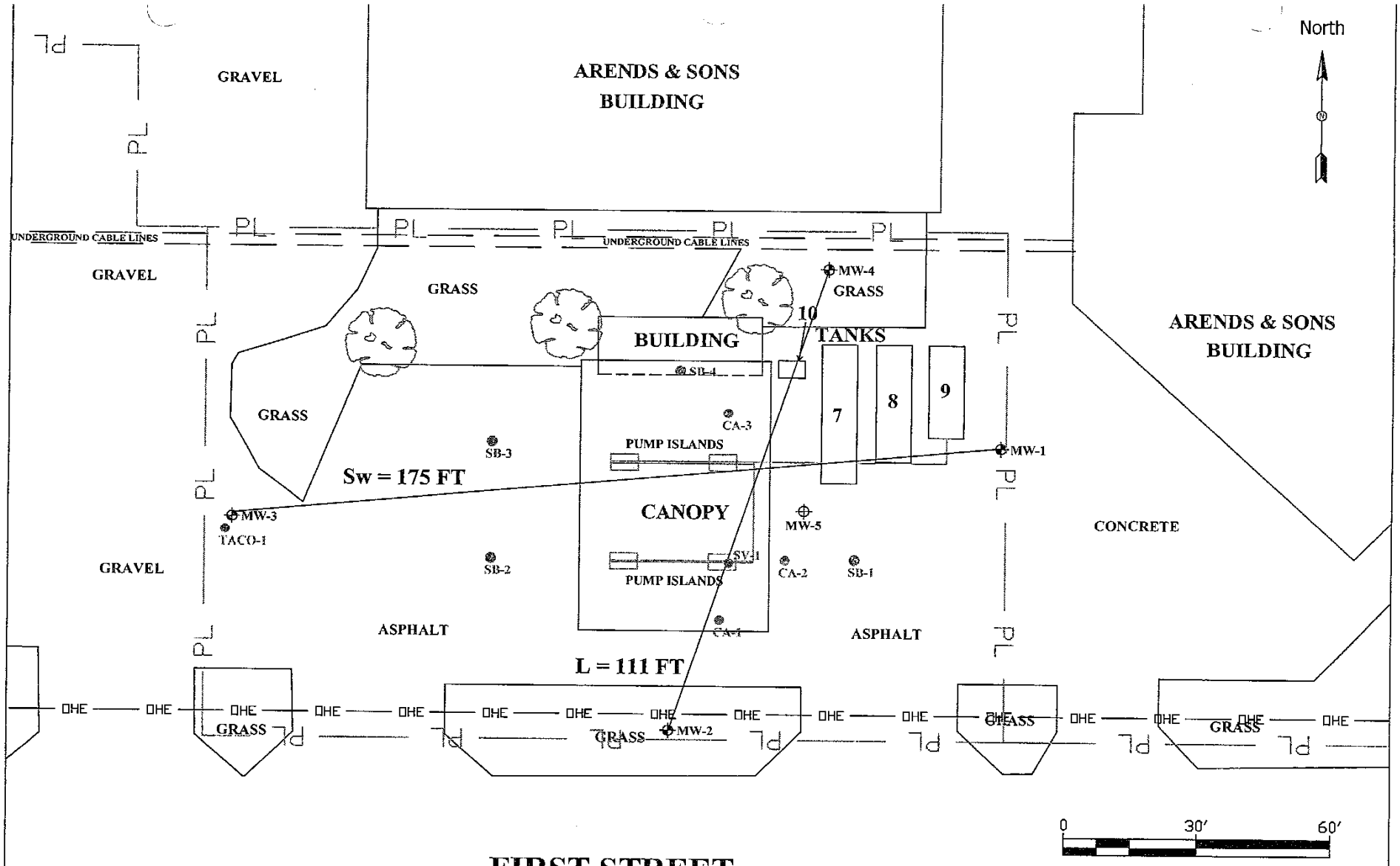
CWM COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	SOIL CONTAMINATION PLUME MAP	DATE: 1/14/19 REVISED DATE: 8/26/2021 SCALE 1"=30' DRAWING: 0009	DRAWN BY: MJS REVISED BY: JKK REVIEWED BY: CLR SPlume.DWG

000038



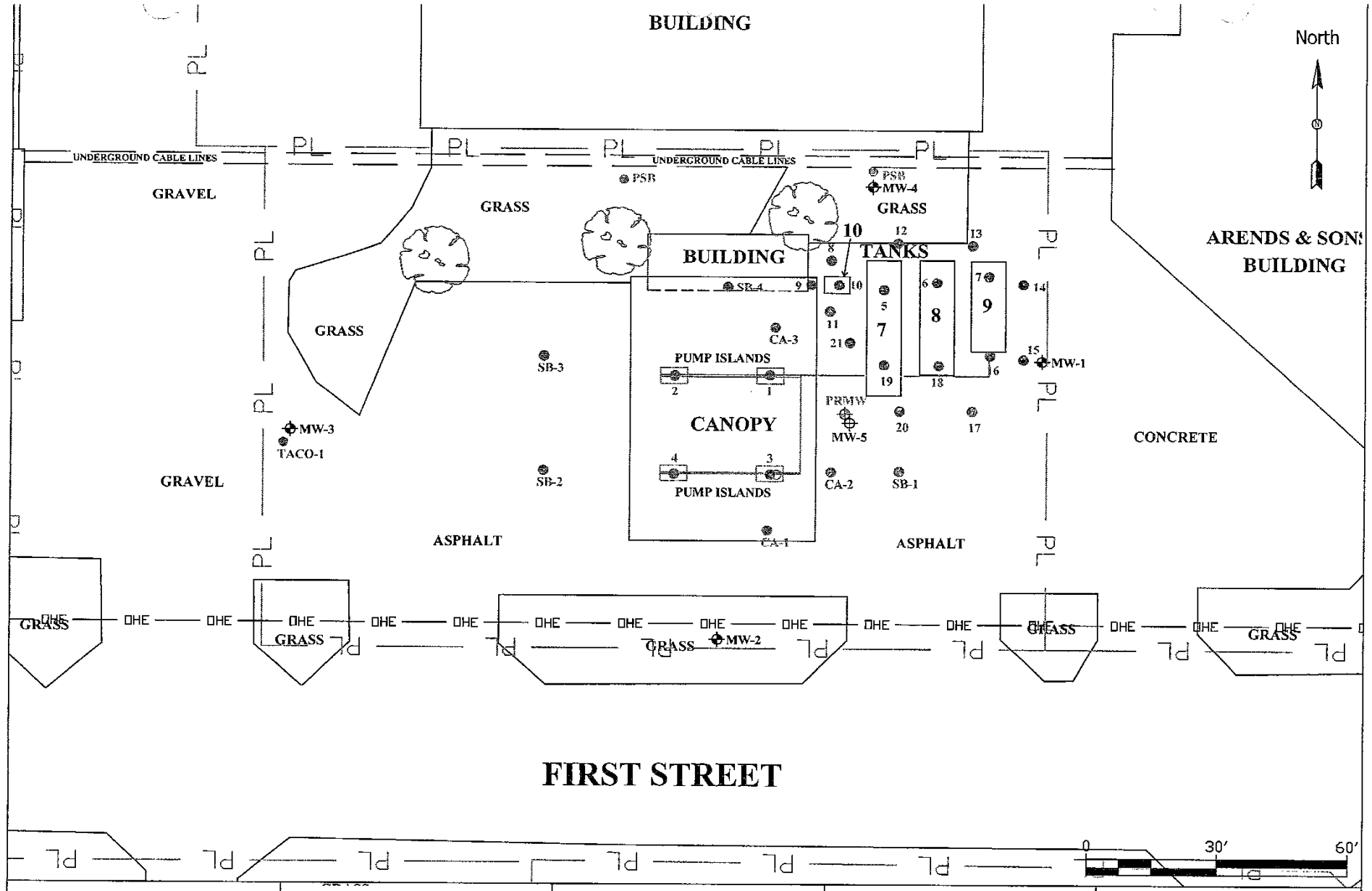
CWM COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	GROUNDWATER CONTAMINATION PLUME MAP	DATE: 1/14/19 REVISED DATE: 6/25/2021 SCALE 1"=30' DRAWING: 0010	DRAWN BY: MJS REVISED BY: JKK REVIEWED BY: CLR GWPlume.DWG

000039



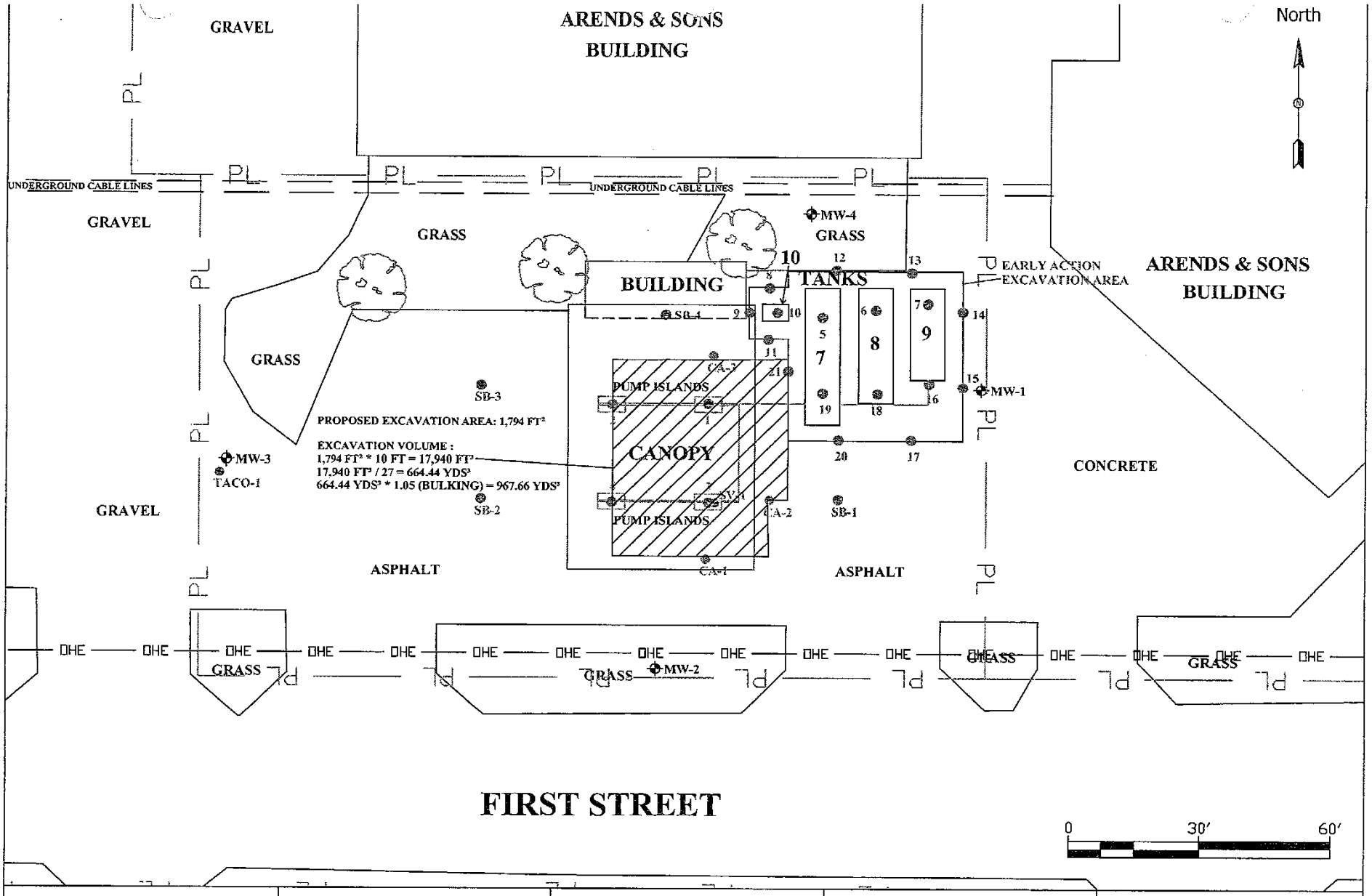
CW[illegible]M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	TACO PARAMETERS MAP	DATE: 8/2/19 REVISED DATE: 6/25/2021 SCALE 1"=30' DRAWING: 0011	DRAWN BY: MJS REVISED BY: JKK REVIEWED BY: CLR TACO.DWG

000040



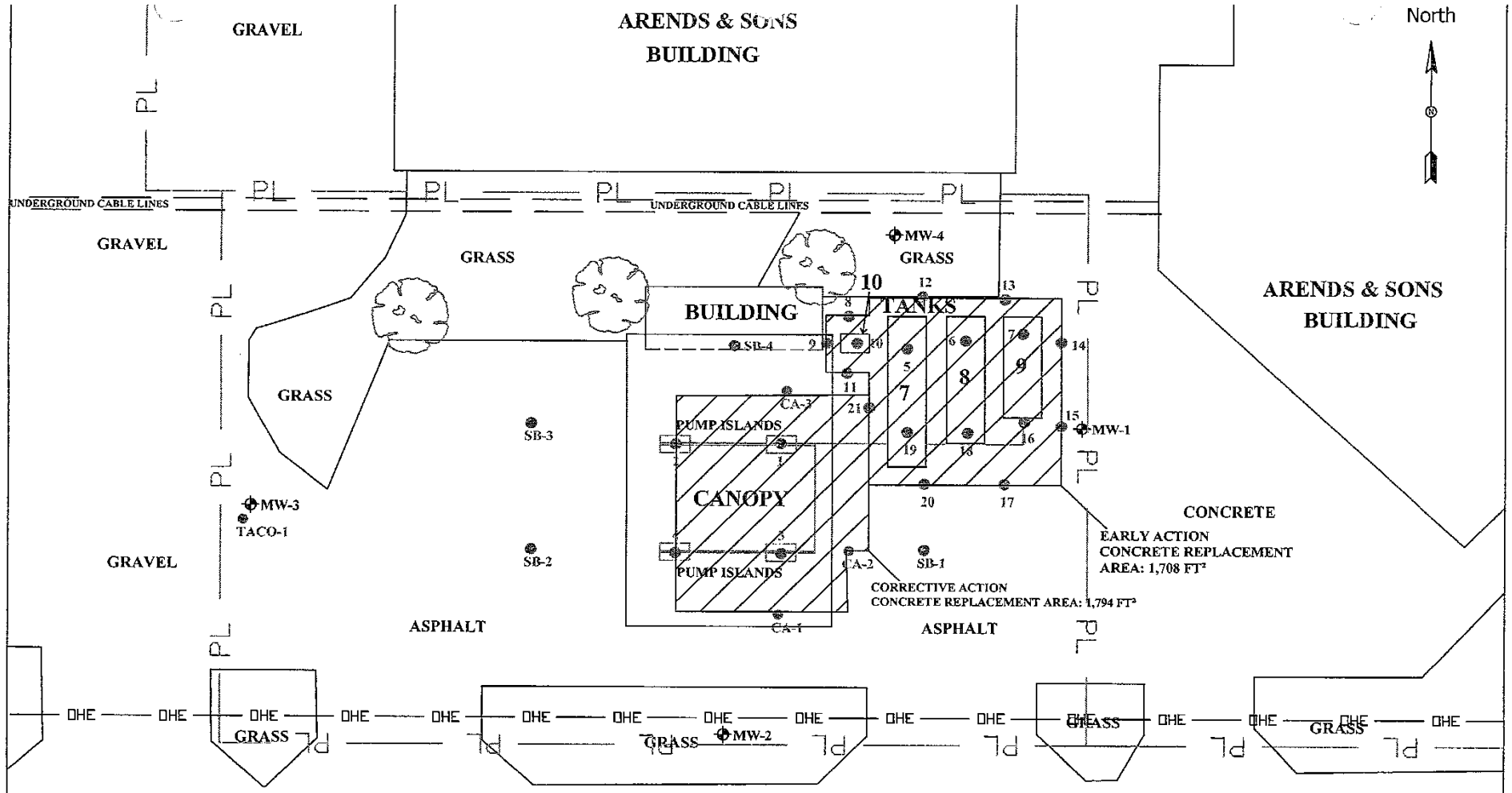
CWM COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	PROPOSED SOIL BORING/ MONITORING WELL REPLACEMENT LOCATION MAP	DATE: 8/26/2021 REVISED DATE: SCALE 1"=30' DRAWING: 0012	DRAWN BY: JKK REVISED BY: REVIEWED BY: CLR PSB-RMW.DWG

000041



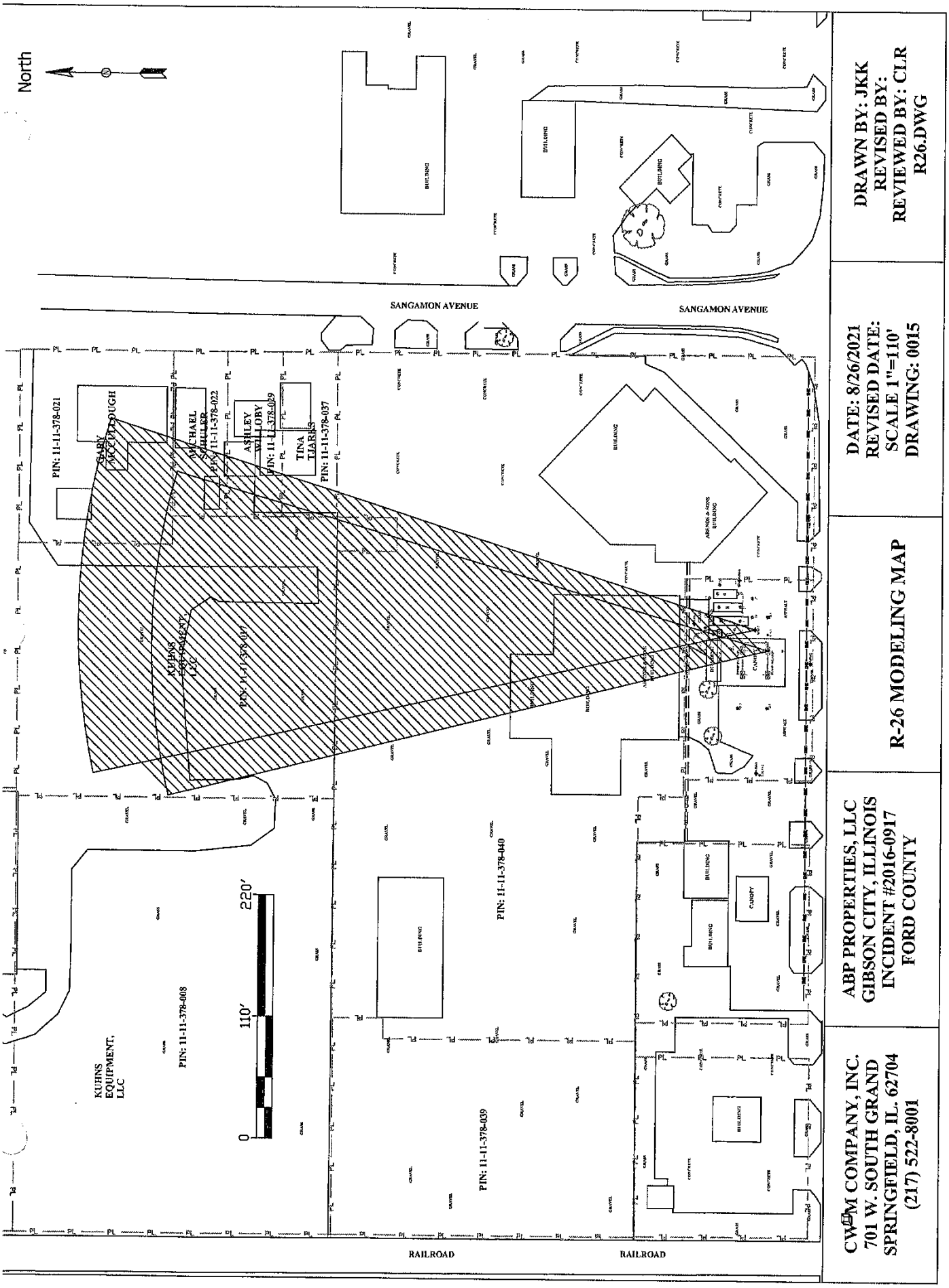
CW[illegible]M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	PROPOSED EXCAVATION LOCATION MAP	DATE: 8/26/21 REVISED DATE: SCALE 1"=30' DRAWING: 0013	DRAWN BY: JKK REVISED BY: REVIEWED BY: CLR PExcav.DWG

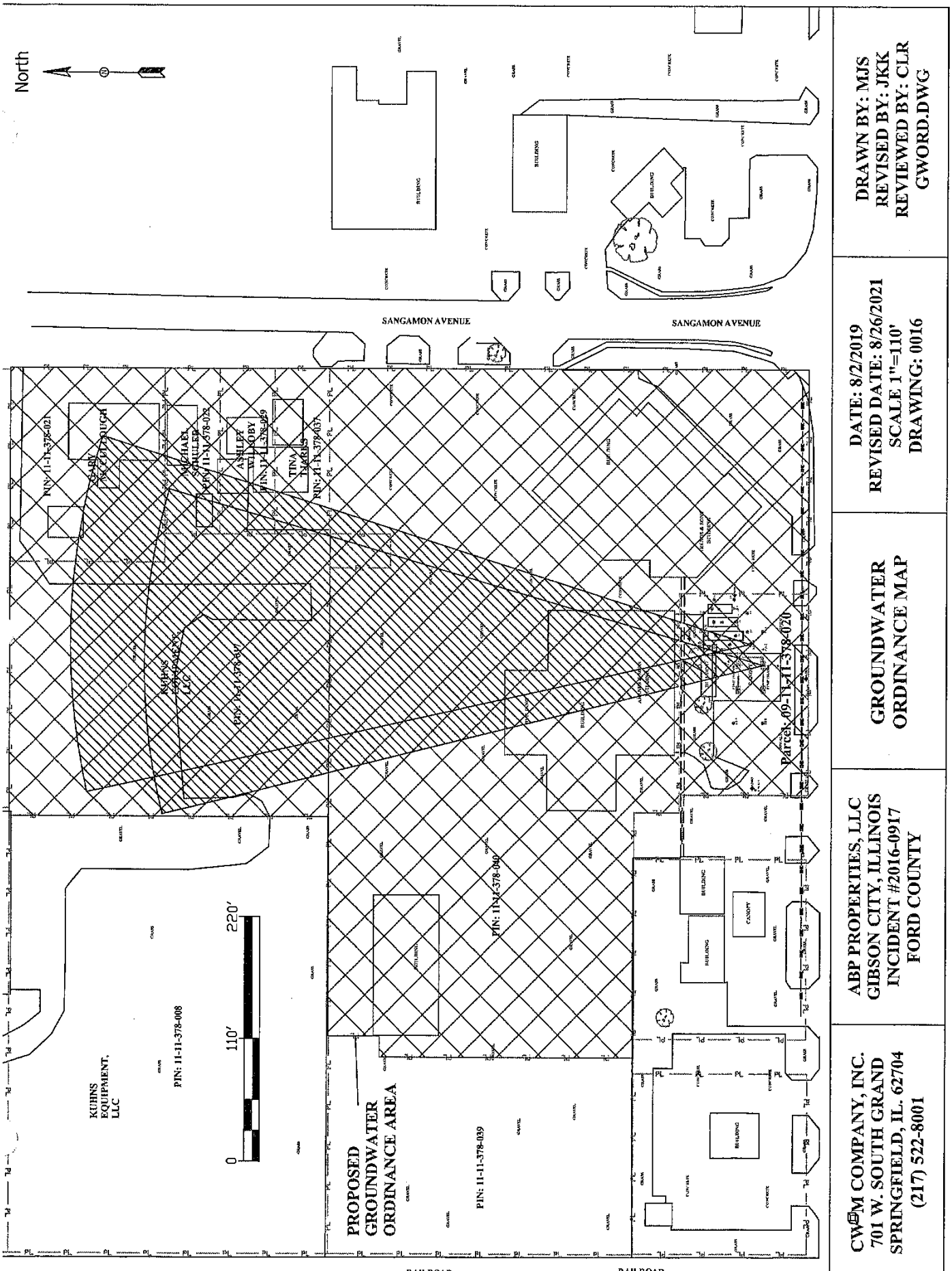
000042

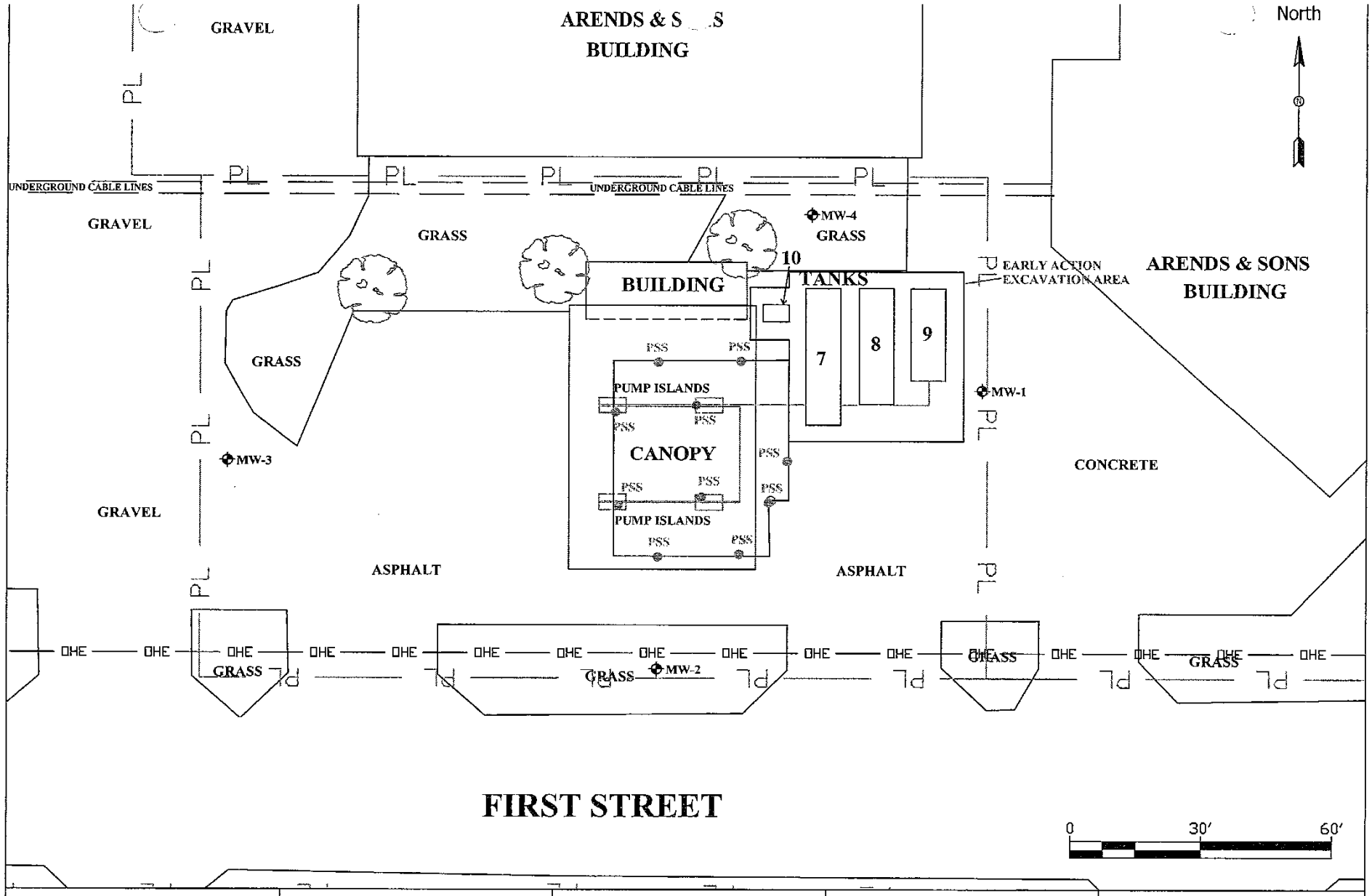


CW[illegible]M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	CONCRETE REPLACEMENT LOCATION MAP	DATE: 8/26/21 REVISED DATE: SCALE 1"=30' DRAWING: 0014	DRAWN BY: JKK REVISED BY: REVIEWED BY: CLR Concrete.DWG

000043


North
SANGAMON AVENUE
SANGAMON AVENUE
PIN: 11-11-378-021
GARY WOODDOUGH
MICHAEL SCHILLER
PIN: 11-11-378-022
ASHLEY WILLOBY
PIN: 11-11-378-009
TINA TJARKS
PIN: 11-11-378-037
KUHNS EQUIPMENT, LLC
PIN: 11-11-378-007
PIN: 11-11-378-040
PIN: 11-11-378-008
KUHNS EQUIPMENT, LLC
PIN: 11-11-378-039
0
110'
220'
RAILROAD
RAILROAD
DRAWN BY: JKK
REVISED BY:
REVIEWED BY: CLR
R26.DWG
DATE: 8/26/2021
REVISED DATE:
SCALE 1"=110'
DRAWING: 0015
R-26 MODELING MAP
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS
INCIDENT #2016-0917
FORD COUNTY
CWM COMPANY, INC.
701 W. SOUTH GRAND
SPRINGFIELD, IL. 62704
(217) 522-8001


North
SANGAMON AVENUE
SANGAMON AVENUE
RAILROAD
RAILROAD
PROPOSED
GROUNDWATER
ORDINANCE AREA
KUHNS
EQUIPMENT,
LLC
PIN: 11-11-378-008
PIN: 11-11-378-039
PIN: 11-11-378-040
PIN: 11-11-378-020
Parcel: 09-11-11-378-020
PIN: 11-11-378-021
PIN: 11-11-378-022
PIN: 11-11-378-029
PIN: 11-11-378-037
0
110'
220'
CWM COMPANY, INC.
701 W. SOUTH GRAND
SPRINGFIELD, IL. 62704
(217) 522-8001
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS
INCIDENT #2016-0917
FORD COUNTY
GROUNDWATER
ORDINANCE MAP
DATE: 8/2/2019
REVISED DATE: 8/26/2021
SCALE 1"=110'
DRAWING: 0016
DRAWN BY: MJS
REVISED BY: JKK
REVIEWED BY: CLR
GWORD.DWG



CW M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	PROPOSED EXCAVATION SOIL SAMPLING LOCATION MAP	DATE: 8/26/21 REVISED DATE: SCALE 1"=30' DRAWING: 0017	DRAWN BY: JKK REVISED BY: REVIEWED BY: CLR PSS.DWG

000046

APPENDIX C

OSFM ELIGIBILITY DETERMINATION

CORRECTIVE ACTION PLAN AND BUDGET AMENDMENT
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS

Office of the Illinois
State Fire Marshal

4/3/2017

ABP Properties, LLC
159 N Greenleaf Street
Suite 2
Gurnee, IL 60031

In Re: Facility No. 4014590
IEMA Incident No. 20160917
Marathon #7604
120 W. 1st Street
Gibson City, Ford, IL 60936

RECEIVED
APR - 3 2017
BY: CR

Dear Applicant:

The Reimbursement Eligibility and Deductible Application received on April 03, 2017 for the above referenced occurrence has been reviewed. The following determinations have been made based upon this review.

It has been determined that you are eligible to seek payment of costs in excess of $5,000. The costs must be in response to the occurrence referenced above and associated with the following tanks:

Eligible Tanks

Tank 7 12000 gallon Gasoline
Tank 8 10000 gallon Gasoline
Tank 9 8000 gallon Gasoline
Tank 10 560 gallon Heating Oil

You must contact the Illinois Environmental Protection Agency to receive a packet of Agency billing forms for submitting your request for payment.

An owner or operator is eligible to access the Underground Storage Tank Fund if the eligibility requirements are satisfied:

1. Neither the owner nor the operator is the United States Government,
2. The tank does not contain fuel which is exempt from the Motor Fuel Tax Law,
3. The costs were incurred as a result of a confirmed release of any of the following substances:

   "Fuel", as defined in Section 1.19 of the Motor Fuel Tax Law

   Aviation fuel

   Heating oil

   Kerosene

   Used oil, which has been refined from crude oil used in a motor vehicle, as defined in Section 1.3 of the Motor Fuel Tax Law.
4. The owner or operator registered the tank and paid all fees in accordance with the statutory and regulatory requirements of the Gasoline Storage Act.
5. The owner or operator notified the Illinois Emergency Management Agency of a confirmed release, the costs were incurred after the notification and the costs were a result of a release of a substance listed in this Section. Costs of corrective action or indemnification incurred before providing that notification shall not be eligible for payment.
6. The costs have not already been paid to the owner or operator under a private insurance policy, other written agreement, or court order.

7. The costs were associated with "corrective action".

This constitutes the final decision as it relates to your eligibility and the set deductible. We reserve the right to change the deductible determination should additional information that would change the determination become available. An underground storage tank owner or operator may appeal the decision to the Illinois Pollution Control Board (Board), pursuant to Section 57.9 (c) (2). An owner or operator who seeks to appeal the decision shall file a petition for a hearing before the Board within 35 days of the date of issuance of the final decision, (35 Illinois Administrative Code 105.504(b)).

For information regarding the filing of an appeal, please contact:

Clerk
Illinois Pollution Control Board
State of Illinois Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601
(312) 814-3620

The following tanks are also listed for this site:

Tank 1 4000 gallon Gasoline
Tank 2 4000 gallon Gasoline
Tank 3 6000 gallon Gasoline
Tank 4 6000 gallon Gasoline
Tank 5 6000 gallon Gasoline
Tank 6 1000 gallon Kerosene

Your application indicates that there has not been a release from these tanks under this incident number. You may be eligible to seek payment of corrective action costs associated with these tanks if it is determined that there has been a release from one or more of these tanks. Once it is determined that there has been a release from one or more of these tanks you may submit a separate application for an eligibility determination to seek corrective action costs associated with this/these tanks.

If you have any questions, please contact our Office at (217) 785-1020.

Sincerely,

Deanne Lock

Division of Petroleum and Chemical Safety

APPENDIX D

CORRECTIVE ACTION PLAN BUDGET AND CERTIFICATION

CORRECTIVE ACTION PLAN AND BUDGET AMENDMENT
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS

Owner/Operator and Licensed Professional Engineer/Geologist Budget Certification Form

I hereby certify that I intend to seek payment from the UST Fund for costs incurred while performing corrective action activities for Leaking UST incident 2016-0917. I further certify that the costs set forth in this budget are for necessary activities and are reasonable and accurate to the best of my knowledge and belief. I also certify that the costs included in this budget are not for corrective action in excess of the minimum requirements of 415 ILCS 5/57, no costs are included in this budget that are not described in the corrective action plan, and no costs exceed Subpart H: Maximum Payment Amounts, Appendix D Sample Handling and Analysis amounts, and Appendix E Personnel Titles and Rates of 35 Ill. Adm. Code 732 or 734. I further certify that costs ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 732.606 or 734.630 are not included in the budget proposal or amendment. Such ineligible costs include but are not limited to:

Costs associated with ineligible tanks.
Costs associated with site restoration (e.g., pump islands, canopies).
Costs associated with utility replacement (e.g., sewers, electrical, telephone, etc.).
Costs incurred prior to IEMA notification.
Costs associated with planned tank pulls.
Legal fees or costs.
Costs incurred prior to July 28, 1989.
Costs associated with installation of new USTs or the repair of existing USTs.

Owner/Operator: ABP Properties, LLC

Authorized Representative: Yogi Bhardwaj Title: Agent

Signature: Yogi Bhardwaj Date: 8/6/21

Subscribed and sworn to before me the 6th day of August, 2021.

(Notary Public) Seal:

OFFICIAL SEAL
CAROL L. ROWE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 03-18-2025

In addition, I certify under penalty of law that all activities that are the subject of this plan, budget, or report were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this plan, budget, or report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in the plan, budget, or report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 732 or 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Illinois EPA, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].

L.P.E./L.P.G.: Vince E. Smith L.P.E./L.P.G. Seal:

VINCE E. SMITH 46118 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

L.P.E./L.P.G. Signature: Vince E. Smith Date: 8/3/21

Subscribed and sworn to before me the 30th day of August, 2021.

(Notary Public) Seal:

OFFICIAL SEAL
CAROL L. ROWE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 03-18-2025

The Illinois EPA is authorized to require this information under 415 ILCS 5/1. Disclosure of this information is required. Failure to do so may result in the delay or denial of any budget or payment requested hereunder.

Illinois Environmental Protection Agency

Bureau of Land • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

General Information for the Budget and Billing Forms

LPC #: 530100002 County: Ford

City: Gibson City Site Name: ABP Gibson City

Site Address: 120 West 1st Street

IEMA Incident No.: 2016-0917

IEMA Notification Date: Oct 5,2016

Date this form was prepared: Aug 26, 2021

This form is being submitted as a (check one, if applicable):

☐ Budget Proposal

☒ Budget Amendment (Budget amendments must include only the costs over the previous budget.)

☐ Billing Package

Please provide the name(s) and date(s) of report(s) documenting the costs requested:

Name(s): _____

Date(s): _____

This package is being submitted for the site activities indicated below:

35 Ill. Adm. Code 734:

☐ Early Action

☐ Free Product Removal after Early Action

☐ Site Investigation . . . . . Stage 1: ☐ Stage 2: ☐ Stage 3: ☐

☒ Corrective Action Actual Costs

35 Ill. Adm. Code 732:

☐ Early Action

☐ Free Product Removal after Early Action

☐ Site Classification

☐ Low Priority Corrective Action

☐ High Priority Corrective Action

35 Ill. Adm. Code 731:

☐ Site Investigation

☐ Corrective Action

General Information for the Budget and Billing Forms

The following address will be used as the mailing address for checks and any final determination letters regarding payment from the Fund.

Pay to the order of: ABP Properties, LLC

Send in care of: CWM Company, Inc.

Address: P.O. Box 571

City: Carlinville State: IL Zip: 62626

The payee is the: Owner ☐ Operator ☐ (Check one or both.)

Signature of the owner or operator of the UST(s) (required)

W-9 must be submitted.
Click here to print off a W-9 Form.

Number of petroleum USTs in Illinois presently owned or operated by the owner or operator; any subsidiary, parent or joint stock company of the owner or operator; and any company owned by any parent, subsidiary or joint stock company of the owner or operator:

Fewer than 101: ☒ 101 or more: ☐

Number of USTs at the site: 10 (Number of USTs includes USTs presently at the site and USTs that have been removed.)

Number of incidents reported to IEMA for this site: 1

Incident Numbers assigned to the site due to releases from USTs: 2016-0917

Please list all tanks that have ever been located at the site and tanks that are presently located at the site.

Product Stored in UST	Size (gallons)	Did UST have a release?	Incident No.	Type of Release Tank Leak / Overfill / Piping Leak
Gasoline	4,000	Yes ☐ No ☐	-	
Gasoline	4,000	Yes ☐ No ☐	-	
Gasoline	6,000	Yes ☐ No ☐	-	
Gasoline	6,000	Yes ☐ No ☐	-	
Gasoline	6,000	Yes ☐ No ☐	-	
Kerosene	1,000	Yes ☐ No ☐	-	
Gasoline	12,000	Yes ☒ No ☐	2016-0917	Overfill
Gasoline	10,000	Yes ☒ No ☐	2016-0917	Overfill
Gasoline	8,000	Yes ☒ No ☐	2016-0917	Overfill

Add More Rows | Undo Last Add

Product Stored in UST	Size (gallons)	Did UST have a release?	Incident No.	Type of Release Tank Leak / Overfill / Piping Leak
Heating Oil	560	Yes ☒ No ☐	2016-0917	Tank Leak
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		

Add More Rows | Undo Last Add

Budget Summary

Choose the applicable regulation: (•) 734 ( ) 732

734	Free Product	Stage 1 Site Investigation	Stage 2 Site Investigation	Stage 3 Site Investigation	Corrective Action
					Proposed
Drilling and Monitoring Well Costs Form	$	$	$	$	$ 3,993.45
Analytical Costs Form	$	$	$	$	$ 5,971.79
Remediation and Disposal Costs Form	$	$	$	$	$ 100,955.97
UST Removal and Abandonment Costs Form	$	$	$	$	$
Paving, Demolition, and Well Abandonment Costs Form	$	$	$	$	$ 30,731.84
Consulting Personnel Costs Form	$	$	$	$	$ 32,040.80
Consultant's Materials Costs Form	$	$	$	$	$ 1,862.40
Handling Charges Form	Handling charges will be determined at the time a billing package is submitted to the Illinois EPA. The amount of allowable handling charges will be determined in accordance with the Handling Charges Form.				
Total	$	$	$	$	$ 175,556.25

Drilling and Monitoring Well Costs Form

1. Drilling

Number of Borings to Be Drilled	Type HSA/PUSH/ Injection	Depth (feet) of Each Boring	Total Feet Drilled	Reason for Drilling
2	PUSH	10.00	20.00	Delineate soil plume on-site (NW of station / N of MW-4)
1	PUSH	10.00	10.00	Waste Characterization
				Pre - Excavation

☒ Subpart H minimum payment amount applies.

	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:		31.16	
Total Feet via PUSH:	30.00	24.39	731.70
Total Feet for Injection via PUSH:		20.32	
		Total Drilling Costs:	1,625.80 *

* adjusted to reflect Subpart H minimum payment amount

2. Monitoring / Recovery Wells

Number of Wells	Type of Well HSA / PUSH / 4" or 6" Recovery / 8" Recovery	Diameter of Well (inches)	Depth of Well (feet)	Total Feet of Wells to Be Installed ($)

Well Installation	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:		22.36	
Total Feet via PUSH:		16.94	
Total Feet of 4" or 6" Recovery:		33.87	
Total Feet of 8" or Greater Recovery:		55.55	
		Total Well Costs:	

Total Drilling and Monitoring Well Costs:	$1,625.80

Drilling and Monitoring Well Costs Form

1. Drilling

Number of Borings to Be Drilled	Type HSA/PUSH/ Injection	Depth (feet) of Each Boring	Total Feet Drilled	Reason for Drilling
1	PUSH	5.00	5.00	Soil-Gas Vapor Boring
1	HSA	15.00	15.00	Replacement Well (MW-5)
				Post Excavation: Soil-Gas Vapor @ most contam. &
				Replacement Well @ MW-5

☒ Subpart H minimum payment amount applies.

	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:	15.00	31.16	467.40
Total Feet via PUSH:	5.00	24.39	121.95
Total Feet for Injection via PUSH:		20.32	
		Total Drilling Costs:	2,032.25

2. Monitoring / Recovery Wells

Number of Wells	Type of Well HSA / PUSH / 4" or 6" Recovery / 8" Recovery	Diameter of Well (inches)	Depth of Well (feet)	Total Feet of Wells to Be Installed ($)
1	HSA		15.00	15.00

Well Installation	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:	15.00	22.36	335.40
Total Feet via PUSH:		16.94	
Total Feet of 4" or 6" Recovery:		33.87	
Total Feet of 8" or Greater Recovery:		55.55	
		Total Well Costs:	335.40

Total Drilling and Monitoring Well Costs:	$2,367.65

Analytical Costs Form

Laboratory Analysis	Number of Samples		Cost ($) per Analysis		Total per Parameter
Chemical Analysis					
BETX Soil with MTBE EPA 8260	15	X	115.16	=	$1,727.40
BETX Water with MTBE EPA 8260	1	X	109.74	=	$109.74
COD (Chemical Oxygen Demand)		X		=	
Corrosivity		X		=	
Flash Point or Ignitability Analysis EPA 1010	1	X	44.70	=	$44.70
Fraction Organic Carbon Content (f_{oc}) ASTM-D 2974-00		X		=	
Fat, Oil, & Grease (FOG)		X		=	
LUST Pollutants Soil - analysis must include volatile, base/ neutral, polynuclear aromatics and metals list in Section 732. Appendix B and 734.Appendix B		X		=	
Dissolved Oxygen (DO)		X		=	
Paint Filter (Free Liquids)	1	X	18.97	=	$18.97
PCB / Pesticides (combination)		X		=	
PCBs		X		=	
Pesticides		X		=	
pH	1	X	18.97	=	$18.97
Phenol		X		=	
Polynuclear Aromatics PNA, or PAH SOIL EPA 8270	14	X	205.94	=	$2,883.16
Polynuclear Aromatics PNA, or PAH WATER EPA 8270	1	X	205.94	=	$205.94
Reactivity		X		=	
SVOC - Soil (Semi-Volatile Organic Compounds)		X		=	
SVOC - Water (Semi-Volatile Organic Compounds)		X		=	
TKN (Total Kjeldahl) "nitrogen"		X		=	
TPH (Total Petroleum Hydrocarbons)		X		=	
VOC (Volatile Organic Compounds) - Soil (Non-Aqueous)		X		=	
VOC (Volatile Organic Compounds) - Water	1	X	300.00	=	$300.00
Vapor Intrusion Sampling	1	X	25.00	=	$25.00
Regulator Rental	1	X	35.00	=	$35.00
Air Canister Rental		X		=	
		X		=	
		X		=	
Geo-Technical Analysis					
Soil Bulk Density (p_b) ASTM D2937-94		X		=	
Ex-situ Hydraulic Conductivity / Permeability		X		=	
Moisture Content (w) ASTM D2216-92 / D4643-93		X		=	
Porosity		X		=	
Rock Hydraulic Conductivity Ex-situ		X		=	
Sieve / Particle Size Analysis ASTM D422-63 / D1140-54		X		=	
Soil Classification ASTM D2488-90 / D2487-90		X		=	
Soil Particle Density (p_s) ASTM D854-92		X		=	
		X		=	
		X		=	
		X		=	

Analytical Costs Form

Metals Analysis					
Soil preparation fee for Metals TCLP Soil (one fee per soil sample)	1	X	107.03	=	$107.03
Soil preparation fee for Metals Total Soil (one fee per soil sample)		X		=	
Water preparation fee for Metals Water (one fee per water sample)		X		=	
Arsenic TCLP Soil		X		=	
Arsenic Total Soil		X		=	
Arsenic Water		X		=	
Barium TCLP Soil		X		=	
Barium Total Soil		X		=	
Barium Water		X		=	
Cadmium TCLP Soil		X		=	
Cadmium Total Soil		X		=	
Cadmium Water		X		=	
Chromium TCLP Soil		X		=	
Chromium Total Soil		X		=	
Chromium Water		X		=	
Cyanide TCLP Soil		X		=	
Cyanide Total Soil		X		=	
Cyanide Water		X		=	
Iron TCLP Soil		X		=	
Iron Total Soil		X		=	
Iron Water		X		=	
Lead TCLP Soil	1	X	21.67	=	$21.67
Lead Total Soil		X		=	
Lead Water		X		=	
Mercury TCLP Soil		X		=	
Mercury Total Soil		X		=	
Mercury Water		X		=	
Selenium TCLP Soil		X		=	
Selenium Total Soil		X		=	
Selenium Water		X		=	
Silver TCLP Soil		X		=	
Silver Total Soil		X		=	
Silver Water		X		=	
Metals TCLP Soil (a combination of all metals) RCRA		X		=	
Metals Total Soil (a combination of all metals) RCRA		X		=	
Metals Water (a combination of all metals) RCRA		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
Other					
EnCore® Sampler, purge-and-trap sampler, or equivalent sampling device	15	X	13.55	=	$203.25
Sample Shipping per sampling event[1]	4	X	67.74	=	$270.96

[1]A sampling event, at a minimum, is all samples (soil and groundwater) collected in a calendar day.

Total Analytical Costs: $ 5,971.79

Remediation and Disposal Costs Form

A. Conventional Technology

Excavation, Transportation, and Disposal of contaminated soil and/or the 4-foot backfill material removal during early action activities:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost
967.66	77.23	$74,732.38

Backfilling the Excavation:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost
967.66	27.10	$26,223.59

Overburden Removal and Return:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost
	8.81	$.00

B. Alternative Technology

Alternative Technology Selected:	
Number of Cubic Yards of Soil to Be Remediated	
Total Non-Consulting Personnel Costs Summary Sheet ($)	
Total Remediation Materials Costs Summary Sheet ($)	
Total Cost of the System	

Remediation and Disposal Costs Form

C. Groundwater Remediation and/or Free Product Removal System

Total Non-Consulting Personnel Costs Summary Sheet ($)	
Total Remediation Materials Costs Summary Sheet ($)	
Total Cost of the System	

D. Groundwater and/or Free Product Removal and Disposal

☐ Subpart H minimum payment amount applies.

Number of Gallons	Cost per Gallon ($)	Total Cost ($)

E. Drum Disposal

☐ Subpart H minimum payment amount applies.

Number of Drums of Solid Waste	Cost per Drum ($)	Total Cost ($)
Number of Drums of Liquid Waste	**Cost per Drum ($)**	**Total Cost ($)**
Total Drum Disposal Costs		.00

Total Remediation and Disposal Costs:	$100,955.97

Paving, Demolition, and Well Abandonment Costs Form

A. Concrete and Asphalt Placement/Replacement

Number of Square Feet	Asphalt or Concrete	Thickness (inches)	Cost ($) per Square Foot	Replacement or Placement for an Engineered Barrier	Total Cost
1,708.00	Concrete	6.00	5.92	Replacement	$10,111.36
1,794.00	Concrete	6.00	5.92	Replacement	$10,620.48

Total Concrete and Asphalt Placement/Replacement Costs:	$20,731.84

B. Building Destruction or Dismantling and Canopy Removal

Item to Be Destroyed, Dismantled, or Removed	Unit Cost ($)	Total Cost ($)
Existing Canopy on-site (over proposed excavation)	1.00	10,000.00

Total Building Destruction or Dismantling and Canopy Removal Costs:	$10,000.00

Paving, Demolition, and Well Abandonment Costs Form

C. Well Abandonment

Monitoring Well ID #	Type of Well (HSA / PUSH / Recovery)	Depth of Well (feet)	Cost ($) per Foot	Total Cost

Total Monitoring Well Abandonment Costs:	

Total Paving, Demolition, and Well Abandonment Costs:	**$30,731.84**

Consulting Personnel Costs Form

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	Task			
	Senior Project Manager	34.00	135.48	$4,606.32
CCAP	Corrective Action Design / Report Development / IEPA Correspondence			
	Senior Prof. Engineer	2.00	176.13	$352.26
CCAP	Report Review and Certification			
	Senior Admin. Assistant	2.00	60.97	$121.94
CCAP	Report Compilation, Assembly, and Distribution			
	Senior Draftperson/CAD	6.00	81.28	$487.68
CCAP	Drafting and Editing Maps for Report			
	Senior Project Manager	10.00	135.48	$1,354.80
CCAP-Budget	Budget Preparation			
	Senior Prof. Engineer	2.00	176.13	$352.26
CCAP-Budget	Budget Review & Certification			
	Senior Project Manager	6.00	135.48	$812.88
TACO 2 or 3	TACO Tier 2 Parameters/CUO Development / Re-assessment of TACO data post-excavation			
	Senior Project Manager	6.00	135.48	$812.88
TACO 2 or 3	Contaminant Transport Modeling / Assessment of Contamination Levels/ Soil and GW Plume			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	Task			
	Senior Project Manager	8.00	135.48	$1,083.84
CCA-Field	Office Prep, Scheduling, Arrangements Excavation Activities			
	Senior Project Manager	8.00	135.48	$1,083.84
CCA-Field	Agency Corr/Discussion/Document/Review/Tabulate Analytical Results			
	Senior Project Manager	12.00	135.48	$1,625.76
CCA-Field	Drilling/Sampling for Soil Plume Delineation (1- Waste Char, 2 SBs) / Field Prep/ Drill Notif./ JULIEs			
	Senior Technician	10.00	88.06	$880.60
CCA-Field	Drilling/Sampling for Soil Plume Delineation (1- Waste Characterization for excav, 2 SBs)			
	Engineer III	6.00	135.48	$812.88
CCA-Field	Excavation Preparation / Landfill Authorization / Setup			
	Senior Project Manager	42.00	135.48	$5,690.16
CCA-Field	On-site Excavation & Backfill Oversight/ Field Preparation / Sample Collection			
	Senior Project Manager	8.00	135.48	$1,083.84
CCA-Field	Corrective Action Documentation, Excavation / Disposal / Manifest / Tickets			
	Senior Project Manager	5.00	135.48	$677.40
CCA-Field	Boring Logs / Field Reports (Daily for excavation)			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	Task			
	Senior Project Manager	16.00	135.48	$2,167.68
CCA-Field	Drill/Sample Replace. MW & Soil Gas-Vapor Boring, and GW Sample (2 Round Trips), Field Prep			
	Senior Technician	14.00	88.06	$1,232.84
CCA-Field	Drill/Sample Replace. MW & Soil Gas-Vapor Boring, and GW Sample (2 Round Trips),			
	Senior Project Manager	10.00	135.48	$1,354.80
CCA-Field	Concrete Replacement / Contractor Layout / Documentation of Completion			
	Senior Prof. Engineer	6.00	176.13	$1,056.78
CA-Pay	Reimbursement Review and Certifications (3)			
	Senior Acct. Technician	54.00	74.51	$4,023.54
CA-Pay	Reimbursement Preparations (3)			
	Senior Admin. Assistant	6.00	60.97	$365.82
CA-Pay	Reimbursement Compilation, Assembly, and Distributions (3)			

*Refer to the applicable Maximum Payment Amounts document.

Total of Consulting Personnel Costs	$32,040.80

Consultant's Materials Costs Form

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Postage	2.00	9.20	/each	$18.40
CCAP	Report/ Forms/ Distribution			
PID	5.00	75.00	/day	$375.00
CCA-Field	Monitoring During Excavation Activities / Sampling activities (4 days-Excav, 1- day samp)			
Mileage	800.00	.56	/mile	$448.00
CCA-Field	4 RT from Office (1-WC/SBs Samp, 2- Excavation, 3- RMW/Soil-Gas Vap, 4- GW Samp)			
Mileage	400.00	.56	/mile	$224.00
CCA-Field	2 RT from Springfield Office (1 - Concrete layout, 2- Confirm concrete quality & layout)			
Per Diem - Incidentals/Meals	5.00	55.00	/day	$275.00
CCA-Field	Ford County Per Diem Rates (Meals/Incidentals Rate)			
Per Diem - Hotel	5.00	96.00	/day	$480.00
CCA-Field	Ford County Per Diem Rates (Lodging Rates)			
Postage	4.00	10.50	/each	$42.00
CA-Pay	Reimbursement Distribution/ Forms			

Total of Consultant Materials Costs	$1,862.40

APPENDIX E

TACO VARIABLES AND EQUATIONS & HYDRAULIC CONDUCTIVITY CALCULATIONS

CORRECTIVE ACTION PLAN AND BUDGET AMENDMENT
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS

R-26 Input/Summary Sheet

Version: 3/26/2018

IEMA Incident # (6 or 8 digit)	2016-0917
IEPA LPC # (10 digit)	0530100002
Site Name:	ABP Properties, LLC
Site Address:	120 West 1st Street
City:	Gibson City
County:	Ford
Zip Code:	60936
SSL Equations Used:	S5,6,7,8,9,10,17,18,19,20,21,22,24
RBCA Equations Used:	R-1, R-2, R3
Contact Information for Individual who Performed Calculat	
Land Use:	Residential & Construction Worker
Objective from S17 used in R26:	No
Groundwater:	Class 1
Standard or Mass Limit Equations:	Standard Equations — If Mass Limit, then Specifiy Acres:
Square Feet of Plume for Mass Limit Eq.:	0.00 < use this # above
Date Data is Entered:	December 5, 2019

Entry	Description		
	Holcomb Bulk Density (pcf), or	Shelby Tube Location:	
1.233	Dry Soil Bulk Density (g/cm³ or kg/L): 1.5, or Gravel =2.0, Sand = 1.8, Silt = 1.6, Clay = 1.7, or site specific		
2.634	ρs - Soil Particle Density	Reference	
0.532	Total Soil Porosity	0.532	0.532
0.243	Water Filled Porosity	0.243	0.243
0.289	Air Filled Porosity	0.289	0.289
0.430	θ_T - Total Soil Porosity (RBCA)	0.43 or; Gravel - 0.25; Sand = 0.32; Silt = 0.40; Clay = 0.36	
0.220	w - Average Soil Moisture Content	0.1, or: Subsurface Soil (top 1m) = 0.1; Subsurface Soil (below 1 m) =0.2; or Site Specific	
Sand	USDA Soil Classification (Pick from List)		

Entry		
0.03430	Fractional Organic Carbon (foc) in g/g	Organic Matter (%):
		Organic Matter (mg/kg):
		Total Organic Carbon (g/g): 0.0343

2.77E-03	Average Hydraulic Conductivity (cm/sec)	Well Name
2.77E-03	Falling Hydraulic Conductivity (cm/sec)	MW-3
	Rising Hydraulic Conductivity (cm/sec)	
0.00964	Hydraulic Gradient (0.02 for sites with no groundwater)	Meters
10	d_a - Aquifer Thickness (ft)	3.048 m
10	d_s - Depth of Source (ft) (Vertical Thickness of Contamination)	3.048 m
	X - Distance along the centerline of the groundwater plume emanating to setback zone or surface water from the source in the direction of groundwater flow (ft) (RBCA)	0 cm
114	L - Source Length Parallel to Groundwater Flow (ft)	34.7472 m
175	Sw: Source Width -horizontal plane (ft) (RBCA)	5334 cm

Hydraulic Gradient Calculations

MW-2	93.92
MW-4	92.85
Distance:	111

$C_{(x)}$ - Concentration of Contaminant in groundwater at distance X from the source (mg/L)

	Benzene	MTBE
	Toluene	
	Ethylbenzene	
	Total Xylenes	

Surface Water

Chemicals of Concern		
Benzene	Naphthalene	
Toluene		Chrysene
Ethylbenzene		Benzo(k)fluoranthene
Total Xylenes		Indeno(1,2,3-cd)pyrene
MTBE		

☐ Mass Limit Equations

SSL Equations Needed

☑ Inhalation Equations

☑ Groundwater Ingestion Equations

☑ Csat Equations

☐ Fugitive Dust Equations

☑ Ingestion Equations

Text discussion for "i", L, d_a, d_s, S_w, S_d	
Hydraulic Gradient	The **Hydraulic Gradient (*i*)** was determined from an onsite survey of each of the groundwater monitoring wells. The riser elevations were determined and the depth to groundwater was noted in each well. This data was used to generate a potentiometric flow map with contour lines which show potentiometric head. A corresponding flow line, perpendicular to the contour lines, was determined between two known points of groundwater elevation. The hydraulic gradient was determined by the difference in elevation divided by the length of flow between the points.
Source Length	The **Source Length Parallel to Groundwater Flow (L)** was determined from the site map and analytical results. A value of 45.1104 m was used to encompass the length of contamination parallel to groundwater flow. This value is the distance between soil borings BH-1 and BH-2.
Aquifer Thickness	The **Aquifer Thickness (d_a)** is a site specific value determined by the length of the monitoring well screen. The Aquifer Thickness value used in the modeling equations was 3.048 meters.
Depth of Source	The **Depth of Source (d_s)** was determined from the analytical results and soil boring logs. A value of 3.048 m was used to encompass the vertical thickness of contamination based upon a clean soil sample at BH-1A, "hot" samples at BH-2B and BH-2C, and a clean soil sample at BH-2D. Thus the vertical thickness of soil contamination has been determined to be 3.048 m.
Source Width	**The source width perpendicular to groundwater flow direction in the Horizontal Plane (S_w)** was determined from the site map and analytical results. A value of 3566.16 cm was used to encompass the width of contamination in the horizontal plane. This value is the distance between clean wells MW-4 and and MW-6.
Source Depth	**The source width perpendicular to groundwater flow direction in the Vertical Plane (S_d)** was determined from the soil boring logs and analytical results. A value of 304.8 cm was used to encompass the width of contamination in the vertical plane based on the depths of contamination present and the PID readings from the bore logs.
Distance (X)	

BENZENE								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)
1	5.2	330	0.132	0.0050	MW-2	0.009	76	0.0050
3	32.5	565	0.827	0.0050	MW-5	1.180	620	0.0050
4	1.54	206	0.039	0.0050				
5	0.16	1	0.004	0.0040				
6	0.122	1	0.003	0.0031				
15	0.103	1	0.003	0.0026				
19	0.83	150	0.021	0.0050				
20	0.2	2	0.005	0.0050				
MW-4A	0.0891	1	0.002	0.0023				
SB-4B	0.0792	1	0.002	0.0020				

Toluene								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)
1	68.7	1	0.6048	0.5683				
3	325	19	2.861	0.9791				
4	24.8	1	0.218	0.2052				

Ethylbenzene								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)
1	13.5	1	0.06000522	0.0590	MW-5	2.690	75	0.6967
2	16.9	1	0.075	0.0739				
3	63.5	1	0.282	0.2775				

Total Xylenes								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)
1	74.7	1	0.268473273	0.2656				
2	83.4	1	0.300	0.2965				
3	343	1	1.233	1.2195				
4	49.1	1	0.176	0.1746				

MTBE								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)

Naphthalene								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)
					MW-4	0.349	59	0.1378

Benzo[a]pyrene								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)

Dibenz[a,h]anthracene								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)

Lead				
Soil Exceedances				
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)

Benz[a]anthracene								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)

Acenaphthene								
Soil Exceedances					Groundwater Exceedances			
Location	Soil Concentration (mg/kg)	X (ft)	Gw_{obj} (mg/L) R26 Csource	C(x) (mg/L)	Location	Groundwater Concentration (mg/L)	X (ft)	C(x) (mg/L)

ABP Properties, LLC GROUNDWATER CLEAN-UP OBJECTIVES (mg/L)				
Parameter	Most Stringent CUO	Class I GW	Class II GW	ADLs (U)
Benzene	**0.005**	**0.005**	0.025	<0.002
Ethylbenzene	**0.7**	**0.7**	1	<0.002
MTBE	**0.07**	**0.07**	**0.07**	<0.005
Toluene	**1.0**	**1.0**	2.5	<0.002
Total Xylenes	**10.0**	**10.0**	**10.0**	<0.005
Acenaphthene	**0.42**	**0.42**	2.1	<0.018
Acenaphthylene^	**0.21**	**0.21**	1.05	<0.010
Anthracene	**2.1**	**2.1**	10.5	<0.0066
Benzo(a)anthracene	**0.00013**	**0.00013**	0.00065	<0.00013
Benzo(a)pyrene	**0.0002**	**0.0002**	0.002	<0.0002
Benzo(b)fluoranthene	**0.00018**	**0.00018**	0.0009	<0.00018
Benzo(g,h,i)perylene^	**0.21**	**0.21**	1.05	<0.00076
Benzo(k)fluoranthene	**0.00017**	**0.00017**	0.00085	<0.00017
Chrysene	**0.0015**	**0.0015**	0.0075	<0.0015
Dibenz(a,h)anthracene	**0.0003**	**0.0003**	0.0015	<0.0003
Fluoranthene	**0.28**	**0.28**	1.4	<0.0021
Fluorene	**0.28**	**0.28**	1.4	<0.0021
Indeno(1,2,3-cd)pyrene	**0.00043**	**0.00043**	0.00215	<0.00043
Naphthalene	**0.14**	**0.14**	0.22	<0.010
Phenanthrene^	**0.21**	**0.21**	1.05	<0.0064
Pyrene	**0.21**	**0.21**	1.05	<0.0027
^Temporary Objectives from additional tables -- 10/1/04				
Updated 12/20/04				

Summary of Tier 2 Calculations
ABP Properties, LLC
2016-0917
12/05/19

Table 3

Tier 1 Objectives

		Benzene		Toluene		Ethylbenzene		Total Xylenes		Naphthalene		MTBE	
Residential	Ingestion	12	mg/kg	16,000	mg/kg	7,800	mg/kg	16,000	mg/kg	1,600	mg/kg	780	mg/kg
	Inhalation	0.8	mg/kg	650	mg/kg	400	mg/kg	320	mg/kg	170	mg/kg	8,800	mg/kg
	Migration Class 1	0.03	mg/kg	12	mg/kg	13	mg/kg	150	mg/kg	12	mg/kg	0.32	mg/kg
	Migration Class 2	0.17	mg/kg	29	mg/kg	19	mg/kg	150	mg/kg	18	mg/kg	0.32	mg/kg
Industrial/Commercial	Ingestion	100	mg/kg	410,000	mg/kg	200,000	mg/kg	410,000	mg/kg	41,000	mg/kg	20,000	mg/kg
	Inhalation	1.60	mg/kg	650	mg/kg	400	mg/kg	320	mg/kg	270	mg/kg	8,800	mg/kg
Construction Worker	Ingestion	2,300	mg/kg	410,000	mg/kg	20,000	mg/kg	41,000	mg/kg	4,100	mg/kg	2,000	mg/kg
	Inhalation	2.20	mg/kg	42	mg/kg	58	mg/kg	5.6	mg/kg	1.80	mg/kg	140	mg/kg
Soil Saturation		580	mg/kg	290	mg/kg	150	mg/kg	110	mg/kg	537.90	mg/kg	8,400	mg/kg

Tier 2 SSL Objectives

		Benzene	Equation	Toluene	Equation	Ethylbenzene	Equation	Total Xylenes	Equation	Naphthalene	Equation	MTBE	
Residential	Ingestion	11.64	S-2	6,257.14	S-1	7,821	S-1	15,643	S-1	1,564	S-1	782.1	S-1
	Inhalation	2.19	S-6	1,552.43	S-4	14.89	S-6	959.86	S-4	270.68	S-4	2,696.04	S-4
	Migration Mass-Limit Class 1	0.34	S-28	67.05	S-28	46.94	S-28	670.54	S-28	9.39	S-28	4.69	S-28
	Migration Class 1	0.197	S-17	113.60	S-17	157.49	S-17	2,782.40	S-17	48.58	S-17	0.84	S-17
Industrial-Commercial	Ingestion	104.06	S-2	1,635,200	S-1	204,400	S-1	408,800	S-1	40,880	S-1	20,440	S-1
	Inhalation	4.18	S-6	91,628.32	S-4	28.45	S-6	3,120.21	S-4	430.95	S-4	55,743.51	S-4
	Migration Mass-Limit Class 1	0.34	S-28	67.05	S-28	46.94	S-28	670.54	S-28	9.39	S-28	4.69	S-28
	Migration Class 1	0.197	S-17	113.60	S-17	157.49	S-17	2,782.40	S-17	48.58	S-17	0.84	S-17
Construction Worker	Ingestion	2,258.21	S-3	163,236	S-1	10,202.26	S-1	81,618	S-1	122,427	S-1	61,214	S-1
	Inhalation	5.87	S-7	592.77	S-5	40.01	S-7	80.74	S-5	2.79	S-5	297.28	S-5
Soil Saturation		3,538.78	S-29	3,010.40	S-29	1,912.33	S-29	1,530.32	S-29	537.90	S-29	30,456.13	S-29

all values are in mg/kg

Site Specific Value cannot exceed Soil Saturation Limit, otherwise Tier 2 Inhalation or Tier 2 Migration objectives are the Soil Saturation objective
Calculated value is less than Tier 1 Objective

Groundwater Contaminate Concentration Exceedances at Surface Water or Set Back Zone (mg/L)

	Benzene	Equation	Toluene	Equation	Ethylbenzene	Equation	Total Xylenes	Equation	Naphthalene	Equation	MTBE	
Result	#DIV/0!	R-26	#DIV/0!	R-26	#DIV/0!	R-26	#DIV/0!	R-26			#DIV/0!	R-26
Surface Water Objective	0.86		0.6		0.014		0.36					

ABP Properties, LLC *2016-0917*

Math for R-28 Calculations
BENZENE MATH FOR VERTICAL SOIL MODELING AND R-28 MODELING OF VERTICAL MODELED SOIL (Attachment A)

Sample Location	C_w = (soil contamination at modeling point) / (Equation S-17)				$GW_{cl} = C_w / DF$				Conversion: 1 foot = 30.48 cm		R-16: $\alpha_x = 0.10 * X$			R-17: $\alpha_z = \alpha_x / 3$				R-18: $\alpha_y = \alpha_z / 20$				"Term 1" = [X / (2 * α_x)]					"Term 2" = [1 - SQRT(1 + (4 * λ * α_z) / (U)²)]								
	C_w	/	DF	=	GW_{cl} (mg/L)				X (ft)	X (cm)			α_x (cm)			α_z (cm)			α_y (cm)			X	/	2	x	α_x	= "Term 1"								
1	5.2	/	1.966	=	2.645	2.645	/	20.000	=	0.13225	330	10058.4	0.1	x	10058.4	=	1005.84	1005.84	/	3	=	335.28	1005.84	/	20	=	50.292	10058.4	/	2	x	1005.84	=	5
3	32.5	/	1.966	=	16.531	16.531	/	20.000	=	0.82655	665	17221.2	0.1	x	17221.2	=	1722.12	1722.12	/	3	=	574.04	1722.12	/	20	=	86.106	17221.2	/	2	x	1722.12	=	5
4	1.64	/	1.966	=	0.783	0.783	/	20.000	=	0.03917	200	6278.88	0.1	x	6278.88	=	627.888	627.888	/	3	=	209.296	627.888	/	20	=	31.3944	6278.88	/	2	x	627.888	=	5
5	0.16	/	1.966	=	0.081	0.081	/	20.000	=	0.00407	1	30.48	0.1	x	30.48	=	3.048	3.048	/	3	=	1.016	3.048	/	20	=	0.1524	30.48	/	2	x	3.048	=	5
15	0.103	/	1.966	=	0.052	0.052	/	20.000	=	0.00259	1	30.48	0.1	x	30.48	=	3.048	3.048	/	3	=	1.016	3.048	/	20	=	0.1524	30.48	/	2	x	3.048	=	5
19	0.83	/	1.966	=	0.422	0.422	/	20.000	=	0.02111	1	30.48	0.1	x	30.48	=	3.048	3.048	/	3	=	1.016	3.048	/	20	=	0.1524	30.48	/	2	x	3.048	=	5
20	0.2	/	1.966	=	0.102	0.102	/	20.000	=	0.00509	150	4572	0.1	x	4572	=	457.2	457.2	/	3	=	152.4	457.2	/	20	=	22.86	4572	/	2	x	457.2	=	5
MW-4A	0.0991	/	1.966	=	0.045	0.045	/	20.000	=	0.00227	2	60.96	0.1	x	60.96	=	6.096	6.096	/	3	=	2.032	6.096	/	20	=	0.3048	60.96	/	2	x	6.096	=	5
SB-4B	0.0782	/	1.966	=	0.040	0.040	/	20.000	=	0.00391	1	30.48	0.1	x	30.48	=	3.048	3.048	/	3	=	1.016	3.048	/	20	=	0.1524	30.48	/	2	x	3.048	=	5

Sample Location	$\beta_1 = S_w / (4 * SORT(\alpha_x * X))$												$\beta_2 = S_w / (2 * SORT(\alpha_z * X))$												ERF(β_1)	ERF(β_2)	$C_{GW} = C_{source} \times e^{[("Term 1" + "Term 2") \times \lambda \times t_{travel}]} \times erf(\beta_1) \times erf(\beta_2)$								
	S_w	/	4	x	SORT	(	α_x	x	X	))=	β_1		S_w	/	2	x	SORT	(	α_z	x	X	))=	β_2		Section 742.APPENDIX C: Table G		C_{source}	x e	("Term 1"	+ "Term 2")	x ERF(β_1)	x ERF(β_2)	=	mg/L
1	5334	/	4	x	SORT	(	335.28	x	10058.4	))=	0.72615		304.8	/	2	x	SORT	(	59.292	x	10058.4	))=	0.21427		0.898645	0.238133	0.13225	x e	0.2648	x 0.898645	x 0.238133	=	0.00503	
4	5334	/	4	x	SORT	(	574.04	x	17221.2	))=	0.42412		304.8	/	2	x	SORT	(	86.106	x	17221.2	))=	0.12315		0.451359	0.140485	0.82655	x e	1.6542	x 0.451359	x 0.140485	=	0.00524	
5	5334	/	4	x	SORT	(	209.296	x	6278.88	))=	1.16335		304.8	/	2	x	SORT	(	31.3944	x	6278.88	))=	0.34325		0.903045	0.372634	0.03917	x e	0.0784	x 0.903045	x 0.372634	=	0.00503	
6	5334	/	4	x	SORT	(	1.016	x	30.48	))=	239.62962		304.8	/	2	x	SORT	(	0.1524	x	30.48	))=	79.71988		1.000000	1.000000	0.00407	x e	0.0081	x 1.000000	x 1.000000	=	0.00466	
15	5334	/	4	x	SORT	(	1.016	x	30.48	))=	239.62962		304.8	/	2	x	SORT	(	0.1524	x	30.48	))=	79.71988		1.000000	1.000000	0.00259	x e	0.0052	x 1.000000	x 1.000000	=	0.00360	
19	5334	/	4	x	SORT	(	152.4	x	4572	))=	1.56752		304.8	/	2	x	SORT	(	22.86	x	4572	))=	0.47149		0.676132	0.495015	0.02111	x e	0.0422	x 0.676132	x 0.495015	=	0.00261	
20	5334	/	4	x	SORT	(	2.032	x	60.96	))=	119.81481		304.8	/	2	x	SORT	(	0.3048	x	60.96	))=	35.35534		1.000000	1.000000	0.00509	x e	0.0102	x 0.975152	x 0.495015	=	0.00492	
MW-4A	5334	/	4	x	SORT	(	1.016	x	30.48	))=	239.62962		304.8	/	2	x	SORT	(	0.1524	x	30.48	))=	79.71988		1.000000	1.000000	0.00227	x e	0.0045	x 1.000000	x 1.000000	=	0.00303	
SB-4B	5334	/	4	x	SORT	(	1.016	x	30.48	))=	239.62962		304.8	/	2	x	SORT	(	0.1524	x	30.48	))=	79.71988		1.000000	1.000000	0.00391	x e	0.0078	x 1.000000	x 1.000000	=	0.00225	
																												x e	0.0156	x 1.000000	x 1.000000	=	0.00209	

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R-25 Calculations
BENZENE MATH FOR R-25 MODELING OF GROUNDWATER (Attachment A)

Sample Location	GW Value	Conversion: 1 foot = 30.48 cm		R-16: $\alpha_x = 0.10 * X$			R-17: $\alpha_y = \alpha_z / 3$				R-18: $\alpha_z = \alpha_x / 20$				"Term 1" = $[X / (2 * \alpha_x)]$				"Term 2" = $\{1 - SQRT[1 + (4 * \lambda * \alpha_x) / (U)]\}$										
		X (ft)	X (cm)	0.1	x	X (cm)	α_x (cm)	α_x (cm)	/	3	=	α_z (cm)	α_z (cm)	/	20	=	α_x (cm)	X	/	2	x	α_x	=	"Term 1"	1 -	SQRT[	1	+ [	4	x	λ	x	α_x	]/	U	]=	"Term 2"
MW-2	0.009	76	2316.48	0.1	x	2316.48	=	231.648	231.648	/	3	=	77.216	231.648	/	20	=	11.5824	2316.48	/	2	x	231.648	=	5	1 -	SQRT[	1	+ [	4	x	0.0009	x	231.648	]/	5.791540	]=	-0.0749
MW-5	1.18	620	18897.6	0.1	x	18897.6	=	1889.76	1889.76	/	3	=	629.92	1889.76	/	20	=	94.488	18897.6	/	2	x	1889.76	=	5	1 -	SQRT[	1	+ [	4	x	0.0009	x	1889.76	]/	5.36540	]=	-0.9680

Sample Location	$\beta_1 = S_w / (4 * SQRT[\alpha_x * X])$										$\beta_2 = S_w / (2 * SQRT[\alpha_x * X])$										ERF(β_1)	ERF(β_2)	$C_{(x)} = C_{source} \times e^{[(term\ 1\ x\ term\ 2)]} \times erf(\beta_1) \times erf(\beta_2)$											
	S_w	/ [	4	x	SQRT	[	α_x	x	X	]) =	β_1	S_w	/ [	2	x SQRT	[	α_x	x	X	]) =	β_2	Section 742,APPENDIX C: Table G		C_{source}	x e	[Term 1	x	Term 2]	x	ERF(β_1)	x	ERF(β_2)	=	mg/L
MW-2	5334	/ [	4	x	SQRT	[	77.216	x	2316.48	]) =	3.15391	304.8	/ [	2	x SQRT	[	11.5824	x	2316.48	]) =	0.93340	0.000002	0.811756	0.000000	x e	1	x	-0.0749	x	0.000002	x	0.811756	=	0.00000
MW-5	5334	/ [	4	x	SQRT	[	629.92	x	18897.6	]) =	0.38558	304.8	/ [	2	x SQRT	[	94.488	x	18897.6	]) =	0.11469	0.415340	0.126135	1.180000	x e	0	x	-0.9680	x	0.415340	x	0.126135	=	0.00000

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Math for R-25 Calculations

TOLUENE MATH FOR VERTICAL SOIL MODELING AND R-25 MODELING OF VERTICAL MODELED SOIL (Attachment A)

Sample Location	C_w = [soil contamination at modeling point] / (Equation S-17)	$GW_{ds} = C_w / DF$	Conversion: 1 foot = 30.48 cm	R-16: $\alpha_x = 0.10 * X$	R-17: $\alpha_y = \alpha_x / 3$	R-18: $\alpha_z = \alpha_y / 20$	"Term 1" = [X / (2 * α_x)]	"Term 2" = {1 - SQRT[1 + (4 * λ * α_z) / (U)]}
	C_w	C_o / DF = GW_{ds} (mg/L)	X (ft) X (cm)	0.1 x X (cm) = α_x (cm)	α_x (cm) / 3 = α_y (cm)	α_y (cm) / 20 = α_z (cm)	X / 2 x α_x = "Term 1"	1 - SQRT[1 +[4 x λ x α_z)/ U] = "Term 2"
1	66.7 / 5.560 = 12.005	12.005 / 20.000 = 0.60475	1 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT[1 +[4 x 0.011 x 3.048)/ 5.96540] = -0.0124
3	325 / 5.650 = 57.218	57.218 / 20.000 = 2.86092	19 579.12	0.1 x 579.12 = 57.912	57.912 / 3 = 19.304	57.912 / 20 = 2.8956	579.12 / 2 x 57.912 = 5	1 - SQRT[1 +[4 x 0.011 x 57.912)/ 5.96540] = -0.2145
4	24.8 / 5.650 = 4.366	4.366 / 20.000 = 0.21831	1 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT[1 +[4 x 0.011 x 3.048)/ 5.96540] = -0.0124

Sample Location	$\beta_1 = S_o / (4 * SQRT(\alpha_z * X))$	$\beta_2 = S_d / (2 * SQRT(\alpha_z * X))$	ERF(β_1) Section 7#2 Table C	ERF(β_2) APPENDIX C: Table C	$C_{air} = C_{source} \times e^{(["Term 1" + "Term 2"])} \times erf(\beta_1) \times erf(\beta_2)$
	S_o / (4 x SQRT (α_z x X)) = β_1	S_d / (2 x SQRT (α_z x X)) = β_2			C_{source} x e [("Term 1" + "Term 2")] x ERF(β_1) x ERF(β_2) = mg/L
1	5334 / (4 x SQRT (1.016 x 30.48)) = 239.62932	304.8 / (2 x SQRT (0.1524 x 30.48)) = 70.71068	1.000000	1.000000	0.60475 x e [5 x -0.0124] x 1.000000 x 1.000000 = 0.59824
3	5334 / (4 x SQRT (19.304 x 579.12)) = 12.61203	304.8 / (2 x SQRT (2.8956 x 579.12)) = 3.72161	1.000000	1.000000	2.86092 x e [5 x -0.2145] x 1.000000 x 1.000000 = 0.97805
4	5334 / (4 x SQRT (1.016 x 30.48)) = 239.62932	304.8 / (2 x SQRT (0.1524 x 30.48)) = 70.71068	1.000000	1.000000	0.21831 x e [5 x -0.0124] x 1.000000 x 1.000000 = 0.20516

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Math for R-26 Calculations

ETHYLBENZENE MATH FOR VERTICAL SOIL MODELING AND R-26 MODELING OF VERTICAL MODELED SOIL (Attachment A)

Sample Location	C_w = (soil contamination at modeling point) / (Equation S-17)	$GW_{obj} = C_w / DF$	Conversion: 1 foot = 30.48 cm	R-16: $\alpha_x = 0.10 * X$	R-17: $\alpha_y = \alpha_x / 3$	R-18: $\alpha_z = \alpha_x / 20$	"Term 1" = $[X / (2 * \alpha_x)]$	"Term 2" = $\{1 - SQRT[1 + (4 * \lambda * \alpha_x) / (U)]\}$
	... / ... = C_w	C_w / DF = GW_{obj} (mg/L)	X (ft) ; X (cm)	0.1 x X (cm) = α_x (cm)	α_x (cm) / 3 = α_y (cm)	α_x (cm) / 20 = α_z (cm)	X / 2 x α_x = "Term 1"	1 - SQRT [1 + (4 x λ x α_x) / U] = "Term 2"
1	13.5 / 11.249 = 1.200	1.200 / 20.000 = 0.06001	1 ; 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT [1 + (4 x 0.003 x 3.048) / 5.36540] = -0.0034
2	16.9 / 11.249 = 1.502	1.502 / 20.000 = 0.07512	1 ; 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT [1 + (4 x 0.003 x 3.048) / 5.36540] = -0.0034
3	63.5 / 11.249 = 5.645	5.645 / 20.000 = 0.28225	1 ; 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT [1 + (4 x 0.003 x 3.048) / 5.36540] = -0.0034

Sample Location	$\beta_1 = S_w / (4 * SQRT[\alpha_y * X])$	$\beta_2 = S_d / (2 * SQRT[\alpha_z * X])$	ERF(β_1)	ERF(β_2)	$C_{(x)} = C_{source} \times e^{(Term 1 \times Term 2)} \times erf(\beta_1) \times erf(\beta_2)$
	S_w / (4 x SQRT (α_y x X)) = β_1	S_d / (2 x SQRT (α_z x X)) = β_2	Section 742.APPENDIX C: Table G		C_{source} x e ["Term 1" x "Term 2"] x ERF(β_1) x ERF(β_2) = mg/L
1	5334 / (4 x SQRT (1.016 x 30.48)) = 239.62862	304.8 / (2 x SQRT (0.1524 x 30.48)) = 70.71068	1.000000	1.000000	0.06001 x e [5 x -0.0034] x 1.000000 x 1.000000 = 0.05899
2	5334 / (4 x SQRT (1.016 x 30.48)) = 239.62862	304.8 / (2 x SQRT (0.1524 x 30.48)) = 70.71068	1.000000	1.000000	0.07512 x e [5 x -0.0034] x 1.000000 x 1.000000 = 0.07385
3	5334 / (4 x SQRT (1.016 x 30.48)) = 239.62862	304.8 / (2 x SQRT (0.1524 x 30.48)) = 70.71068	1.000000	1.000000	0.28225 x e [5 x -0.0034] x 1.000000 x 1.000000 = 0.27749

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R-26 Calculations
ETHYLBENZENE MATH FOR R-26 MODELING OF GROUNDWATER (Attachment A)

Sample Location	GW Value	Conversion: 1 foot = 30.48 cm		R-16: $\alpha_x = 0.10 * X$					R-17: $\alpha_y = \alpha_x / 3$					R-18: $\alpha_z = \alpha_x / 20$				
		X (ft)	X (cm)	0.1	x	X (cm)		α_x (cm)	α_x (cm)	/	3	=	α_y (cm)	α_x (cm)	/	20	=	α_z (cm)
MW-5	2.60	75	2286	0.1	x	2286	=	228.6	228.6	/	3	=	76.2	228.6	/	20	=	11.43

Sample Location	"Term 1" = $[X / (2 * \alpha_x)]$							"Term 2" = $\{1 - SQRT[1 + (4 * \lambda * \alpha_x) / (U)]\}$													
	X	/	2	x	α_x	=	"Term 1"	1	-	SQRT [	1	+(	4	x	λ	x	α_x	)/	U	]=	"Term 2"
MW-5	2286	/	2	x	228.6	=	5	1	-	SQRT [	1	+(	4	x	0.003	x	228.6	)/	5.36540	]=	-0.2293

Sample Location	$\beta_1 = S_w / (4 * SQRT[\alpha_y * X])$											$\beta_2 = S_d / (2 * SQRT[\alpha_z * X])$									
	S_w	/(	4	x	SQRT	(	α_y	x	X	))=	β_1	S_d	/(	2	x SQRT	(	α_z	x	X	))=	β_2
MW-5	6334	/(	4	x	SQRT	(	76.2	x	2286	))=	3.19585	304.8	/(	2	x SQRT	(	11.43	x	2286	))=	0.94281

Sample Location	ERF(β_1)	ERF(β_2)	$C_{(x)} = C_{source} \times e^{(Term 1 \times Term 2)} \times erf(\beta_1) \times erf(\beta_2)$										
	Section 742.APPENDIX C: Table G		C_{source}	x e	("Term 1"	x	"Term 2")	x	ERF(β_1)	x	ERF(β_2)	=	mg/L
MW-5	0.000904	0.617576	2.60000	x e	5	x	-0.2293	x	0.000904	x	0.617576	=	0.00067

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Math for R-20 Calculations

TOTAL XYLENES MATH FOR VERTICAL SOIL MODELING AND R-38 MODELING OF VERTICAL MODELED SOIL (Attachment A)

Sample Location	C_w = (soil contamination at modeling point) / (Equation S-17)	$GW_m = C_w / DF$	Conversion: 1 foot = 30.48 cm	R-16: $\alpha_x = 0.10 * X$	R-17: $\alpha_y = \alpha_x / 3$	R-18: $\alpha_z = \alpha_y / 20$	"Term 1" = [X / (2 * α_x)]	"Term 2" = [1 - SQRT(1 + (4 * λ * α_z) / (U)²)]
	C_w / 13.912 = C_w	C_w / DF = GW_m (mg/L)	X (ft) X (cm)	0.1 x X (cm) = α_x (cm)	α_x (cm) / 3 = α_y (cm)	α_y (cm) / 20 = α_z (cm)	X / 2 x α_x = "Term 1"	1 - SQRT[1 +[4 x λ x α_z / U²]] = "Term 2"
1	74.7 / 13.912 = 5.369	5.369 / 20.000 = 0.26847	1 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT[1 +[4 x 0.0012 x 3.048 / 5.39544²]] = -0.0022
2	83.4 / 13.912 = 5.995	5.995 / 20.000 = 0.29974	1 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT[1 +[4 x 0.0010 x 3.048 / 5.39540²]] = -0.0022
3	343 / 13.912 = 24.655	24.655 / 20.000 = 1.23275	1 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT[1 +[4 x 0.0010 x 3.048 / 5.39540²]] = -0.0022
4	49.1 / 13.912 = 3.529	3.529 / 20.000 = 0.17647	1 30.48	0.1 x 30.48 = 3.048	3.048 / 3 = 1.016	3.048 / 20 = 0.1524	30.48 / 2 x 3.048 = 5	1 - SQRT[1 +[4 x 0.0010 x 3.048 / 5.39540²]] = -0.0022

Sample Location	$\beta_1 = S_w / (4 * SQRT(\alpha_x * X))$	$\beta_2 = S_y / (2 * SQRT(\alpha_y * X))$	ERF(β_1) Section 742/APPENDIX C: Table Q	ERF(β_2)	$C_{(x)} = C_{source} \times e^{[("term\ 1")^2 - ("term\ 2")^2]} \times erf(\beta_1) \times erf(\beta_2)$
	S_w / (4 x SQRT(α_x x X)) = β_1	S_y / (2 x SQRT(α_y x X)) = β_2			C_{source} x e [("term 1")² - ("term 2")²] x ERF(β_1) x ERF(β_2) = mg/L
1	5334 / (4 x SQRT(1.016 x 30.48)) = 239.62662	304.8 / (2 x SQRT(0.1524 x 30.48)) = 70.71068	1.000000	1.000000	0.26847 x e [25 - 25] x 1.000000 x 1.000000 = 0.26858
2	5334 / (4 x SQRT(1.016 x 30.48)) = 239.62662	304.8 / (2 x SQRT(0.1524 x 30.48)) = 70.71068	1.000000	1.000000	0.29974 x e [25 - 25] x 1.000000 x 1.000000 = 0.29953
3	5334 / (4 x SQRT(1.016 x 30.48)) = 239.62662	304.8 / (2 x SQRT(0.1524 x 30.48)) = 70.71068	1.000000	1.000000	1.23275 x e [25 - 25] x 1.000000 x 1.000000 = 1.21953
4	5334 / (4 x SQRT(1.016 x 30.48)) = 239.62662	304.8 / (2 x SQRT(0.1524 x 30.48)) = 70.71068	1.000000	1.000000	0.17647 x e [25 - 25] x 1.000000 x 1.000000 = 0.17457

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R-26 Calculations

NAPTHALENE MATH FOR R-26 MODELING OF GROUNDWATER (Attachment A)

Sample Location	GW Value	Conversion: 1 foot = 30.48 cm		R-16: $\alpha_x = 0.10 * X$					R-17: $\alpha_y = \alpha_x / 3$					R-16: $\alpha_z = \alpha_x / 20$					"Term 1" = $[X / (2 * \alpha_x)]$							"Term 2" = $[1 - SQRT[1 + (4 * \lambda * \alpha_x) / (U)]]$													
		X (ft)	X (cm)	0.1	x	X (cm)		α_x (cm)	α_x (cm)	/	3	=	α_y (cm)	α_x (cm)	/	20	=	α_z (cm)	X	/	2	x	α_x	=	"Term 1"	1	-	SQRT [	1	+(	4	x	λ	x	α_x	)/	U	]=	"Term 2"
MW-4	0.349	59	1798.32	0.1	x	1798.32	=	179.832	179.832	/	3	=	59.944	179.832	/	20	=	8.9916	1798.32	/	2	x	179.832	=	5	1	-	SQRT [	1	+(	4	x	0.0027	x	179.832	)/	5.38540	]=	-0.1870

Sample Location	$\beta_1 = S_w / (4 * SQRT(\alpha_y * X))$											$\beta_2 = S_d / (2 * SQRT(\alpha_z * X))$										ERF(β_1)	ERF(β_2)	$C_{(x)} = C_{source} \times e^{(Term 1 \times Term 2)} \times erf(\beta_1) \times erf(\beta_2)$										
																						Section 742.APPENDIX C: Table G												
	S_w	/(	4	x	SQRT	(	α_y	x	X	)) =	β_1	S_d	/(	2	x SQRT	(	α_z	x	X	)) =	β_2			C_{source}	x e	("Term 1"		"Term 2")	x	ERF(β_1)	x	ERF(β_2)	=	mg/L
MW-4	5334	/(	4	x	SQRT	(	59.944	x	1798.32	)) =	4.06150	304.8	/(	2	x SQRT	(	8.9916	x	1798.32	)) =	1.19849	1.000000	0.900009	0.34000	x e	5	x	-0.1870	x	1.000000	x	0.900000	=	0.13776

Illinois Enviromental Protection Agency
Leaking Underground Storage Tank Program
SSL Input Parameters for Use with Tier 2 Calculations

A. Site Identification

IEMA Incident # (6- or 8-digit): 2016-0917 IEPA LPC # (10-digit): 0530100002

Site Name: ABP Properties, LLC

Site Address (not a P.O. Box): 120 West 1st Street

City: Gibson City County: Ford Zip Code: 60936

Leaking UST Technical File

B. Tier 2 Calculation Information

Equation(s) Used (ex: S12,S17,S28): S5,6,7,8,9,10,17,18,19,20,21,22,24

Contact Information for Individual Who Performed Calculations:

0

Land Use: Residential Soil Type: Sand

Groundwater: [X] Class I [ ] Class II

Mass Limit: [ ] Yes [X] No If Yes, then Specify Acreage:

- Mass Limit Acreage other than defaults must always be rounded up.
- Failure to use site-specific parameters where allowed could affect payment from the UST Fund
- Maps depicting source width, plume dimensions, distance, etc. must also be submitted.
- Inputs must be submitted in the designated unit.

AT (ingestion)	=	Residential = 6	yr
		Con. Worker = 0.115	yr
AT (inhalation)	=	Residential = 30	yr
		Con. Worker = 0.115	yr
AT_c	=	70	yr
BW	=	Res. (NonCarcinogen) = 15	kg
		Res. (Carcinogen) = 70	kg
		Con. Worker = 70	kg
C_{sat}	=	Benzene = 3538.781	mg/kg
		Toluene = 3010.399	mg/kg
		Ethylbenzene = 1912.333	mg/kg
		Total Xylenes = 1530.319	mg/kg
		MTBE = 30456.13	mg/kg
		Naphthalene = 537.903	mg/kg
			mg/kg
			mg/kg
			mg/kg
			mg/kg

d_a	=	3.048	m
d_s	=	3.048	m
DA	=	Benzene = 0.000472885125498908	cm^2/s
		Toluene = 0.000190648177765709	cm^2/s
		Ethylbenzene = 9.921406449034 89E-05	cm^2/s
		Xylenes = 0.000065763288726339	cm^2/s
		MTBE = 0.000189498512056847	cm^2/s
		Naphthalene = 3.102706090670 88E-06	cm^2/s
			cm^2/s
			cm^2/s
			cm^2/s
			cm^2/s

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C_w	=	Benzene = 0.1	mg/L
		Toluene = 20	mg/L
		Ethylbenzene = 157.486	mg/L
		Total Xylenes = 2782.399	mg/L
		MTBE = 0.836	mg/L
		Naphthalene = 48.584	mg/L
			mg/L
			mg/L
			mg/L
			mg/L
			mg/L
d	=	4.694	m
ED (inhalation of carcinogens)	=	Residential = 30	yr
		Con. Worker = 1	yr
ED (ingestion of noncarcinogens)	=	Residential = 6	yr
		Con. Worker = 1	yr
ED (inhalation of noncarcinogens)	=	Residential = 30	yr
		Con. Worker = 1	yr
ED (ingestion of groundwater)	=	Residential = 30	yr
		Con. Worker = 1	yr
ED_{M-L}	=	70	yr
EF	=	Residential = 350	d/yr
		Con. Worker = 30	d/yr
F(x)	=	0.194	unitless
f_{oc}	=	0.0343	g/g
GW_{obj}	=	Benzene = 0.005	mg/L
		Toluene = 1	mg/L
		Ethylbenzene = 0.7	mg/L
		Total Xylenes = 10	mg/L
		MTBE = 0.07	mg/L
		Naphthalene = 0.14	mg/L
			mg/L
			mg/L
			mg/L
			mg/L
H'	=	Benzene = 0.23	unitless
		Toluene = 0.271	unitless
		Ethylbenzene = 0.324	unitless
		Total Xylenes = 0.271	unitless
		MTBE = 0.0241	unitless
		Naphthalene = 0.0198	unitless
			unitless
			unitless
			unitless
			unitless
I	=	0.00964	m/m
I	=	0.3	m/yr
I_{M-L}	=	0.18	m/yr
$IF_{soil-adj}$	=	114	(mg-yr)/(kg-d)
IR_{soil}	=	Residential = 200	mg/d
		Con. Worker = 480	mg/d

D_i	=	Benzene = 0.088	cm^2/s
		Toluene = 0.087	cm^2/s
		Ethylbenzene = 0.075	cm^2/s
		Total Xylenes = 0.0735	cm^2/s
		MTBE = 0.102	cm^2/s
		Naphthalene = 0.0000075	cm^2/s
			cm^2/s
			cm^2/s
			cm^2/s
			cm^2/s
			cm^2/s
D_w	=	Benzene = 0.0000102	cm^2/s
		Toluene = 0.0000086	cm^2/s
		Ethylbenzene = 0.0000078	cm^2/s
		Total Xylenes = 0.00000923	cm^2/s
		MTBE = 0.000011	cm^2/s
		Naphthalene = 0.0000075	cm^2/s
			cm^2/s
			cm^2/s
			cm^2/s
			cm^2/s
DF	=	4.792494985	unitless
ED (ingestion of carcinogens	=		yr
		Con. Worker = 1	yr
K_{oc}	=	Benzene = 50	cm^3/g or L/kg
		Toluene = 158	cm^3/g or L/kg
		Ethylbenzene = 320	cm^3/g or L/kg
		Total Xylenes = 398	cm^3/g or L/kg
		MTBE = 11.5	cm^3/g or L/kg
		Naphthalene = 500	cm^3/g or L/kg
			cm^3/g or L/kg
			cm^3/g or L/kg
			cm^3/g or L/kg
			cm^3/g or L/kg
K_s	=	1830	m/yr
L	=	34.7472	m
PEF	=		m^3/kg
PEF'	=		m^3/kg
Q/C (VF equations)	=	Residential = 68.81	$(g/m^2\text{-}s)/(kg/m^3)$
		Con. Worker = 85.81	$(g/m^2\text{-}s)/(kg/m^3)$
Q/C (PEF equations)	=		$(g/m^2\text{-}s)/(kg/m^3)$

RfC (mg/m^3)		**Chronic**	**Subchronic**
Benzene	=	0.03	0.08
Toluene	=	5	5
Ethylbenzene	=	1	9
Total Xylenes	=	0.1	0.4
MTBE	=	3	2.5
Naphthalene	=	0.003	0.003
	=		NA
	=		NA
	=		NA
	=		NA

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IR_w	=	Residential = 2	L/d
K	=	873.5472	m/yr
K_d(non-ionizing organics)	=	Benzene = 1.715	cm^3/g or L/kg
		Toluene = 5.4194	cm^3/g or L/kg
		Ethylbenzene = 10.976	cm^3/g or L/kg
		Total Xylenes = 13.6514	cm^3/g or L/kg
		MTBE = 0.39445	cm^3/g or L/kg
		Naphthalene = 17.15	cm^3/g or L/kg
			cm^3/g or L/kg
			cm^3/g or L/kg
			cm^3/g or L/kg
			cm^3/g or L/kg
K_d (ionizing organics)	=		cm^3/g or L/kg
K_d (inorganics)	=		cm^3/g or L/kg
VF'	=	Benzene = 538	m^3/kg
		Toluene = 847.314	m^3/kg
		Ethylbenzene = 1174.557	m^3/kg
		Total Xylenes = 1442.677	m^3/kg
		MTBE = 849.88	m^3/kg
		Naphthalene = 6641.873	m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg
VM_{M-L}	=	#VALUE!	m^3/kg
		#VALUE!	m^3/kg
		#VALUE!	m^3/kg
		#VALUE!	m^3/kg
		#VALUE!	m^3/kg
		#VALUE!	m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg
VF'_{M-L}	=	#VALUE!	m^3/kg
		#VALUE!	m^3/kg
		#VALUE!	m^3/kg
		#VALUE!	m^3/kg
		#VALUE!	m^3/kg
		#VALUE!	m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg
η	=	0.532	L_{pore}/L_{soil}
θ_a	=	0.289	L_{air}/L_{soil}

RfD_o mg/(kg-d)		Chronic	Subchronic
Benzene	=	0.004	0.012
Toluene	=	0.08	0.8
Ethylbenzene	=	0.1	0.05
Total Xylenes	=	0.2	0.4
MTBE	=	0.01	0.3
Naphthalene	=	0.02	0.6
	=		0.2
	=		NA
	=		NA
	=		NA

S	=	Benzene = 1800	mg/L
		Toluene = 530	mg/L
		Ethylbenzene = 170	mg/L
		Total Xylenes = 110	mg/L
		MTBE = 51000	mg/L
		Naphthalene = 31	mg/L
			mg/L
			mg/L
			mg/L
			mg/L
SF_o	=	Benzene = 0.055	$(mg/kg-d)^{-1}$
		Toluene = NA	$(mg/kg-d)^{-1}$
		Ethylbenzene = 0.011	$(mg/kg-d)^{-1}$
		Total Xylenes = NA	$(mg/kg-d)^{-1}$
		MTBE = NA	$(mg/kg-d)^{-1}$
		Naphthalene = NA	$(mg/kg-d)^{-1}$
			$(mg/kg-d)^{-1}$
			$(mg/kg-d)^{-1}$
			$(mg/kg-d)^{-1}$
			$(mg/kg-d)^{-1}$
T	=	Residential = 9.5E08	s
		Con. Worker = 3.6×10^8	s
T_{M-L}	=	30	yr
THQ	=	1	unitless
TR	=	1.00E-06	unitless
U_m	=	4.69	m/s
URF	=	Benzene = 7.8×10^{-6}	$(\mu g/m^3)^{-1}$
U_t	=	11.32	m/s
V	=	0.5	unitless
VF	=	Benzene = 7008.212	m^3/kg
		Toluene = 11037.45	m^3/kg
		Ethylbenzene = 15300.248	m^3/kg
		Total Xylenes = 18792.88	m^3/kg
		MTBE = 11070.881	m^3/kg
		Naphthalene = 86519.657	m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg
			m^3/kg

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θ_w	=	0.243	L_{water}/L_{soil}
ρ_b	=	1.233	kg/l or g/cm^3
ρ_s	=	2.634	g/cm^3
ρ_w	=	1	g/cm^3
1/(2b+3)	=	0.09	unitless

Illinois Enviromental Protection Agency
Leaking Underground Storage Tank Program
RBCA Input Parameters for Use with Tier 2 Calculations

A. **Site Identification**

IEMA Incident # (6- or 8-digit): 2016-0917 IEPA LPC # (10-digit): 0530100002

Site Name: ABP Properties, LLC

Site Address (not a P.O. Box): 120 West 1st Street

City: Gibson City County: Ford Zip Code: 60936

Leaking UST Technical File

B. **Tier 2 Calculation Information**

Equation(s) Used (ex: R12,R14,R26): R16, R17, R18,R19, R21, R22, R23, R24,R26

Contact Information for Individual Who Performed Calculations:

0

Land Use: Residential Soil Type: Sand

Groundwater: [X] Class I [ ] Class II

Mass Limit: [ ] Yes [X] No If Yes, then Specify Acreage:

Objective from S17 used in R26? [ ] Yes [X] No

If Yes, then Specify C_{source} from S17 See Attached mg/L.

- Mass Limit Acreage other than defaults must always be rounded up.
- Failure to use site-specific parameters where allowed could affect payment from the UST Fund
- Maps depicting source width, plume dimensions, distance, etc. must also be submitted.
- Inputs must be submitted in the designated unit.

AT_c	=	70	yr
AT_n	=	Residential = 30 Con. Worker = 0.115	yr yr
BW	=	70	yr
C_{source}	=	See Attached	mg/L
$C_{(x)}$	=	See Attached	mg/L
d	=	100	cm

D^{air}	=	See Attached	cm^2/s
D^{water}	=	See Attached	cm^2/s
D_s^{eff}	=	See Attached	cm^2/s
ED	=	Residential = 30 Con. Worker = 1	yr yr
EF	=	Residential = 350 Con. Worker = 30	d/yr d/yr

erf	=	See Attached	unitless
f_{oc}	=	0.0343	g/g
GW_{comp}	=	See Attached	mg/L
GW_{source}	=	See Attached	mg/L
H'	=	See Attached	$cm3_{water}/cm^3_{air}$
I	=	0.00964	cm/cm
I	=	30	cm/yr
IR_{air}	=	20	m^3/d
IR_{soil}	=	Residential = 100 Con. Worker = 480	mg/d mg/d
IR_w	=	Residential = 2	L/d
K	=	239.328 87354.720	cm/d cm/yr
K_{oc}	=	See Attached	cm^3/g or L/kg
k_s (non-ionizing organics)	=	See Attached	cm^3_{water}/g_{soil}
k_s (ionizing organics)	=	Not Applicable	cm^3_{water}/g_{soil}
k_s (inorganics)	=	Not Applicable	cm^3_{water}/g_{soil}
L_s	=	100	cm
LF_{sw}	=	See Attached	$(mg/L_{water})/(mg/kg_{soil})$
M	=	0.5	mg/cm^2
Pe	=	$6.9 \cdot 10^{-14}$	g/cm^4-s
RAF_d	=	0.5	unitless
α_x	=	See Attached	cm
α_y	=	See Attached	cm
α_z	=	See Attached	cm
λ	=	See Attached	d^{-1}
π	=	3.1416	
τ	=	$9.46 \cdot 10^8$	s

RAF_d (PNAs)	=	0.05	unitless
RAF_d (inorganics)	=	0	unitless
RAF_o	=	1	unitless
$RBSL_{air}$ (carcinoginic)	=	See Attached	$\mu g/m^3$
$RBSL_{air}$ (noncarcinogenic)	=	See Attached	$\mu g/m^3$
RfD_i	=	See Attached	mg/kg-d
SA	=	3,160	cm^2/d
S_d	=	200.0	cm
S_w	=	5,334.0	cm
SF_i	=	See Attached	$(mg/kg-d)^{-1}$
SF_o	=	See Attached	$(mg/kg-d)^{-1}$
THQ	=	1	unitless
TR	=	1.00E-06	unitless
U	=	6.3653	cm/d
U_{air}	=	225	cm/s
U_{gw}	=	87354.729	cm/y
VF_p	=	3.97133E-12	kg/m^3
VF_{samb}	=	See Attached	$(mg/m^3_{air})/mg/kg_{soil}$ or kg/m
VF_{ss}	=	See Attached	kg/m3
W	=		cm
w	=	0.22	g_{water}/g_{soil}
δ_{air}	=	200	cm
δ_{gw}	=	200	cm
θ_{as}	=	0.15874	cm^3_{air}/cm^3_{soil}
θ_{ws}	=	0.27126	cm^3_{water}/cm^3_{soil}
θ_T	=	0.43	cm^3/cm^3_{soil}
ρ_b	=	1.233	g/cm^3
ρ_w	=	1	g/cm^3

	H'	λ	Koc
Benzene	0.23	0.0009	50
Toluene	0.271	0.011	158
Ethylbenzene	0.324	0.003	320
Total Xylenes	0.271	0.0019	398
MTBE	0.0241	0	11.5
Naphthalene	0.0198	0.0027	500

Benzene R26 Modeled Groundwater from Vertical Modeled Soils

Location	C_{source} from S17 (mg/L)	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w/(4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w/(2 \cdot \sqrt{[\alpha_z \cdot X]})$
1	0.132	0.005	10058.4	1005.84	335.28	50.292	0.69554535	0.23813323
3	0.827	0.005	17221.2	1722.12	574.04	86.106	0.45135934	0.14048466
4	0.039	0.005	6278.88	627.888	209.296	31.3944	0.90004625	0.37263353
5	0.004	0.004	30.48	3.048	1.016	0.1524	1	1
6	0.003	0.003	30.48	3.048	1.016	0.1524	1	1
15	0.003	0.003	30.48	3.048	1.016	0.1524	1	1
19	0.021	0.005	4572	457.2	152.4	22.86	0.97813156	0.49501492
20	0.005	0.005	60.96	6.096	2.032	0.3048	1	1
MW-4A	0.002	0.002	30.48	3.048	1.016	0.1524	1	1
SB-4B	0.002	0.002	30.48	3.048	1.016	0.1524	1	1

Benzene R26 Modeled Groundwater

Location	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w/(4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w/(2 \cdot \sqrt{[\alpha_z \cdot X]})$
MW-2	0.009	2316.48	231.648	77.216	11.5824	0.99999177	0.81175629
MW-5	1.180	18897.6	1889.76	629.92	94.488	0.41533983	0.12813526

Toluene R26 Modeled Groundwater from Vertical Modeled Soils								
Location	C_{source} from S17 (mg/L)	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$
1	0.6048	0.5683	30.48	3.048	1.016	0.1524	1	1
3	2.8609	0.9791	579.12	57.912	19.304	2.8956	1	0.99999986
4	0.2183	0.2052	30.48	3.048	1.016	0.1524	1	1

Toluene R26 Modeled Groundwater							
Location	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$

Ethylbenzene R26 Modeled Groundwater from Vertical Modeled Soils								
Location	C_{source} from S17 (mg/L)	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$
1	0.0600	0.0590	30.48	3.048	1.016	0.1524	1	1
2	0.0751	0.0739	30.48	3.048	1.016	0.1524	1	1
3	0.2822	0.2775	30.48	3.048	1.016	0.1524	1	1

Ethylbenzene R26 Modeled Groundwater							
Location	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	$\sqrt{[\alpha_y \cdot X]}$	$\sqrt{[\alpha_z \cdot X]}$
MW-5	2.690	2286	228.6	76.2	11.43	0.99999377	0.81757756

Total Xylenes R26 Modeled Groundwater from Vertical Modeled Soils

Location	C_{source} from S17 (mg/L)	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$
1	0.2685	0.2656	30.48	3.048	1.016	0.1524	1	1
2	0.2997	0.2965	30.48	3.048	1.016	0.1524	1	1
3	1.2327	1.2195	30.48	3.048	1.016	0.1524	1	1
4	0.1765	0.1746	30.48	3.048	1.016	0.1524	1	1

Total Xylenes R26 Modeled Groundwater

Location	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$

MTBE R26 Modeled Groundwater from Vertical Modeled Soils

Location	C_{source} from S17 (mg/L)	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_y / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$

MTBE R26 Modeled Groundwater

Location	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$

Naphthalene R26 Modeled Groundwater from Vertical Modeled Soils								
Location	C_{source} from S17 (mg/L)	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$

Naphthalene R26 Modeled Groundwater							
Location	C(x) (mg/L)	X (cm)	α_x (cm)	α_y (cm)	α_z (cm)	erf: $S_w / (4 \cdot \sqrt{[\alpha_y \cdot X]})$	erf: $S_w / (2 \cdot \sqrt{[\alpha_z \cdot X]})$
MW-4	0.349	1798.32	179.832	59.944	8.9916	0.99999999	0.9099085

Tier 2 Industrial/Commercial Calculations for Benzene

ABP Properties, LLC
2016-0917

SSL RBCA | SSL & RBCA IRIS/HEAST

Date Compiled: 12/05/19

Input Values

Holcomb's Bulk Density =>	0	Converted Value to be used in calculation sheet -->			–	USDA Soil Classification:	Sand			
Organic Matter (%) -->	0	FOC % (0.58 conversion) -->	0.000	Organic Matter (mg/kg)	0	FOC mg/kg (0.58 conversion)	0.000	foc conversion to g/g:	0.000	

1.233	ρ_b - Dry Soil Bulk Density				1.5 or; Gravel = 2.0; Sand = 1.8; Silt = 1.6; Clay = 1.7; or Site Specific
2.634	ρs - Soil Particle Density				2.65 or; Site Specific
0.289	Θ_a - Air Filled Soil Porosity	*0.289*	Value from S-21		Top 1 meter = 0.28; below 1 meter = 0.13; Gravel = 0.05; Sand = 0.14; Silt =0.24; Clay = 0.19; or Calculated Value (S21)
0.243	Θw - Water Filled Soil Porosity	*0.243*	Value from S-20		Top 1 meter = 0.15; below 1 meter = 0.30; Gravel = 0.20; Sand = 0.18; Silt =0.16; Clay = 0.17; or Calculated Value (S20)
0.532	n - SSL: Total Soil Porosity	*0.532*	Value from S-24		0.43 or; Gravel - 0.25; Sand = 0.32; Silt = 0.40; Clay = 0.36; or Calculated Value (S24)
0.00964	I - Hydraulic Gradient				Site Specific
0.034	foc - Total Organic Carbon (g/g)				Surface Soil = 0.006; Subsurface Soil = 0.002; or Site Specific
20.000	DF - Dilution Factor	*4.792*	Value from S-22		If calculated value for DF is less than 20, then 20 default is used, else calculated value is used
4.695	d - Mixing Zone (m)	*4.695*	Value from S-25		2; or calculated value
3.048	d_s - Depth of source (m)		feet = 10		Depth of Source (Vertical thickness of contamination)
873.55	K - Hydraulic Conductivity (m/yr)	cm/sec =	2.77E-03		Site Specific 2.39E+02 cm/d 8.74E+04 cm/yr Use cm/d for R15, R19, & R26; cm/yr for R24
34.747	L_s - Source Length Parallel to Groundwater Flow (m)		feet = 114		Site Specific (m)
3.048	d_a - Aquifer Thickness (m)		feet = 10		Site Specific (m)
0.3	I - Infiltration Rate (m/yr)				0.3 for Illinois
1830	K_s - Saturated Hydraulic Conductivity				See Table K for Input Values
0.005	GW_{obj} - Groundwater Remediation Objective Class 1				0.025 GW_{obj} - Groundwater Remediation Objective Class 2
0.090	1/(2b+3) - Exponent for S20				See Table K for Input Values
70	BW - Body Weight				Residential = 70 (carcinogenic); 15 (non-carcinogenic); Industrial/Commercial = 70; Construction Worker = 70; RBCA = 70
114	$IR_{soil-adj}$ -Age Adjusted Soil Ingestion Factor for Carcinogens				114
50	IR_{soil} -Soil Ingestion Rate				Residential = 200; Industrial/Commercial = 50; Construction Worker = 480
0.055	SF_o -Oral Slope Factor				Benzene = 0.055
1	IR_w -Daily Water Ingestion Rate				Residential = 2; Industrial/Commercial = 1
1800	S - Solubility in Water				Benzene = 1750
1.0E-06	TR - Target Cancer Risk				Residential = 10^{-6}; Industrial/Commercial = 10^{-6}; Construction Worker = 10^{-6} at point of human exposure
70	AT_c -Average Time for Carcinogens				70
7.80E-06	URF - Inhalation Unit Risk Factor				Benzene = 7.8 x 10^{-6}
250	EF - Exposure Frequency				Residential = 350; Industrial/Commercial = 250; Construction Worker = 30
25	ED - Exposure Duration for Inhalation to Carcinogens				Residential = 30; Industrial/Commercial = 25; Construction Worker = 1
68.81	Q/C - Inverse of the mean concentration at the center of a square source				Residential = 68.81; Industrial/Commercial = 85.81; Construction Worker = 85.81; or Table H
7.90E+08	T - Exposure Interval				Residential = 9.5 x10^8; Industrial/Commercial = 7.9 x 10^8; Construction Worker = 3.6 x 10^8
30	T_{M-L} - Exposure Interval for Mell Limit Volatilization Factor Equation S26				30
70	ED_{M-L} - Exposure Duration for Migration to Groundwater Mass-Limit Equation S28				70
0.18	I_{M-L} - Infiltration Rate for Migration to Groundwater Mass-Limit Equation S28				0.18
0.088	D_i - Diffusivity in Air				Benzene = 0.088
0.23	H' - Henry's Law Constant				Benzene = 0.228
1.02E-05	D_w - Diffusivity in Water				Benzene = 9.8 x 10^{-6}
60	K_{oc} - Organic Carbon Partition Coefficient				Benzene = 58.9

Industrial/Commercial Ingestion Tier II Benzene Objective

$$S\text{-}3 = \frac{TR \times BW \times AT_c \times 365}{SF_o \times 10^{-6} \times EF \times ED \times IRsoil} = \frac{1.0E\text{-}06 \times 70 \times 70 \times 365}{0.055 \times 1.00E\text{-}06 \times 250 \times 25 \times 50} = \frac{1.8E+00}{1.72E\text{-}02} = 104.058 \text{ mg/kg}$$

Construction Worker Ingestion Tier II Benzene Objective

$$S\text{-}3 = \frac{TR \times BW \times AT_c \times 365}{SF_o \times 10^{-6} \times EF \times IRsoil} = \frac{1.0E\text{-}06 \times 70 \times 70 \times 365}{0.055 \times 1.00E\text{-}06 \times 30 \times 480} = \frac{1.8E+00}{7.92E\text{-}04} = 2258.21 \text{ mg/kg}$$

Tier 2 Industrial/Commercial Calculations for Benzene

ABP Properties, LLC
2016-0917

Industrial Commercial Inhalation Tier II Objective

$$S\text{-}6 = \frac{TR \times ATc \times 365}{URF \times 1000 \times EF \times ED \times 1/VF} = \frac{1.0E\text{-}06 \times 70 \times 365}{7.80E\text{-}06 \times 1000 \times 250 \times 25 \times (1/\ 7.97E{+}03\ )} = \frac{0.02555}{6.12E\text{-}03} = 4.177 \text{ mg/kg}$$

Construction Worker Inhalation Tier II Objective

$$S\text{-}7 = \frac{TR \times ATc \times 365}{URF \times 1000 \times EF \times ED \times 1/VF'} = \frac{1.0E\text{-}06 \times 70 \times 365}{7.80E\text{-}06 \times 1000 \times 30 \times 1 \times (1/\ 5.38E{+}01\ )} = \frac{0.02555}{4.35E\text{-}03} = 5.874 \text{ mg/kg}$$

RESIDENTIAL OR COMMERCIAL

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{(3.14 \times 4.73E\text{-}04 \times 7.90E{+}08)^{1/2} \times 0.0001}{(2 \times 1.233 \times 4.73E\text{-}04)} = \frac{9.2938}{0.0012} = 7969.7624$$

Construction Worker

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{(3.14 \times 4.73E\text{-}04 \times 3.60E{+}06)^{1/2} \times 0.0001}{(2 \times 1.233 \times 4.73E\text{-}04)} = \frac{0.6274}{0.0012} = 538.0010$$

Equation for Derivation of Volatilization Factor - Construction Worker

$$S\text{-}9 = VF' = \frac{VF}{10} = \frac{538.0010}{10} = 53.8001$$

Equation for Derivation of Apparent Diffusivity

$$S\text{-}10 = D_A = \frac{(\theta_a^{3.33} \times D_i \times H') + (\theta_w^{3.33} \times D_w)}{\eta^2} \times \frac{1}{(\rho_b \times K_d) + \theta_w + (\theta_a \times H')}$$

$$= \frac{(1.60E\text{-}02 \times 0.088 \times 0.230) + (0.0090 \times 1.02E\text{-}05)}{0.2830} \times \frac{1}{(1.233 \times 1.715) + 0.24 + (0.289 \times 0.230)} = 4.73E\text{-}04$$

Soil Component of the Migration to Groundwater Cleanup Objective (Class 1)

$$S\text{-}17 = C_w \times \left[K_d + \frac{(\theta_w + \theta_a \times H')}{\rho b} \right] = 0.1 \times \left[1.715 + \frac{(0.243 + 0.289 \times 0.230)}{1.233} \right] = 0.197 \text{ mg/kg}$$

Tier 2 Industrial/Commercial Calculations for Benzene

ABP Properties, LLC
2016-0917

Target Soil Leachate Concentration (Class 1)

S-18 = C_w = $DF \times GW_{obj}$ = 20.00 x 0.005 = 0.1

Soil-Water Partition Coefficient

S-19 = K_d = $K_{oc} \times f_{oc}$ = 50.00 x 0.034 = 1.715

Water-Filled Porosity

S-20 = Θ_w = $\eta \times \left(\frac{1}{K_a}\right)^{1/(2b+3)}$ = 0.53 x $\left[\frac{0.300}{1630.000}\right]^{0.059}$ = 0.2428

Air-Filled Porosity

S-21 = Θ_a = $\eta - \Theta_w$ = 0.53 - 0.24 = 0.2890

Dilution Factor

S-22 = DF = $1 + \frac{K \times I \times d}{I \times L}$ = $\frac{873.55}{0.300} \times \frac{0.0096}{34.747} \times 4.695 + 1$ = 4.7925

GW Ingestion

S-23 = $\frac{TR \times BW \times AL_c \times 365}{SF_o \times IR_w \times EF \times ED}$ = $\frac{1.0E-06}{0.055} \times \frac{70}{1.000} \times \frac{70}{250} \times \frac{365}{25}$ = $\frac{1.8E+00}{343.75}$ = 0.0052 mg/L

Total Soil Porosity

S-24 = η = $1 - \frac{\rho_b}{\rho_s}$ = 1 - $\frac{1.233}{2.634}$ = 0.5319

Estimation of Mixing Zone Depth

S-25 = d = $(0.0112 \times L^2)^{0.5} + d_a\left[1 - \exp\frac{(-L \times I)}{(K \times i \times d_a)}\right]$

= (0.0112 x 34.747 ^{2})$^{0.5}$ +

3.048 x [1 - exp { $\frac{-34.747}{873.547} \times \frac{0.3}{0.0096} \times \frac{)}{3.048}$ }] = 4.695 m

Soil Saturation Limit

S-29 = $C_{sat} = \frac{S}{\rho_b} \times [(K_d \times \rho b) + \Theta w + (H' \times \theta a)]$ = $\frac{1800}{1.233}$ x [(1.715 x 1.233) + 0.243 + (0.230 x 0.289)] = 3,538.78 mg/kg

Soil Gas Outdoor Inhalation

S-30 = $ROs\ g = \frac{ROsoil \times H \times \rho b \times 1000}{H' \times \Theta a + \Theta w + Kd \times \rho b}$ = $\frac{4.177}{2.300E-01} \times \frac{0.230}{0.289} \times \frac{1.233}{0.243} \times \frac{1000}{1.715} \times \frac{}{1.233}$ = 488.66 mg/m^3

Tier 2 Industrial/Commercial Calculations for Toluene

ABP Properties, LLC
2016-0917

SSL | RBCA | SSL & RBCA | IRIS/HEAST

Date Compiled: 12/05/19

Input Values

Holcomb's Bulk Density =>	0	Converted Value to be used in calculation sheet ->			–	USDA Soil Classification:	Sand		
Organic Matter (%) =>	0	FOC % (0.58 conversion) =>	0.000	Organic Matter (mg/kg)	0	FOC mg/kg (0.58 conversion)	0.000	foc conversion to g/g:	0.000

1.233	ρ_b - Dry Soil Bulk Density			1.5 or; Gravel = 2.0; Sand = 1.8; Silt = 1.6; Clay = 1.7; or Site Specific
2.634	ρ_s - Soil Particle Density			2.65 or; Site Specific
0.289	Θ_a - Air Filled Soil Porosity	0.289	Value from S-21	Top 1 meter = 0.28; below 1 meter = 0.13; Gravel = 0.05; Sand = 0.14; Silt =0.24; Clay = 0.19; or Calculated Value (S21)
0.243	Θ_w - Water Filled Soil Porosity	0.243	Value from S-20	Top 1 meter = 0.15; below 1 meter = 0.30; Gravel = 0.20; Sand = 0.18; Silt =0.16; Clay = 0.17; or Calculated Value (S20)
0.532	n - SSL: Total Soil Porosity	0.532	Value from S-24	0.43 or; Gravel - 0.25; Sand = 0.32; Silt = 0.40; Clay = 0.36; or Calculated Value (S24 or R23)
0.00964	I - Hydraulic Gradient			Site Specific
0.034	foc - Total Organic Carbon (g/g)			Surface Soil = 0.006; Subsurface Soil = 0.002; or Site Specific
20.000	DF - Dilution Factor	4.792	Value from S-22	If calculated value for DF is less than 20, then 20 default is used, else calculated value is used
4.695	d - Mixing Zone (m)	4.695	Value from S-25	2; or calculated value
3.048	d_a - Depth of source (m)	feet = 10		Depth of Source (Vertical thickness of contamination)
873.55	K - Hydraulic Conductivity (m/yr)	cm/sec = 2.77E-03		Site Specific | 2.39E+02 cm/d. | 8.74E+04 cm/yr | Use cm/d for R15, R19, & R26; cm/yr for R24
34.747	L - Source Length Parallel to Groundwater Flow (m)	feet = 114		Site Specific (m)
3.048	d_a - Aquifer Thickness (m)	feet = 10		Site Specific (m)
0.3	I - Infiltration Rate (m/yr)			0.3 for Illinois
1830	K_s - Saturated Hydraulic Conductivity			See Table K for Input Values
1.000	GW_{obj} - Groundwater Remediation Objective Class 1			2.5 GW_{obj} - Groundwater Remediation Objective Class 2
0.090	1/(2b+3) - Exponent for S20			See Table K for Input Values
15	BW - Body Weight			Residential = 70 (carcinogenic); 15 (non-carcinogenic); Industrial/Commercial = 70; Construction Worker = 70; RBCA = 70
114	$IF_{soil-adj}$ -Age Adjusted Soil Ingestion Factor for Carcinogens			114
50	IR_{soil} -Soil Ingestion Rate			Residential = 200; Industrial/Commercial = 50; Construction Worker = 480
1	IR_w -Daily Water Ingestion Rate			Residential = 2; Industrial/Commercial = 1
530	S - Solubility in Water			Toluene = 526
1.0E-06	TR - Target Cancer Risk			Residential = 10^{-5}; Industrial/Commercial = 10^{-5}; Construction Worker = 10^{-5} at point of human exposure
250	EF - Exposure Frequency			Residential = 350; Industrial/Commercial = 250; Construction Worker = 30
25	ED - Exposure Duration for Inhalation for Non-Carcinogens			Residential = 30; Industrial/Commercial = 25; Construction Worker = 1
68.81	Q/C - Inverse of the mean concentration at the center of a square source			Residential = 68.81; Industrial/Commercial = 85.81; Construction Worker = 85.81; or Table H
7.90E+08	T - Exposure Interval			Residential = 9.5×10^8; Industrial/Commercial = 7.9×10^8; Construction Worker = 3.6×10^8
30	T_{M-L} - Exposure Interval for Mall Limit Volatilization Factor Equation S26			30
70	ED_{M-L} - Exposure Duration for Migration to Groundwater Mass-Limit Equation S28			70
0.18	I_{M-L} - Infiltration Rate for Migration to Groundwater Mass-Limit Equation S28			0.18
0.087	D_i - Diffusivity in Air			Toluene = 0.087
0.271	H' - Henry's Law Constant			Toluene = 0.272
8.60E-06	D_w - Diffusivity in Water			Toluene = 8.6×10^{-6}
25	AT - Average Time for Non-Carcinogens In ingestion Equation			Residential = 6; Industrial/Commercial = 25; Construction Worker = 0.115
25	AT - Average Time for Non-Carcinogens In Inhalation Equation			Residential = 30; Industrial/Commercial = 25; Construction Worker = 0.115
1	THQ - Target Hazard Quotient			1
0.5	RfC - Inhalation Reference Concentration			Chronic = 5; Subchronic = 5
0.8	RfD_o - Oral Reference Dose			Chronic = 0.08; Subchronic = 0.8
158.00	K_{oc} - Organic Carbon Partition Coefficient			Toluene = 182

Industrial/Commercial Ingestion Remediation Objectives for Non-Carcinogenic Contaminants

$$S\text{-}1 = \frac{THQ \times BW \times AT \times 365}{10^{-6} \times (1/RfD_o) \times EF \times ED \times IR_{soil}} = \frac{1 \times 70 \times 25 \times 365}{0.000001 \times 1/0.8 \times 250 \times 25 \times 50} = \frac{638750}{0.390625} = 1635200 \text{ mg/kg}$$

Construction Worker Ingestion Remediation Objectives for Non-Carcinogenic Contaminants

$$S\text{-}1 = \frac{THQ \times BW \times AT \times 365}{10^{-6} \times (1/RfD_o) \times EF \times ED \times IR_{soil}} = \frac{1 \times 70 \times 0.115 \times 365}{0.000001 \times 1/0.8 \times 30 \times 1 \times 480} = \frac{2938.25}{0.018} = 163236 \text{ mg/kg}$$

Industrial Commercial Inhalation

$$S\text{-}4 = \frac{THQ \times AT \times 365}{EF \times ED \times (1/RfC \times 1/VF)} = \frac{1 \times 25 \times 365}{250 \times 25 \times 1/5 \times 1/12551.82484} = \frac{9125}{0.099587} = 91628.321 \text{ mg/kg}$$

Tier 2 Inhalation Objective cannot exceed Soil Saturation Limit

Inhalation Non-Carcinogenic Construction Worker

$$S\text{-}5 = \frac{THQ \times AT \times 365}{EF \times ED \times (1/RfC \times 1/VF)} = \frac{1 \times 0.115 \times 365}{30 \times 1 \times 1/5 \times 1/84.73143758} = \frac{41.975}{0.070812} = 592.767 \text{ mg/kg}$$

RESIDENTIAL OR COMMERCIAL

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \left(\frac{3.14 \times 1.91E\text{-}04 \times 7.90E+08}{2 \times 1.233 \times 1.91E\text{-}04}\right)^{1/2} \times 0.0001 = \frac{5.9011}{4.70E\text{-}04} = 12551.8248$$

660000

-C (Toluene)

Tier 2 Industrial/Commercial Calculations for Toluene

ABP Properties, LLC
2016-0917

Construction Worker

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{\left(\frac{3.14 \times 1.91E\text{-}04 \times 3.60E+06}{2 \times 1.233 \times 1.91E\text{-}04}\right)^{1/2} \times 0.0001}{4.70E\text{-}04} = \frac{0.3984}{4.70E\text{-}04} = 847.3144$$

Equation for Derivation of Volatilization Factor - Construction Worker

$$S\text{-}9 = VF' = \frac{VF}{10} = \frac{847.3144}{10} = 84.7314$$

Equation for Derivation of Apparent Diffusivity

$$S\text{-}10 = D_A = \frac{(\theta_a^{3.33} \times D_i \times H') + (\theta_w^{3.33} \times D_w)}{\eta^2} \times \frac{1}{(\rho_b \times K_d) + \theta_w + (\theta_a \times H')}$$

$$= \frac{(1.60E\text{-}02 \times 0.087 \times 0.271) + (0.0090 \times 8.60E\text{-}06)}{0.2830} \times \frac{1}{(1.233 \times 5.4194) + 0.24 + (0.289 \times 0.271)} = 1.91E\text{-}04$$

Soil Component of the Migration to Groundwater Cleanup Objective (Class 1)

$$S\text{-}17 = C_w \times \left[K_d + \frac{(\theta_w + \theta_a \times H')}{\rho b}\right] = 20 \times \left[5.4194 + \frac{(0.243 + 0.289 \times 0.271)}{1.233}\right] = 113.600 \text{ mg/kg}$$

Target Soil Leachate Concentration (Class 1)

$$S\text{-}18 = C_w = DF \times GW_{obj} = 20.00 \times 1.000 = 20$$

Soil-Water Partition Coefficient

$$S\text{-}19 = K_d = K_{oc} \times f_{oc} = 158.00 \times 0.034 = 5.4194$$

Water-Filled Porosity

$$S\text{-}20 = \Theta_w = \eta \times \frac{1}{K_a}^{1/(2b+3)} = 0.53 \times \left[\frac{0.300}{1830.000}\right]^{0.000} = 0.2428$$

Tier 2 Industrial/Commercial Calculations for Toluene

ABP Properties, LLC
2016-0917

Air-Filled Porosity

S-21 = $\Theta_a = \eta - \Theta_w$ = 0.53 - 0.24 = 0.2890

Dilution Factor

S-22 = $DF = 1 + \frac{K \times i \times d}{I \times L}$ = $\frac{873.55}{0.300} \times \frac{0.0096}{34.747} \times 4.695 + 1$ = 4.7925

GW Ingestion

S-23 = $\frac{TR \times BW \times At_c \times 365}{SF_o \times IR_w \times EF \times ED}$ = $\frac{1.0E\text{-}06}{0.000} \times \frac{15}{1.000} \times \frac{0}{250} \times \frac{365}{25}$ = $\frac{0.0E+00}{0}$ = #DIV/0! mg/L

Total Soil Porosity

S-24 = $\eta = 1 - \frac{\rho_b}{\rho_s}$ = $1 - \frac{1.233}{2.634}$ = 0.5319

Estimation of Mixing Zone Depth

S-25 = $d = (0.0112 \times L^2)^{0.5} + d_a \left[1 - \exp \frac{(-L \times I)}{(K \times i \times d_a)}\right]$

= (0.0112 × 34.747 ^{2})$^{0.5}$ + 3.048 × [1 - exp { -34.747 / 873.547 × 0.3 / 0.0098 } / 3.048] = 4.695 m

Soil Saturation Limit

S-29 = $C_{sat} = \frac{S}{\rho_b} \times [(K_d \times \rho b) + \Theta w + (H' \times \theta a)]$ = $\frac{530}{1.233} \times [(5.4194 \times 1.233) + 0.243 + (0.271 \times 0.289)]$ = 3,010.40 mg/kg

Soil Gas Outdoor Inhalation

S-30 = $ROs\ g = \frac{ROsoil\ X\ H\ X\ pb\ X\ 1000}{H'\ X\ \Theta a + \Theta w + Kd\ X\ pb}$ = $\frac{592.767}{2.710E\text{-}01} \times \frac{0.271}{0.289} \times \frac{1.233}{0.243} \times \frac{1000}{5.419} \times 1.233$ = 28,281.67 mg/m^3

Tier 2 Industrial/Commercial Calculations for Ethylbenzene

ABP Properties, LLC
2016-0917

SSL | SSL & RBCA | RBCA | RISC/HEAST

Date Compiled: 12/05/19

Input Values

Holcomb's Bulk Density -->	0	Converted Value to be used in calculation sheet -->		–	USDA Soil Classification:	Sand					
Organic Matter (%) -->	0	FOC % (0.58 conversion) -->	0.000	Organic Matter (mg/kg)	0	FOC mg/kg (0.58 conversion)	0.000	foc conversion to g/g:	0.000		

1.233	ρ_b - Dry Soil Bulk Density				1.5 or; Gravel = 2.0; Sand = 1.8; Silt = 1.6; Clay = 1.7; or Site Specific
2.634	ρ_s - Soil Particle Density				2.65 or; Site Specific
0.289	Θ_a - Air Filled Soil Porosity	*0.289*	Value from S-21		Top 1 meter = 0.28; below 1 meter = 0.13; Gravel = 0.05; Sand = 0.14; Silt =0.24; Clay = 0.19; or Calculated Value (S21)
0.243	Θ_w - Water Filled Soil Porosity	*0.243*	Value from S-20		Top 1 meter = 0.15; below 1 meter = 0.30; Gravel = 0.20; Sand = 0.18; Silt =0.16; Clay = 0.17; or Calculated Value (S20)
0.532	n - SSL- Total Soil Porosity	*0.532*	Value from S-24		0.43 or; Gravel = 0.25; Sand = 0.32; Silt = 0.40; Clay = 0.36; or Calculated Value (S24)
0.00964	I - Hydraulic Gradient				Site Specific
0.034	foc - Total Organic Carbon (g/g)				Surface Soil = 0.006; Subsurface Soil = 0.002; or Site Specific
20.000	DF - Dilution Factor	*4.792*	Value from S-22		If calculated value for DF is less than 20, then 20 default is used, else calculated value is used
4.695	d - Mixing Zone (m)	4.695	Value from S-25		2; or calculated value
3.048	d_a - Depth of source (m)		feet = 10		Depth of Source (Vertical thickness of contamination)
873.55	K - Hydraulic Conductivity (m/yr)	cm/sec =	2.77E-03		Site Specific | 2.39E+02 | cm/d | 8.74E+04 | cm/yr | Use cm/d for R15, R19 & R26; cm/yr for R24
34.747	L - Source Length Parallel to Groundwater Flow (m)		feet = 114		Site Specific (m)
3.048	d_a - Aquifer Thickness (m)		feet = 10		Site Specific (m)
0.3	I - Infiltration Rate (m/yr)				0.3 for Illinois
1830	K_s - Saturated Hydraulic Conductivity				See Table K for Input Values
0.700	GW_{obj} - Groundwater Remediation Objective Class 1			1	GW_{obj} - Groundwater Remediation Objective Class 2
0.090	1/(2b+3) - Exponent for S20				See Table K for Input Values
70	BW - Body Weight				Residential = 70 (carcinogenic); 15 (non-carcinogenic); Industrial/Commercial = 70; Construction Worker = 70; RBCA = 70
114	$IF_{soil-adj}$ -Age Adjusted Soil Ingestion Factor for Carcinogens				114
50	IR_{soil} -Soil Ingestion Rate				Residential = 200; Industrial/Commercial = 50; Construction Worker = 480
1	IR_w -Daily Water Ingestion Rate				Residential = 2; Industrial/Commercial = 1
170	S - Solubility in Water				Ethylbenzene = 169
1.0E-06	TR - Target Cancer Risk				Residential = 10^{-6}; Industrial/Commercial = 10^{-6}; Construction Worker = 10^{-5} at point of human exposure
250	EF - Exposure Frequency				Residential = 350; Industrial/Commercial = 250; Construction Worker = 30
25	ED - Exposure Duration for Inhalation for Non-Carcinogens				Residential = 30; Industrial/Commercial = 25; Construction Worker = 1
68.81	Q/C - Inverse of the mean concentration at the center of a square source				Residential = 68.81; Industrial/Commercial = 85.81; Construction Worker = 85.81; or Table H
7.90E+08	T - Exposure Interval				Residential = 9.5×10^8; Industrial/Commercial = 7.9×10^8; Construction Worker = 3.6×10^6
30	T_{M-L} - Exposure Interval for Mall Limit Volatilization Factor Equation S26				30
70	ED_{M-L} - Exposure Duration for Migration to Groundwater Mass-Limit Equation S28				70
0.18	I_{M-L} - Infiltration Rate for Migration to Groundwater Mass-Limit Equation S28				0.18
0.075	D_i - Diffusivity in Air				Ethylbenzene = 0.075
0.324	H' - Henry's Law Constant				Ethylbenzene = 0.323
7.80E-06	D_w - Diffusivity in Water				Ethylbenzene = 7.8×10^{-6}
25	AT - Average Time for Non-Carcinogens in Ingestion Equation				Residential = 6; Industrial/Commercial = 25; Construction Worker = 0.115
25	AT - Average Time for Non-Carcinogens in Inhalation Equation				Residential = 30; Industrial/Commercial = 25; Construction Worker = 0.115
1	THQ - Target Hazard Quotient				1
1.0E-3	RfC - Inhalation Reference Concentration				Chronic = 1; Subchronic = 0
0.1	RfD_o - Oral Reference Dose				Chronic = 0.1; Subchronic = 0.05
320.00	K_{oc} - Organic Carbon Partition Coefficient				Ethylbenzene = 363

Industrial/Commercial Ingestion Remediation Objectives for Non-Carcinogenic Contaminants

$$S\text{-}1 = \frac{THQ \times BW \times AT \times 365}{10^{-6} \times (1/RfD_o) \times EF \times ED \times IR_{soil}} = \frac{1 \times 70 \times 25 \times 365}{0.000001 \times 1/0.1 \times 250 \times 25 \times 50} = \frac{638750}{3.125} = 204400 \text{ mg/kg}$$

Construction Worker Ingestion Remediation Objectives for Non-Carcinogenic Contaminants

$$S\text{-}1 = \frac{THQ \times BW \times AT \times 365}{10^{-6} \times (1/RfD_o) \times EF \times ED \times IR_{soil}} = \frac{1 \times 70 \times 0.115 \times 365}{0.000001 \times 1/0.05 \times 30 \times 1 \times 480} = \frac{2938.25}{0.288} = 10202 \text{ mg/kg}$$

Industrial Commercial Inhalation

$$S\text{-}4 = \frac{THQ \times AT \times 365}{EF \times ED \times (1/RfC \times 1/VF)} = \frac{1 \times 25 \times 365}{250 \times 25 \times 1/1 \times 17399.49239} = \frac{9125}{0.359208} = 25403 \text{ mg/kg}$$

Tier 2 Inhalation Objective cannot exceed Soil Saturation Limit

Industrial Commercial Inhalation Objective (Carcinogen)

Tier 2 Inhalation Objective does not exceed Tier 1 Objective

$$S\text{-}6 = \frac{TR \times ATc \times 365}{URF \times 1000 \times EF \times ED \times (1/VF)} = \frac{0.000001 \times 70 \times 365}{2.5E\text{-}06 \times 1000 \times 250 \times 25.0000 \times 1/17399.4924} = \frac{0.02555}{0.000898} = 28.452 \text{ mg/kg}$$

Construction Worker Inhalation Objective (Carcinogen)

Tier 2 Inhalation Objective does not exceed Tier 1 Objective

$$S\text{-}7 = \frac{TR \times ATc \times 365}{URF \times 1000 \times EF \times ED \times (1/VF)} = \frac{0.000001 \times 70 \times 365}{2.5E\text{-}06 \times 1000 \times 30 \times 1.0000 * 1/117.4558} = \frac{0.02555}{0.000639} = 40.013 \text{ mg/kg}$$

C (Ethylbenzene)

Tier 2 Industrial/Commercial Calculations for Ethylbenzene

ABP Properties, LLC
2016-0917

Inhalation Non-Carcinogenic Construction Worker

$$S\text{-}5 = \frac{THQ \times AT \times 365}{EF \times ED \times (1/RfC \times 1/VF')} = \frac{1}{30} \times \frac{0.115}{1} \times \frac{365}{9} \times 1/\ 117.4557503 = \frac{41.975}{0.028379} = 1479.062 \text{ mg/kg}$$

RESIDENTIAL OR COMMERCIAL

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{\left(\frac{3.14}{2} \times \frac{9.92E\text{-}05}{1.233} \times \frac{7.90E+08}{9.92E\text{-}05}\right)^{1/2} \times 0.0001}{2.45E\text{-}04} = \frac{4.2570}{2.45E\text{-}04} = 17399.4924$$

Construction Worker

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{\left(\frac{3.14}{2} \times \frac{9.92E\text{-}05}{1.233} \times \frac{3.60E+06}{9.92E\text{-}05}\right)^{1/2} \times 0.0001}{2.45E\text{-}04} = \frac{0.2874}{2.45E\text{-}04} = 1174.5575$$

Equation for Derivation of Volatilization Factor - Construction Worker

$$S\text{-}9 = VF' = \frac{VF}{10} = \frac{1174.5575}{10} = 117.4558$$

Equation for Derivation of Apparent Diffusivity

$$S\text{-}10 = D_A = \frac{(\theta_a^{3.33} \times D_i \times H') + (\theta_w^{3.33} \times D_w)}{\eta^2} \times \frac{1}{(\rho_b \times K_d) + \theta_w + (\theta_a \times H')}$$

$$= \frac{\left(\frac{1.60E\text{-}02}{0.2830} \times 0.075 \times 0.324\right) + \left(0.0090 \times 7.80E\text{-}06\right)}{\left(1.233 \times 10.976\right) + 0.24 + \left(0.289 \times 0.324\right)} \times \frac{1}{} = 9.92E\text{-}05$$

Soil Component of the Migration to Groundwater Cleanup Objective (Class 1)

$$S\text{-}17 = C_w \times \left[K_d + \frac{(\theta_w + \theta_a \times H')}{\rho b}\right] = 14 \times \left[10.976 + \frac{0.243 + 0.289 \times 0.324}{1.233}\right] = 157.486 \text{ mg/kg}$$

Target Soil Leachate Concentration (Class 1)

$$S\text{-}18 = C_w = DF \times GW_{obj} = 20.00 \times 0.700 = 14$$

Soil-Water Partition Coefficient

$$S\text{-}19 = K_d = K_{oc} \times f_{oc} = 320.00 \times 0.034 = 10.976$$

Water-Filled Porosity

$$S\text{-}20 = \Theta_w = \eta \times \frac{1}{K_a}^{1/(2b+3)} = 0.53 \times \left[\frac{0.300}{1830.000}\right]^{0.020} = 0.2428$$

Tier 2 Industrial/Commercial Calculations for Ethylbenzene

ABP Properties, LLC
2016-0917

Air-Filled Porosity

S-21 = $\Theta_a = \eta - \Theta_w$ = 0.53 - 0.24 = 0.2890

Dilution Factor

S-22 = $DF = 1 + \frac{K \times i \times d}{I \times L}$ = $\frac{873.55}{0.300} \times \frac{0.0096}{34.747} \times 4.695 + 1$ = 4.7925

GW Ingestion

S-23 = $\frac{TR \times BW \times At_c \times 365}{SF_o \times IR_w \times EF \times ED}$ = $\frac{1.0E\text{-}06}{0.000} \times \frac{70}{1.000} \times \frac{0}{250} \times \frac{365}{25}$ = $\frac{0.0E+00}{0}$ = #DIV/0! mg/L

Total Soil Porosity

S-24 = $\eta = 1 - \frac{\rho_b}{\rho_s}$ = 1 - $\frac{1.233}{2.634}$ = 0.5319

Estimation of Mixing Zone Depth

S-25 = $d = (0.0112 \times L^2)^{0.5} + d_a \left[1 - \exp \frac{(-L \times I)}{(K \times i \times d_a)}\right]$

= (0.0112 x 34.747 ^{2})$^{0.5}$ +

3.048 x [1 - exp { -34.747 x 0.3) / { 873.547 x 0.0096 x 3.048)] = 4.695 m

Soil Saturation Limit

S-29 = $C_{sat} = \frac{S}{\rho_b} \times [(K_d \times \rho b) + \Theta w + (H' \times \theta a)]$ = $\frac{170}{1.233}$ x [(10.976 x 1.233) + 0.243 + (0.324 x 0.289)] = 1,912.33 mg/kg

Soil Gas Outdoor Inhalation

S-30 = $ROs\ g = \frac{ROsoil \times H \times \rho b \times 1000}{H' \times \Theta a + \Theta w + Kd \times \rho b}$ = $\frac{1479.062}{3.240E\text{-}01} \times \frac{0.324}{0.289} + \frac{1.233}{0.243} + \frac{1000}{10.976} \times 1.233$ = 42,600.68 mg/m^3

Tier 2 Industrial/Commercial Calculations for Total Xylenes

ABP Properties, LLC
2016-0917

SSL | RBCA | SSL & RBCA | IRIS/HEAST

Date Compiled: 12/05/19

Input Values

Holcomb's Bulk Density -->	0	Converted Value to be used in calculation sheet -->		--	USDA Soil Classification:	Sand				
Organic Matter (%) -->	0	FOC % (0.58 conversion) -->	0.000	Organic Matter (mg/kg)	0	FOC mg/kg (0.58 conversion)	0.000	foc conversion to g/g:	0.000	

1.233	ρ_b - Dry Soil Bulk Density			1.5 or; Gravel = 2.0; Sand = 1.8; Silt = 1.6; Clay = 1.7; or Site Specific
2.634	ps - Soil Particle Density			2.65 or; Site Specific
0.289	Θ_a - Air Filled Soil Porosity	*0.289*	Value from S-21	Top 1 meter = 0.28; below 1 meter = 0.13; Gravel = 0.05; Sand = 0.14; Silt =0.24; Clay = 0.19; or Calculated Value (S21)
0.243	Θ_w - Water Filled Soil Porosity	*0.243*	Value from S-20	Top 1 meter = 0.15; below 1 meter = 0.30; Gravel = 0.20; Sand = 0.18; Silt =0.16; Clay = 0.17; or Calculated Value (S20)
0.532	n - SSL: Total Soil Porosity	*0.532*	Value from S-24	0.43 or; Gravel - 0.25; Sand = 0.32; Silt = 0.40; Clay = 0.36; or Calculated Value (S24)
0.00964	I - Hydraulic Gradient			Site Specific
0.034	foc - Total Organic Carbon (g/g)			Surface Soil = 0.006; Subsurface Soil = 0.002; or Site Specific
20.000	DF - Dilution Factor	*4.792*	Value from S-22	If calculated value for DF is less than 20, then 20 default is used, else calculated value is used
4.695	d - Mixing Zone (m)	*4.695*	Value from S-25	2; or calculated value
3.048	d_a - Depth of source (m)		feet = 10	Depth of Source (Vertical thickness of contamination)
873.55	K - Hydraulic Conductivity (m/yr)	cm/sec =	2.77E-03	Site Specific: 2.39E+02 cm/d; 8.74E+04 cm/yr; Use cm/d for R15, R19, & R26, cm/yr for R24
34.747	L - Source Length Parallel to Groundwater Flow (m)		feet = 114	Site Specific (m)
3.048	d_a - Aquifer Thickness (m)		feet = 10	Site Specific (m)
0.3	I - Infiltration Rate (m/yr)			0.3 for Illinois
1830	K_s - Saturated Hydraulic Conductivity			See Table K for Input Values
10.000	GW_{obj} - Groundwater Remediation Objective Class 1			10 GW_{obj} - Groundwater Remediation Objective Class 2
0.090	1/(2b+3) - Exponent for S20			See Table K for Input Values
70	BW - Body Weight			Residential = 70 (carcinogenic); 15 (non-carcinogenic); Industrial/Commercial = 70; Construction Worker = 70; RBCA = 70
114	$IF_{soil-adj}$ -Age Adjusted Soil Ingestion Factor for Carcinogens			114
50	IR_{soil} -Soil Ingestion Rate			Residential = 200; Industrial/Commercial = 50; Construction Worker = 480
1	IR_w -Daily Water Ingestion Rate			Residential = 2; Industrial/Commercial = 1
110	S - Solubility in Water			Total Xylenes = 186
1.0E-06	TR - Target Cancer Risk			Residential = 10^{-5}; Industrial/Commercial = 10^{-6}; Construction Worker = 10^{-6} at point of human exposure
250	EF - Exposure Frequency			Residential = 350; Industrial/Commercial = 250; Construction Worker = 30
25	ED - Exposure Duration for Inhalation for Non-Carcinogens			Residential = 30; Industrial/Commercial = 25; Construction Worker = 1
68.81	Q/C - Inverse of the mean concentration at the center of a square source			Residential = 68.81; Industrial/Commercial = 85.81; Construction Worker = 85.81; or Table H
7.90E+08	T - Exposure Interval			Residential = 9.5×10^8; Industrial/Commercial = 7.9×10^8; Construction Worker = 3.6×10^6
30	T_{ML} - Exposure Interval for Mall Limit Volatilization Factor Equation S26			30
70	ED_{GW} - Exposure Duration for Migration to Groundwater Mass-Limit Equation S28			70
0.18	I_{ML} - Infiltration Rate for Migration to Groundwater Mass-Limit Equation S28			0.18
0.074	D_i - Diffusivity in Air			Total Xylenes = 0.072
0.271	H' - Henry's Law Constant			Total Xylenes = 0.25
9.23E-06	D_w - Diffusivity in Water			Total Xylenes = 9.34×10^{-6}
25	AT - Average Time for Non-Carcinogens In Ingestion Equation			Residential = 6; Industrial/Commercial = 25; Construction Worker = 0.115
25	AT - Average Time for Non-Carcinogens In Inhalation Equation			Residential = 30; Industrial/Commercial = 25; Construction Worker = 0.115
1	THQ - Target Hazard Quotient			1
0.1	RfC - Inhalation Reference Concentration			Chronic = 0.1; Subchronic = 0.4
0.2	RfD_o - Oral Reference Dose			Chronic = 0.2; Subchronic = 0.4
398.00	K_{oc} - Organic Carbon Partition Coefficient			Total Xylenes = 260

Industrial/Commercial Ingestion Remediation Objectives for Non-Carcinogenic Contaminants

$$\text{S-1} = \frac{THQ \times BW \times AT \times 365}{10^{-6} \times (1/RfD_o) \times EF \times ED \times IR_{soil}} = \frac{1 \times 70 \times 25 \times 365}{0.000001 \times 1/0.2 \times 250 \times 25 \times 50} = \frac{638750}{1.5625} = 408800 \text{ mg/kg}$$

Construction Worker Ingestion Remediation Objectives for Non-Carcinogenic Contaminants

$$\text{S-1} = \frac{THQ \times BW \times AT \times 365}{10^{-6} \times (1/RfD_o) \times EF \times ED \times IR_{soil}} = \frac{1 \times 70 \times 0.115 \times 365}{0.000001 \times 1/0.4 \times 30 \times 1 \times 480} = \frac{2936.25}{0.036} = 81618 \text{ mg/kg}$$

Industrial Commercial Inhalation

$$\text{S-4} = \frac{THQ \times AT \times 365}{EF \times ED \times (1/RfC \times 1/VF)} = \frac{1 \times 25 \times 365}{250 \times 25 \times 1/0.1 \times 1/21371.32445} = \frac{9125}{2.924479489} = 3120.213 \text{ mg/kg}$$

Tier 2 Inhalation Objective cannot exceed Soil Saturation Limit

Inhalation Non-Carcinogenic Construction Worker

$$\text{S-5} = \frac{THQ \times AT \times 365}{EF \times ED \times (1/RfC \times 1/VF)} = \frac{1 \times 0.115 \times 365}{30 \times 1 \times 1/0.4 \times 1/144.2677114} = \frac{41.975}{0.519866845} = 80.742 \text{ mg/kg}$$

RESIDENTIAL OR COMMERCIAL

$$\text{S-8} = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{3.14 \times 6.58E\text{-}05 \times 7.90E+08)^{1/2} \times 0.0001}{(2 \times 1.233 \times 6.58E\text{-}05)} = \frac{3.4658}{1.62E\text{-}04} = 21371.3245$$

Tier 2 Industrial/Commercial Calculations for Total Xylenes

ABP Properties, LLC
2016-0917

Construction Worker

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{\left(\frac{3.14}{2} \times 6.58E\text{-}05 \times 3.60E+06\right)^{1/2} \times 0.0001}{1.233 \times 6.58E\text{-}05} = \frac{0.2340}{1.62E\text{-}04} = 1442.6771$$

Equation for Derivation of Volatilization Factor - Construction Worker

$$S\text{-}9 = VF' = \frac{VF}{10} = \frac{1442.6771}{10} = 144.2677$$

Equation for Derivation of Apparent Diffusivity

$$S\text{-}10 = D_A = \frac{(\theta_a^{3.33} \times D_i \times H') + (\theta_w^{3.33} \times D_w)}{\eta^2} \times \frac{1}{(\rho_b \times K_d) + \theta_w + (\theta_a \times H')}$$

$$= \frac{\left(\frac{1.60E\text{-}02}{0.2830} \times 0.074 \times 0.271\right) + \left(\frac{0.0090}{0.2830} \times 9.23E\text{-}06\right)}{\left(1.233 \times 13.6514\right) + 0.24 + \left(0.289 \times 0.271\right)} \times \frac{1}{} = 6.58E\text{-}05$$

Soil Component of the Migration to Groundwater Cleanup Objective (Class 1)

$$S\text{-}17 = C_w \times \left[K_d + \frac{(\theta_w + \theta_a \times H')}{\rho b}\right] = 200 \times \left[13.6514 + \frac{0.243 + 0.289 \times 0.271}{1.233}\right] = 2782.400 \text{ mg/kg}$$

Tier 2 Soil Component of GW Ingestion Objective cannot exceed Soil Saturation Limit

Target Soil Leachate Concentration (Class 1)

$$S\text{-}18 = C_w = DF \times GW_{obj} = 20.00 \times 10.000 = 200$$

Soil-Water Partition Coefficient

$$S\text{-}19 = K_d = K_{oc} \times f_{oc} = 398.00 \times 0.034 = 13.6514$$

Water-Filled Porosity

$$S\text{-}20 = \Theta_w = \eta \times \left(\frac{1}{K_s}\right)^{1/(2b+3)} = 0.53 \times \left[\frac{0.300}{1830.000}\right]^{0.086} = 0.2428$$

Tier 2 Industrial/Commercial Calculations for Total Xylenes

ABP Properties, LLC
2016-0917

Air-Filled Porosity

S-21 = $\Theta_a = \eta - \Theta_w$ = 0.53 - 0.24 = 0.2890

Dilution Factor

S-22 = $DF = 1 + \frac{K \times i \times d}{I \times L}$ = $\frac{873.55}{0.300} \times \frac{0.0096}{34.747} \times 4.695 + 1$ = 4.7925

GW Ingestion

S-23 = $\frac{TR \times BW \times At_c \times 365}{SF_o \times IR_w \times EF \times ED}$ = $\frac{1.0E\text{-}06}{0.000} \times \frac{70}{1.000} \times \frac{0}{250} \times \frac{365}{25}$ = $\frac{0.0E+00}{0}$ = #DIV/0! mg/L

Total Soil Porosity

S-24 = $\eta = 1 - \frac{\rho_b}{\rho_s}$ = 1 - $\frac{1.233}{2.634}$ = 0.5319

Estimation of Mixing Zone Depth

S-25 = $d = (0.0112 \times L^2)^{0.5} + d_a \left[1 - \exp \frac{(-L \times I)}{(K \times i \times d_a)}\right]$

= (0.0112 x 34.747 ^{2})$^{0.5}$ + 3.048 x [1 - exp { -34.747 / 873.547 x 0.3 / 0.0096 x 3.048 }] = 4.695 m

Soil Saturation Limit

S-29 = $C_{sat} = \frac{S}{\rho_b} \times [(K_d \times \rho b) + \Theta w + (H' \times \Theta a)]$ = $\frac{110}{1.233}$ x [(13.6514 x 1.233) + 0.243 + (0.271 x 0.289)] = 1,530.32 mg/kg

Soil Gas Outdoor Inhalation

S-30 = $ROs\ g = \frac{ROsoil \times H \times \rho b \times 1000}{H' \times \Theta a + \Theta w + Kd \times \rho b}$ = $\frac{80.742}{2.710E\text{-}01} \times \frac{0.271}{0.289} \times \frac{1.233}{0.243} \times \frac{1000}{13.651} \times \frac{}{1.233}$ = 1,572.82 mg/m^3

Tier 2 Industrial/Commercial Calculations for Naphthalene

ABP Properties, LLC
2016-0917

SSL | RBCA | SSL & RBCA | IRIS/HEAST

Date Compiled: 12/05/19

Input Values

Holcomb's Bulk Density -->	0	Converted Value to be used in calculation sheet -->		–	USDA Soil Classification:	Sand			
Organic Matter (%) -->	0	FOC % (0.58 conversion) -->	0.000	Organic Matter (mg/kg)	0	FOC mg/kg (0.58 conversion)	0.000	foc conversion to g/g:	0.000

1.233	ρ_b - Dry Soil Bulk Density			1.5 or; Gravel = 2.0; Sand = 1.8; Silt = 1.6; Clay = 1.7; or Site Specific
2.634	ρs - Soil Particle Density			2.65 or; Site Specific
0.289	Θ_a - Air Filled Soil Porosity	*0.289*	Value from S-21	Top 1 meter = 0.28; below 1 meter = 0.13; Gravel = 0.05; Sand = 0.14; Silt =0.24; Clay = 0.19; or Calculated Value (S21)
0.243	Θw - Water Filled Soil Porosity	*0.243*	Value from S-20	Top 1 meter = 0.15; below 1 meter = 0.30; Gravel = 0.20; Sand = 0.18; Silt =0.16; Clay = 0.17; or Calculated Value (S20)
0.532	η - SSL: Total Soil Porosity	*0.532*	Value from S-24	0.43 or; Gravel - 0.25; Sand = 0.32; Silt = 0.40; Clay = 0.36; or Calculated Value (S24)
0.00964	i - Hydraulic Gradient			Site Specific
0.034	foc - Total Organic Carbon (g/g)			Surface Soil = 0.006; Subsurface Soil = 0.002; or Site Specific
20.000	DF - Dilution Factor			If calculated value for DF is less than 20, then 20 default is used, else calculated value is used
4.695	d - Mixing Zone (m)			2; or calculated value
3.048	d_a - Depth of source (m)		feet = 10	Depth of Source (Vertical thickness of contamination)
873.55	K - Hydraulic Conductivity (m/yr)	cm/sec =	2.77E-03	Site Specific 2.39E+02 cm/d 8.74E+04 cm/yr Use cm/d for R15, R19 & R26; cm/yr for R24
34.747	L - Source Length Parallel to Groundwater Flow (m)		feet = 114	Site Specific (m)
3.048	d_s - Aquifer Thickness (m)		feet = 10	Site Specific (m)
0.3	I - Infiltration Rate (m/yr)			0.3 for Illinois
1830	K_s - Saturated Hydraulic Conductivity			See Table K for Input Values
0.140	GW_{obj} - Groundwater Remediation Objective Class 1			0.22 GW_{obj} - Groundwater Remediation Objective Class 2
0.090	1/(2b+3) - Exponent for S20			See Table K for Input Values
70	BW - Body Weight			Residential = 70 (carcinogenic); 15 (non-carcinogenic); Industrial/Commercial = 70; Construction Worker = 70; RBCA = 70
114	$IF_{soil-adj}$ -Age Adjusted Soil Ingestion Factor for Carcinogens			114
50	IR_{soil} -Soil Ingestion Rate			Residential = 200; Industrial/Commercial = 50; Construction Worker = 480
1	IR_w -Daily Water Ingestion Rate			Residential = 2; Industrial/Commercial = 1
31	S - Solubility in Water			Naphthalene = 31
1.0E-06	TR - Target Cancer Risk			Residential = 10^{-6}; Industrial/Commercial = 10^{-5}; Construction Worker = 10^{-5} at point of human exposure
250	EF - Exposure Frequency			Residential = 350; Industrial/Commercial = 250; Construction Worker = 30
25	ED - Exposure Duration for Inhalation for Non-Carcinogens			Residential = 30; Industrial/Commercial = 25; Construction Worker = 1
68.81	O/C - inverse of the mean concentration at the center of a square source			Residential = 68.81; Industrial/Commercial = 85.81; Construction Worker = 85.81; or Table H
7.90E+08	T - Exposure Interval			Residential = 9.5×10^8; Industrial/Commercial = 7.9×10^8; Construction Worker = 3.6×10^8
30	T_{M-L} - Exposure Interval for Mass Limit Volatilization Factor Equation S28			30
70	ED_{M-L} - Exposure Duration for Migration to Groundwater Mass-Limit Equation S28			70
0.18	I_{M-L} - Infiltration Rate for Migration to Groundwater Mass-Limit Equation S28			0.18
0.059	D_i - Diffusivity in Air			Naphthalene = 0.059
0.0198	H' - Henry's Law Constant			Naphthalene = 0.0198
7.50E-06	D_w - Diffusivity in Water			Naphthalene = 7.5×10^{-6}
25	AT - Average Time for Non-Carcinogens in Ingestion Equation			Residential = 6; Industrial/Commercial = 25; Construction Worker = 0.115
25	AT - Average Time for Non-Carcinogens in Inhalation Equation			Residential = 30; Industrial/Commercial = 25; Construction Worker = 0.115
1	THQ - Target Hazard Quotient			1
0.003	RfC - Inhalation Reference Concentration			Chronic = 0.003; Subchronic = 0.003
0.020	RfD_o - Oral Reference Dose			Chronic = 0.02; Subchronic = 0.6
500.00	K_{oc} - Organic Carbon Partition Coefficient			Naphthalene = 2,000

Industrial/Commercial Ingestion Remediation Objectives for Non-Carcinogenic Contaminants

$$S\text{-}1 = \frac{THQ \times BW \times AT \times 365}{10^{-6} \times (1/RfD_o) \times EF \times ED \times IR_{soil}} = \frac{1 \times 70 \times 25 \times 365}{0.000001 \times 1/0.02 \times 250 \times 25 \times 50} = \frac{638750}{15.625} = 40880 \text{ mg/kg}$$

Construction Worker Ingestion Remediation Objectives for Non-Carcinogenic Contaminants

$$S\text{-}1 = \frac{THQ \times BW \times AT \times 365}{10^{-6} \times (1/RfD_o) \times EF \times ED \times IR_{soil}} = \frac{1 \times 70 \times 0.115 \times 365}{0.000001 \times 1/0.6 \times 30 \times 1 \times 480} = \frac{2938.25}{0.024} = 122427 \text{ mg/kg}$$

Industrial Commercial Inhalation

$$S\text{-}4 = \frac{THQ \times AT \times 365}{EF \times ED \times (1/RfC \times 1/VF)} = \frac{1 \times 25 \times 365}{250 \times 25 \times 1/0.003 \times 1/98390.43491} = \frac{9125}{21.17414} = 430.950 \text{ mg/kg}$$

Inhalation Non-Carcinogenic Construction Worker

$$S\text{-}5 = \frac{THQ \times AT \times 365}{EF \times ED \times (1/RfC \times 1/VF)} = \frac{1 \times 0.115 \times 365}{30 \times 1 \times 1/0.003 \times 1/664.1873273} = \frac{41.975}{15.05599} = 2.788 \text{ mg/kg}$$

RESIDENTIAL OR COMMERCIAL

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{\left(\frac{3.14 \times 3.10E\text{-}06 \times 7.90E+08}{2 \times 1.233 \times 3.10E\text{-}06}\right)^{1/2} \times 0.0001}{} = \frac{0.7528}{7.55E\text{-}06} = 98390.4349$$

C (Naphthalene)

Tier 2 Industrial/Commercial Calculations for Naphthalene

ABP Properties, LLC
2016-0917

Construction Worker

$$S\text{-}8 = VF = \frac{Q}{C} \times \frac{(3.14 \times D_A \times T)^{1/2} \times 10^{-4}}{(2 \times \rho_b \times D_A)} = 85.81 \times \frac{\left(\frac{3.14}{2} \times \frac{3.10E\text{-}06}{1.233} \times \frac{3.60E+08}{3.10E\text{-}06}\right)^{1/2} \times 0.0001}{7.65E\text{-}08} = 6641.8733$$

Equation for Derivation of Volatilization Factor - Construction Worker

$$S\text{-}9 = VF' = \frac{VF}{10} = \frac{6641.8733}{10} = 664.1873$$

Equation for Derivation of Apparent Diffusivity

$$S\text{-}10 = D_A = \frac{(\theta_a^{3.33} \times D_i \times H') + (\theta_w^{3.33} \times D_w)}{\eta^2} \times \frac{1}{(\rho_b \times K_d) + \theta_w + (\theta_a \times H')}$$

$$= \frac{\left(\frac{1.60E\text{-}02}{0.2830} \times 0.059 \times 0.020\right) + \left(\frac{0.0090}{0.2830} \times 7.50E\text{-}06\right)}{\left(1.233 \times 17.15\right) + 0.24 + \left(0.289 \times 0.020\right)} \times 1 = 3.10E\text{-}06$$

Soil Component of the Migration to Groundwater Cleanup Objective (Class 1)

$$S\text{-}17 = C_w \times \left[K_d + \frac{(\theta_w + \theta_a \times H')}{\rho b}\right] = 2.8 \times \left[17.15 + \frac{0.243 + 0.289 \times 0.020}{1.233}\right] = 48.585 \text{ mg/kg}$$

Target Soil Leachate Concentration (Class 1)

$$S\text{-}18 = C_w = DF \times GW_{obj} = 20.00 \times 0.140 = 2.8$$

Soil-Water Partition Coefficient

$$S\text{-}19 = K_d = K_{oc} \times f_{oc} = 500.00 \times 0.034 = 17.15$$

Water-Filled Porosity

$$S\text{-}20 = \Theta_w = \eta \times \frac{1}{K_s}^{1/(2b+3)} = 0.53 \times \left[\frac{0.300}{1830.000}\right]^{0.000} = 0.2428$$

Tier 2 Industrial/Commercial Calculations for Naphthalene

ABP Properties, LLC
2016-0917

Air-Filled Porosity

S-21 = $\Theta_a = \eta - \Theta_w = 0.53 - 0.24 = 0.2890$

Dilution Factor

S-22 = $DF = 1 + \frac{K \times i \times d}{I \times L} = \frac{873.55}{0.300} \times \frac{0.0096}{34.747} \times 4.695 + 1 = 4.7925$

GW Ingestion

S-23 = $\frac{TR \times BW \times At_c \times 365}{SF_o \times IR_w \times EF \times ED} = \frac{1.0E\text{-}06}{0.000} \times \frac{70}{1.000} \times \frac{0}{250} \times \frac{365}{25} = \frac{0.0E+00}{0} = \#DIV/0!$ mg/L

Total Soil Porosity

S-24 = $\eta = 1 - \frac{\rho_b}{\rho_s} = 1 - \frac{1.233}{2.634} = 0.5319$

Estimation of Mixing Zone Depth

S-25 = $d = (0.0112 \times L^2)^{0.5} + d_a \left[1 - \exp\frac{(-L \times I)}{(K \times i \times d_a)}\right]$

$= (0.0112 \times 34.747^2)^{0.5} + 3.048 \times \left[1 - \exp\left\{\frac{-34.747}{873.547} \times \frac{0.3}{0.0096} \times \frac{1}{3.048}\right\}\right] = 4.695$ m

Soil Saturation Limit

S-29 = $C_{sat} = \frac{S}{\rho_b} \times [(K_d \times \rho b) + \Theta w + (H' \times \theta a)] = \frac{31}{1.233} \times [(17.15 \times 1.233) + 0.243 + (0.020 \times 0.288)] = 537.90$ mg/kg

Soil Gas Outdoor Inhalation

S-30 = $ROs\,g = \frac{ROsoil \times H \times \rho b \times 1000}{H' \times \Theta a + \Theta w + Kd \times \rho b} = \frac{2.788}{1.980E\text{-}02} \times \frac{0.020}{0.288} \times \frac{1.233}{0.243} \times \frac{1000}{17.150} \times \frac{}{1.233} = 3.18$ mg/m^3

·C (Naphthalene)

ABP Properties, LLC
2016-0917

Appendix C - Table K
Parameter Estimates for Calculating Water - Filled Soil Porosity (Ow)

Soil Texture	Saturated Hydraulic Conductivity (Ks) (m/yr)	1/ (2b+3)
Sand	1830	0.09
Loamy Sand	540	0.085
Sandy Loam	230	0.08
Silt Loam	120	0.074
Loam	60	0.073
Sandy Clay Loam	40	0.058
Silt Clay Loam	13	0.054
Clay Loam	20	0.05
Sandy Clay	10	0.042
Silt Clay	8	0.042
Clay	5	0.039

Version: 3/26/2018

SUBURBAN LABORATORIES, Inc.
1950 S Batavia Ave Ste. 150 Geneva, Illinois 60134
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www.suburbanlabs.com

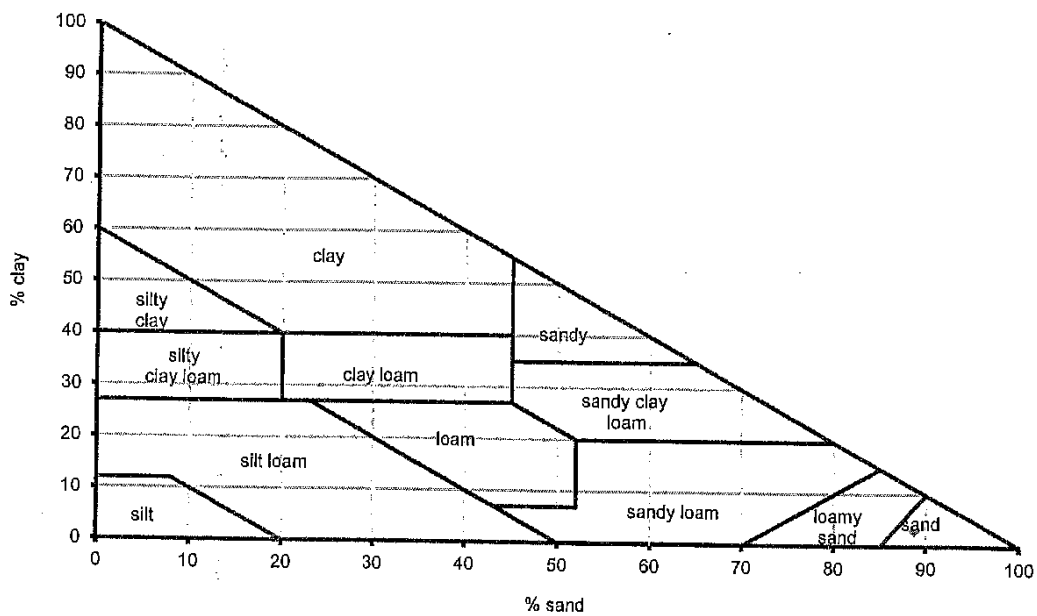
ACCREDITED IN ACCORDANCE WITH nelac

SLI Work Order: 1808A27
SLI Sample ID: 1808A27-001A

Analysis Date: 8/17/2018

% SAND	% CLAY	%SILT
88.8	3.3	7.20

Soil Classification: Sand



Textural triangle by A. Gerakis and B. Baer, 26 July 2000.

Bouwer & Rice Method
Version 2.00
6/18/1995

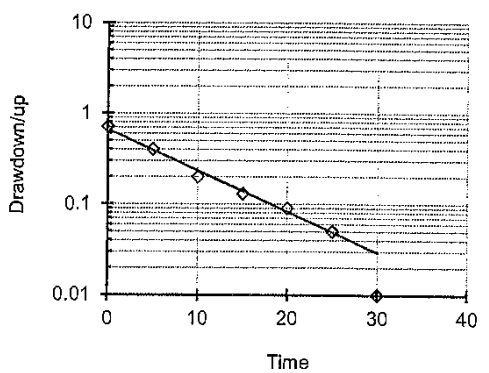
Notice to users: Each user will determine the accuracy of this program and its suitability to a particular purpose before basing any decisions upon program results. All risks of such decisions will be borne by the user. Please notify CSA of any suspected errors in the program.

Calculation Status: Automatic Calculation

Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: ABP Properties, LLC
Project No.: 2016-0917
Client Name: ABP Properties, LLC
Identification: MW-3
Analysis By: JKK/KTR
Run Date: 2/5/2019

Riser Pipe Diameter:	0.1667	feet
Intake Diameter:	0.604	feet
Intake Length:	10	feet
Saturated Column Length:	9.58	feet
Water Table Depth:	5.5	feet
Aquifer Thickness:	10	feet
Line Fit Starting No.:	1	Min 1 to
Line Fit Ending No.:	6	Max 7
Specify Output Units:	7	1 to 9
Hyd. Cond., K(h):	2.77E-03	cm./sec.
Error of Fit:	0.042	



Meas. #	Time seconds	Field Meas. feet	Drawdown/up feet		Line Fit To LN(Yt)	Regression On LN(Yt)
1)	0.00	4.79	0.71		-0.342	-0.421
2)	5.00	5.10	0.40		-0.916	-0.940
3)	10.00	5.30	0.20		-1.609	-1.459
4)	15.00	5.37	0.13		-2.040	-1.978
5)	20.00	5.41	0.09		-2.408	-2.497
6)	25.00	5.45	0.05		-2.996	-3.017
7)	30.00	5.49	0.01		-4.605	-3.536

APPENDIX F

BORE LOGS AND WELL COMPLETION REPORTS

CORRECTIVE ACTION PLAN AND BUDGET AMENDMENT
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

LUST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** WC-1
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 20' S & 28' E of the SE corner of building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted drill rig
DATE/TIME STARTED: 10/5/16 10:30 AM	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 10/5/16 10:45 AM	**BACKFILL:** Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Concrete						
1	Subbase			0			
2	Brown Silty Clay	CL					
3			95%	0	Grab	WC-1 2.5'	
4							
5				0			
6				132			Odor and Discoloration
7	Dark Brown Silty Clay W/ Trace Fine Grain Sand	CL					
8			100%	1178	Grab	WC-1 7.5'	BETX, MTBE, WC Parameters
9							
10				1178			Wet
11	End of Boring - 10'						
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at location of highest PID reading above water table

Manway / Surface Elevation:

Groundwater Depth While Drilling:	~9'	**Auger Depth:**	10'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2016-0917
SITE NAME: ABP Properties, LLC
SITE ADDRESS: 120 W. 1st Street
Gibson City, IL 60936
DATE/TIME STARTED: 3/7/17 1:00 PM
DATE/TIME FINISHED: 3/7/17 1:15 PM

BOREHOLE NUMBER: SB-1
BORING LOCATION: 54' S & 27' E of the SE corner of building
RIG TYPE: Truck mounted drill rig
DRILLING/SAMPLE METHOD: Push
BACKFILL: Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No odor or discoloration
2	Brown Silty Clay	CL					
3			85%	0	Grab	SB-1A 2.5'	BETX, MTBE
4							
5				0			
6				0			
7	Brown Mottled Gray Silty Clay	CL					
8			95%	0	Grab	SB-1B 7.5'	BETX, MTBE
9	Fine-Grained Sand						Wet
10				0			
11	End of Boring - 10'						
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at 2.5' and 7.5' since zero PID throughout

Manway / Surface Elevation:

Groundwater Depth While Drilling: 9-10' **Auger Depth:** 10' **Driller:** AEDC

Groundwater Depth After Drilling: **Rotary Depth:** **Geologist:** MDR/MJS

Illinois Environmental Protection Agency

CW=M COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2016-0917
SITE NAME: ABP Properties, LLC
SITE ADDRESS: 120 W. 1st Street
Gibson City, IL 60936
DATE/TIME STARTED: 3/7/17 1:15 PM
DATE/TIME FINISHED: 3/7/17 1:30 PM

BOREHOLE NUMBER: SB-2
BORING LOCATION: 48' S & 21' W of the SW corner of building
RIG TYPE: Truck mounted drill rig
DRILLING/SAMPLE METHOD: Push
BACKFILL: Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No Odor or Discoloration
2	Brown Clayey Silt	CL					
3			85%	0	Grab	SB-2A 2.5'	BETX, MTBE
4							
5				0			
6	Brown Mottled Gray Silty Clay	CL					
7				0			
8			90%	0	Grab	SB-2B 7.5'	BETX, MTBE
9	Fine-Grained Sand						Wet
10				0			
11	End of Boring - 10'						
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at 2.5' and 7.5' since zero PID throughout

Manway / Surface Elevation:

Groundwater Depth While Drilling: ~10'
Groundwater Depth After Drilling:

Auger Depth: 10'
Rotary Depth:

Driller: AEDC
Geologist: MDR/MJS

Illinois Environmental Protection Agency

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DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** SB-3
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 33' S & 22' W of the SW corner of building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted drill rig
DATE/TIME STARTED: 3/7/17 1:30 PM	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 3/7/17 1:45 PM	**BACKFILL:** Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No Odor or Discoloration
2	Black Clayey Silt	CL					
3			90%	0	Grab	SB-3A 2.5'	BETX, MTBE
4							
5				0			
6				0			
7	Brown Mottled Gray Silty Clay	CL					
8			95%	0	Grab	SB-3B 7.5'	BETX, MTBE
9	Fine-Grained Sand						Wet
10				0			
11	End of Boring - 10'						
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at 2.5' and 7.5' since zero PID throughout

Manway / Surface Elevation:

Groundwater Depth While Drilling:	~10'	**Auger Depth:**	10'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR/MJS

Illinois Environmental Protection Agency

CW[illegible]M COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2016-0917
SITE NAME: ABP Properties, LLC
SITE ADDRESS: 120 W. 1st Street
Gibson City, IL 60936
DATE/TIME STARTED: 3/7/17 9:30 AM
DATE/TIME FINISHED: 3/7/17 10:15 AM

BOREHOLE NUMBER: MW-1
BORING LOCATION: 26' S & 65' E of the SE corner of building
RIG TYPE: Truck mounted drill rig
DRILLING/SAMPLE METHOD: HSA
BACKFILL: N/A - Well Set

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No Odor or Discoloration
2	Black Silty Clay	CL					
3			85%	0	Grab	MW-1A 2.5'	BETX, MTBE
4							
5	Brown Silty Clay			0			
6				0			
7	Brown Mottled Gray Silty Clay	CL					
8			95%	0	Grab	MW-1B 7.5'	BETX, MTBE
9	Fine-Grained Sand						Wet
10				0			
11							
12							
13			100%				
14							
15	End of Boring - 15'						

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at 2.5' and 7.5' since zero PID throughout

Manway / Surface Elevation: 100.36
Groundwater Depth While Drilling: 9-10'
Groundwater Depth After Drilling: 94.08

Auger Depth: 15'
Rotary Depth:
Driller: AEDC
Geologist: MDR/MJS

Illinois Environmental Protection Agency

CW=M COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2016-0917
SITE NAME: ABP Properties, LLC
SITE ADDRESS: 120 W. 1st Street
Gibson City, IL 60936
DATE/TIME STARTED: 3/7/17 10:15 AM
DATE/TIME FINISHED: 3/7/17 11:00 AM

BOREHOLE NUMBER: MW-2
BORING LOCATION: 76' S & 19' W of the SE corner of building
RIG TYPE: Truck mounted drill rig
DRILLING/SAMPLE METHOD: HSA
BACKFILL: N/A - Well Set

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No Odor or Discoloration
2	Black Clayey Silt	CL					
3			85%	0	Grab	MW-2A 2.5'	BETX, MTBE
4							
5				0			
6	Brown Mottled Gray Clay			11			Strong Odor and Discolaration
7		CL					
8			95%	36	Grab	MW-2B 7.5'	BETX, MTBE
9	Fine-Grained Sand						Wet
10				15			
11							
12							
13			100%				
14							
15	End of Boring - 15'						

Stratification lines are approximate, in-situ transition between soil types may be gradual.

OTES: Sampled at 2.5' and 7.5' (highest PID reading)

Manway / Surface Elevation: 99.98

Groundwater Depth While Drilling: 9-10' | **Auger Depth:** 15' | **Driller:** AEDC

Groundwater Depth After Drilling: 93.88 | **Rotary Depth:** | **Geologist:** MDR/MJS

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DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** MW-3
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 37' S & 70' W of the SW corner of building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted drill rig
DATE/TIME STARTED: 3/7/17 11:00 AM	**DRILLING/SAMPLE METHOD:** HSA
DATE/TIME FINISHED: 3/7/17 11:45 AM	**BACKFILL:** N/A - Well Set

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No Odor or Discoloration
2	Black Clayey Silt	CL					
3			95%	0	Grab	MW-3A 2.5'	BETX, MTBE
4							
5				0			
6	Brown Clayey Silt			0			
7		CL					
8			90%	6	Grab	MW-3B 7.5'	BETX, MTBE - Slight Odor Wet
9	Fine-Grained Sand						
10				0			
11							
12							
13			95%				
14							
15	End of Boring - 15'						

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at 2.5' and 7.5' (highest PID reading)

Manway / Surface Elevation:	100.49				
Groundwater Depth While Drilling:	9-10'	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:	94.18	**Rotary Depth:**		**Geologist:**	MDR/MJS

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DRILLING BOREHOLE LOG

LUST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** MW-4
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 22' N & 22' E of the SE corner of building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted drill rig
DATE/TIME STARTED: 3/7/17 11:45 AM	**DRILLING/SAMPLE METHOD:** HSA
DATE/TIME FINISHED: 3/7/17 12:30 AM	**BACKFILL:** N/A - Well Set

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No Odor or Discoloration
2	Brown Clayey Silt	CL					
3			85%	0	Grab	MW-4A 2.5'	BETX, MTBE
4							
5	Black Clayey Silt			0			
6				0			
7	Black Mottled Gray Silty Clay	CL	90%	0	Grab	MW-4B 7.5'	BETX, MTBE
8							
9	Fine-Grained Sand						Wet
10				0			
11							
12							
13			100%				
14							
15	End of Boring - 15'						

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at 2.5' and 7.5' since zero PIDs found

Manway / Surface Elevation:	99.98				
Groundwater Depth While Drilling:	9-10'	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:	92.81	**Rotary Depth:**		**Geologist:**	MDR/MJS

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

ST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** MW-5
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 35' N & 23' E of the SE corner of building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted drill rig
DATE/TIME STARTED: 3/7/17 12:30 PM	**DRILLING/SAMPLE METHOD:** HSA
DATE/TIME FINISHED: 3/7/17 1:00 PM	**BACKFILL:** N/A - Well Set

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No Odor or Discoloration
2	Brown Clayey Silt	CL					
3			90%	0	Grab	MW-5A 2.5'	
4							
5				0			
6				0			
7		CL					
8			95%	0	Grab	MW-5B 7.5'	
9	Fine-Grained Sand						Wet
10				0			
11							
12							
13			95%				
14							
15	End of Boring - 15'						

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: No Samples taken per Regs - Well set only

Manway / Surface Elevation:	100				
Groundwater Depth While Drilling:	9-10'	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:	93.55	**Rotary Depth:**		**Geologist:**	MDR/MJS

Illinois Environmental Protection Agency

CW[illegible]M COMPANY, INC.
DRILLING BOREHOLE LOG

LUST INCIDENT #: 2016-0917
SITE NAME: ABP Properties, LLC
SITE ADDRESS: 120 W. 1st Street
Gibson City, IL 60936
DATE/TIME STARTED: 8/8/2018 10:00 AM
DATE/TIME FINISHED: 8/8/2018 10:10 AM

BOREHOLE NUMBER: TACO-1
BORING LOCATION: 37' S & 70' W of the SW corner of building
RIG TYPE: Truck mounted drill rig
DRILLING/SAMPLE METHOD: Push
BACKFILL: Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Asphalt						
1	Subbase						No Odor or Discoloration
2	Black Clayey Silt	CL		0			
3			90%	0			
4							
5				0			
6	Brown Clayey Silt						
7		CL		0			
8			90%	0	Grab	TACO	TACO parameters
9	Fine-Grained Sand						
10				0			
11	End of Boring - 10'						
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sample taken from 7.5'-8

Manway / Surface Elevation:

Groundwater Depth While Drilling: ~9.5-10' **Auger Depth:** 10' **Driller:** AEDC

Groundwater Depth After Drilling: **Rotary Depth:** **Geologist:** MJS/GTR

Illinois Environmental Protection Agency

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DRILLING BOREHOLE LOG

LUST INCIDENT #: 2016-0917
SITE NAME: ABP Properties, LLC
SITE ADDRESS: 120 W. 1st Street
Gibson City, IL 60936
DATE/TIME STARTED: 8/8/2018 10:10 AM
DATE/TIME FINISHED: 8/8/2018 10:20 AM

BOREHOLE NUMBER: SB-4
BORING LOCATION: 6' S & 22' W of the SE corner of building
RIG TYPE: Truck mounted drill rig
DRILLING/SAMPLE METHOD: Push
BACKFILL: Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Concrete						
1	Subbase						No Odor or Discoloration
2	Black Clayey Silt	CL		0			
3			80%	0	Grab	SB-4A	BETX, MTBE
4							
5				0			
6							
7	Brown mottled gray clayey silt	CL		0			
8			80%	0			
9				65	Grab	SB-4B	Odor and discoloration BETX, MTBE
10							Wet
11	End of Boring - 10'						
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Only sampled to 10' due to higher groundwater
Sampled at center of each 5' interval due to 0 PID or highest PID level per 5' interval

Manway / Surface Elevation:

Groundwater Depth While Drilling: ~9.5-10' **Auger Depth:** 10' **Driller:** AEDC

Groundwater Depth After Drilling: **Rotary Depth:** **Geologist:** MJS/GTR

Illinois Environmental Protection Agency

CW=M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** SV-1
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 1' W of Sample 3 Station Building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted geoprobe
DATE/TIME STARTED: 2/12/20 10:05 A.M.	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 2/12/20 10:15 A.M.	**BACKFILL:** Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0							
1	Concrete / Subbase						Strong Odor throughtout
2	Black Silty Clay	CL					
3			90%		G	SV-1	Soil Vapor Paramters
4							
5	End of Boring - 4'						
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES:

Manway / Surface Elevation:

Groundwater Depth While Drilling:	N/A	**Auger Depth:**	4'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MJS/JKK

Illinois Environmental Protection Agency

CW=M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** CA-1
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 56' S & 9' E of the SW Corner of the Station Building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted geoprobe
DATE/TIME STARTED: 2/12/20 10:15 A.M.	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 2/12/20 10:25 A.M.	**BACKFILL:** Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0							
1	Asphalt / Subbase						Odor Throughout
2	Black Silty Clay	CL		375			
3			80%	1040	Grab	CA-1	Benzene
4							
5	Black Mottled Grey Silty Clay	CL		563			
	End of Boring - 5'						
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at 3' due to highest PID in 0-5' interval

Manway / Surface Elevation:

Groundwater Depth While Drilling:	N/A	**Auger Depth:**	5'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MJS/JKK

Illinois Environmental Protection Agency

CW-M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** CA-2
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 42' S & 6' W of the SW Corner of the Station Building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted geoprobe
DATE/TIME STARTED: 2/12/20 10:25 A.M.	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 2/12/20 10:35 A.M.	**BACKFILL:** Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0							
1	Asphalt / Subbase						Odor Throughout
2	Black Silty Clay	CL					
3			80%	2700	Grab	CA-2	Benzene
4	Black Mottled Grey Silty Clay	CL		1809			
5				1643			
6	End of Boring - 5'						
7							
8							
9							
10							
11							
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

NOTES: Sampled at 2.5' due to highest PID in 0-5' interval

Manway / Surface Elevation:

Groundwater Depth While Drilling:	N/A	**Auger Depth:**	5'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MJS/JKK

Illinois Environmental Protection Agency

CWM COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2016-0917	**BOREHOLE NUMBER:** CA-3
SITE NAME: ABP Properties, LLC	**BORING LOCATION:** 9' S & 7' E of the SW Corner of the Station Building
SITE ADDRESS: 120 W. 1st Street Gibson City, IL 60936	**RIG TYPE:** Truck mounted geoprobe
DATE/TIME STARTED: 2/12/20 10:35 A.M.	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 2/12/20 10:45 A.M.	**BACKFILL:** Cuttings/Grout

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0							
1	Concrete / Subbase						No Odor or Discoloration Throughtout
2	Light Brown Silty Cly	CL		0			
3			80%	0	Grab	CA-3	Benzene
4				0			
5							
6	End of Boring - 5'						
7							
8							
9							
10							
11							
12							
13							
14							
15							

Stratification lines are approximate, in-situ transition between soil types may be gradual.

OTES: Sampled at the center of 0-5' interval due to 0 PID

Manway / Surface Elevation:

Groundwater Depth While Drilling:	N/A	**Auger Depth:**	5'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MJS/JKK

Illinois Environmental Protection Agency — **LUST Well Completion Report**

Incident No.	2016-0917	**Well No.**	MW-1
Site Name	ABP Gibson City	**Date Drilled**	3/7/2017
Drilling Contractor	AEDC	**Date Completed**	3/7/2017
Driller	AEDC	**Geologist**	MDR/MJS
Drilling Method	Hollow Stem Auger	**Drilling Fluids**	N/A

Annular Space Details

Type of Surface Seal	Concrete
Type of Annular Sealant	Bentonite
Type of Bentonite	High-Yield
Type of Sand Pack	Coarse 20-20

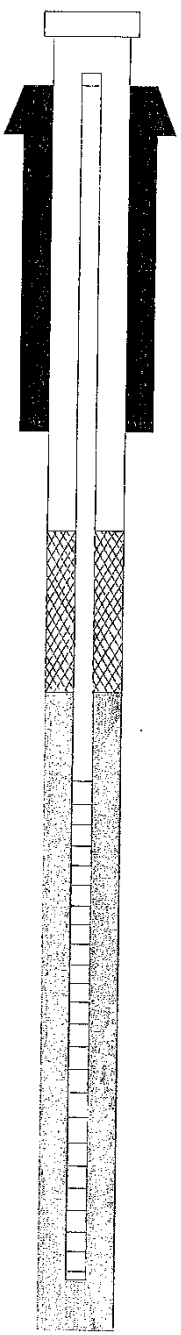
Well Construction Materials

	Stainless Steel Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint			
Riser Pipe Above w.t.		Sched.-40	
Riser Pipe Below w.t.			
Screen		Sched.-40	
Coupling Joint Screen to Riser		Sched.-40	
Protective Casing			Steel

Measurements

Riser Pipe Length	4.25 ft.
Screen Length	10.0 ft.
Screen Slot Size	10-slot
Protective Casing Length	N/A
Depth to Water	9-10' ft. while drilling
Depth to Water	94.08 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	Approximately 1 gallon
Gallons removed (purge)	Approximately 1 gallon
Other	

Completed by: MTK



100.36 ft.	Top of Protective Casing
100.11 ft.	Top of riser pipe
100.36 ft.	Ground surface
99.86 ft.	Top of Annular Sealant
N/A	Casing Stickup
99.86 ft.	Top of Seal
3.00 ft.	Total Seal interval
96.86 ft.	Top of Sand
95.86 ft.	Top of Screen
10.0 ft.	Total Screen Interval
85.86 ft.	Bottom of Screen
85.36 ft.	Bottom of Borehole

Illinois Environmental Protection Agency — **LUST Well Completion Report**

Incident No.	2016-0917	**Well No.**	MW-2
Site Name	ABP Gibson City	**Date Drilled**	3/7/2017
Drilling Contractor	AEDC	**Date Completed**	3/7/2017
Driller	AEDC	**Geologist**	MDR/MJS
Drilling Method	Hollow Stem Auger	**Drilling Fluids**	N/A

Annular Space Details

Type of Surface Seal	Concrete
Type of Annular Sealant	Bentonite
Type of Bentonite	High-Yield
Type of Sand Pack	Coarse 20-20

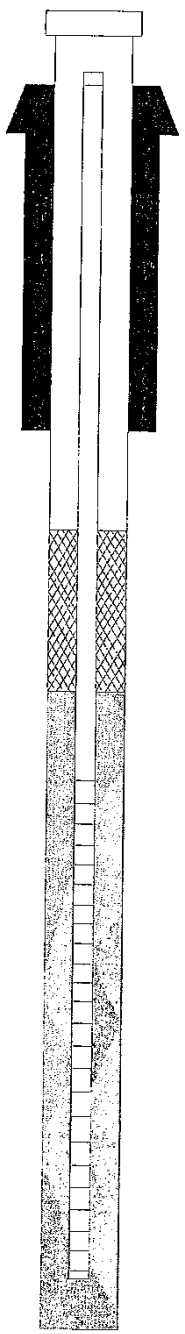
Well Construction Materials

	Stainless Steel Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint			
Riser Pipe Above w.t.		Sched.-40	
Riser Pipe Below w.t.			
Screen		Sched.-40	
Coupling Joint Screen to Riser		Sched.-40	
Protective Casing			Steel

Measurements

Riser Pipe Length	4.25 ft.
Screen Length	10.0 ft.
Screen Slot Size	10-slot
Protective Casing Length	N/A
Depth to Water	9-10' ft. while drilling
Depth to Water	93.88 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	Approximately 1 gallon
Gallons removed (purge)	Approximately 1 gallon
Other	

Completed by: MTK



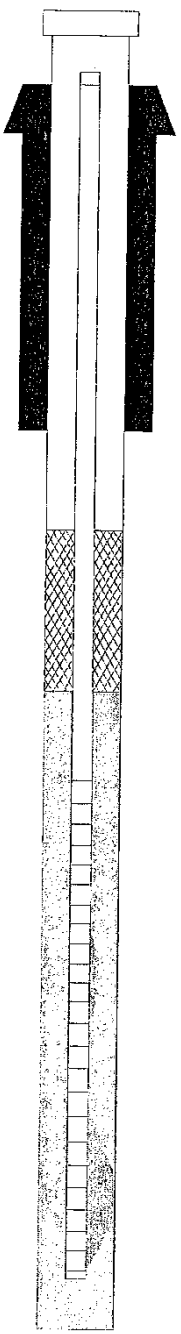
99.98 ft.	Top of Protective Casing
99.73 ft.	Top of riser pipe
99.98 ft.	Ground surface
99.48 ft.	Top of Annular Sealant
N/A	Casing Stickup
99.48 ft.	Top of Seal
3.00 ft.	Total Seal interval
96.48 ft.	Top of Sand
95.48 ft.	Top of Screen
10.0 ft.	Total Screen Interval
85.48 ft.	Bottom of Screen
84.98 ft.	Bottom of Borehole

Illinois Environmental Protection Agency — **LUST Well Completion Report**

Incident No.	2016-0917	**Well No.**	MW-3
Site Name	ABP Gibson City	**Date Drilled**	3/7/2017
Drilling Contractor	AEDC	**Date Completed**	3/7/2017
Driller	AEDC	**Geologist**	MDR/MJS
Drilling Method	Hollow Stem Auger	**Drilling Fluids**	N/A

Annular Space Details

Type of Surface Seal	Concrete
Type of Annular Sealant	Bentonite
Type of Bentonite	High-Yield
Type of Sand Pack	Coarse 20-20



100.49 ft.	Top of Protective Casing
100.24 ft.	Top of riser pipe
100.49 ft.	Ground surface
99.99 ft.	Top of Annular Sealant
N/A	Casing Stickup
99.99 ft.	Top of Seal
3.00 ft.	Total Seal interval
96.99 ft.	Top of Sand
95.99 ft.	Top of Screen
10.0 ft.	Total Screen Interval
85.99 ft.	Bottom of Screen
85.49 ft.	Bottom of Borehole

Well Construction Materials

	Stainless Steel Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint			
Riser Pipe Above w.t.		Sched.-40	
Riser Pipe Below w.t.			
Screen		Sched.-40	
Coupling Joint Screen to Riser		Sched.-40	
Protective Casing			Steel

Measurements

Riser Pipe Length	4.25 ft.
Screen Length	10.0 ft.
Screen Slot Size	10-slot
Protective Casing Length	N/A
Depth to Water	9-10' ft. while drilling
Depth to Water	94.18 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	Approximately 1 gallon
Gallons removed (purge)	Approximately 1 gallon
Other	

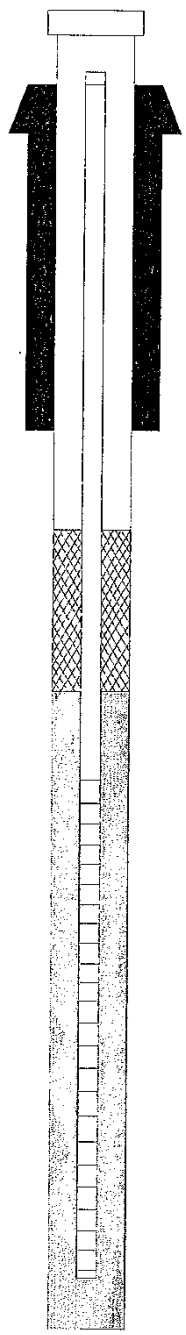
Completed by: MTK

Illinois Environmental Protection Agency — **LUST Well Completion Report**

Incident No.	2016-0917	**Well No.**	MW-4
Site Name	ABP Gibson City	**Date Drilled**	3/7/2017
Drilling Contractor	AEDC	**Date Completed**	3/7/2017
Driller	AEDC	**Geologist**	MDR/MJS
Drilling Method	Hollow Stem Auger	**Drilling Fluids**	N/A

Annular Space Details

Type of Surface Seal	Concrete
Type of Annular Sealant	Bentonite
Type of Bentonite	High-Yield
Type of Sand Pack	Coarse 20-20



99.98 ft. Top of Protective Casing
99.73 ft. Top of riser pipe
99.98 ft. Ground surface
99.48 ft. Top of Annular Sealant
N/A Casing Stickup

99.48 ft. Top of Seal
3.00 ft. Total Seal interval
96.48 ft. Top of Sand
95.48 ft. Top of Screen

10.0 ft. Total Screen Interval

85.48 ft. Bottom of Screen
84.98 ft. Bottom of Borehole

Well Construction Materials

	Stainless Steel Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint			
Riser Pipe Above w.t.		Sched.-40	
Riser Pipe Below w.t.			
Screen		Sched.-40	
Coupling Joint Screen to Riser		Sched.-40	
Protective Casing			Steel

Measurements

Riser Pipe Length	4.25 ft.
Screen Length	10.0 ft.
Screen Slot Size	10-slot
Protective Casing Length	N/A
Depth to Water	9-10' ft. while drilling
Depth to Water	92.81 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	Approximately 1 gallon
Gallons removed (purge)	Approximately 1 gallon
Other	

Completed by: MTK

Illinois Environmental Protection Agency — **LUST Well Completiou Report**

Incident No.	2016-0917	**Well No.**	MW-5
Site Name	ABP Gibson City	**Date Drilled**	3/7/2017
Drilling Contractor	AEDC	**Date Completed**	3/7/2017
Driller	AEDC	**Geologist**	MDR/MJS
Drilling Method	Hollow Stem Auger	**Drilling Fluids**	N/A

Annular Space Details

Type of Surface Seal	Concrete
Type of Annular Sealant	Bentonite
Type of Bentonite	High-Yield
Type of Sand Pack	Coarse 20-20

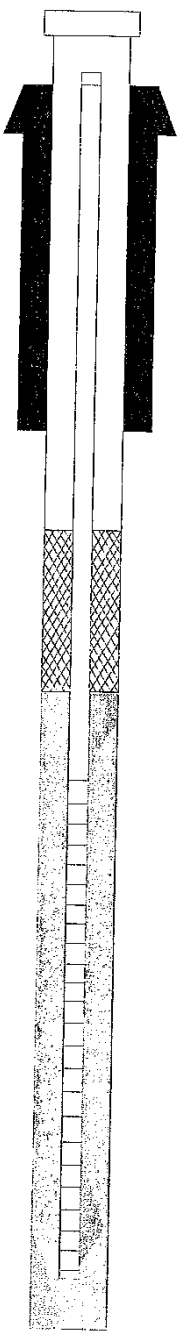
Well Construction Materials

	Stainless Steel Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint			
Riser Pipe Above w.t.		Sched.-40	
Riser Pipe Below w.t.			
Screen		Sched.-40	
Coupling Joint Screen to Riser		Sched.-40	
Protective Casing			Steel

Measurements

Riser Pipe Length	4.25 ft.
Screen Length	10.0 ft.
Screen Slot Size	10-slot
Protective Casing Length	N/A
Depth to Water	9-10' ft. while drilling
Depth to Water	93.55 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	Approximately 1 gallon
Gallons removed (purge)	Approximately 1 gallon
Other	

Completed by: MTK



100.00 ft. Top of Protective Casing
99.75 ft. Top of riser pipe
100.00 ft. Ground surface
99.50 ft. Top of Annular Sealant
N/A Casing Stickup

99.50 ft. Top of Seal
3.00 ft. Total Seal interval
96.50 ft. Top of Sand
95.50 ft. Top of Screen

10.0 ft. Total Screen Interval

85.50 ft. Bottom of Screen
85.00 ft. Bottom of Borehole

APPENDIX G

ANALYTICAL RESULTS

CORRECTIVE ACTION PLAN
AND BUDGET AMENDMENT
ABP PROPERTIES, LLC
GIBSON CITY, ILLINOIS

ABP Properties - Gibson City
Site Assessment Data

Release Confirmation/Waste Characterization

	Location	WC-1
	Date	10/5/2016
	Depth	
Parameter	Tier I CUO	
Benzene	0.03	9.46
Ethylbenzene	13.0	25.9
Toluene	12.0	103.
Total Xylenes	5.6	137.
MTBE	0.32	ND

Results in mg/kg
Numbers not bold indicate actual quantities, but are below the TACO Tier 1 Most Stringent Soil Clean-up Objective.
BOLD & SHADING -- Exceeds the TACO Tier 1 Most Stringent Soil Clean-up Objective.
ND -- Not Detected

ABP - Gibson City
Site Assessment Data

Early Action Release Confirmation - Soil

	Location	RC-1	RC-2
	Date	11/15/2016	11/16/2016
	Depth	13'	13'
Parameter	Tier I CUO		
Benzene	0.03	**12.**	**15.**
Ethylbenzene	13.0	**39.8**	**49.7**
Toluene	12.0	**154.**	**201.**
Total Xylenes	5.6	**208.**	**273.**
MTBE	0.32	ND	ND

Results in mg/kg
Numbers not bold indicate actual quantities, but are below the TACO Tier 1 Most Stringent Soil Clean-up Objective.
BOLD & SHADING -- Exceeds the TACO Tier 1 Most Stringent Soil Clean-up Objective.
ND -- Not Detected

ABP - Gibson City
Site Assessment Data

Early Action - Soil

	Location	1	2	3	4	5	6	7	8
	Date	11/16/2016	11/16/2017	11/16/2016	11/16/2017	11/17/2016	11/17/2016	11/17/2016	11/17/2016
	Depth	3'	3'	3'	3'	13'	13'	13'	7'
Parameter	Tier I CUO								
Benzene	**0.03**	**5.2**	ND	**32.5**	**1.54**	**0.16**	**0.122**	ND	ND
Ethylbenzene	**13.0**	**13.5**	**16.9**	**63.5**	9.26	0.272	0.1	ND	ND
Toluene	**12.0**	**68.7**	ND	**325.**	**24.8**	1.57	0.0959	0.063	ND
Total Xylenes	**5.6**	**74.7**	**83.4**	**343.**	**49.1**	1.48	0.201	0.0942	ND
MTBE	**0.32**	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	**570**								ND
Acenaphthylene	**30**								ND
Anthracene	**12,000**								ND
Benzo(a)anthracene	**0.9**								ND
Benzo(a)pyrene	**0.09**								ND
Benzo(b)flouranthene	**0.9**								ND
Benzo(g,h,i)perylene	**160**								ND
Benzo(k)flouranthene	**9**								ND
Chrysene	**88**								ND
Dibenzo(a,h)anthracene	**0.09**								ND
Flouranthene	**3,100**								ND
Fluorene	**560**								ND
Indeno(1,2,3-c,d)pyrene	**0.9**								ND
Napthalene	**1.8**								ND
Phenanthrene	**280**								ND
Pyrene	**2,300**								ND
Results in mg/kg									
Numbers not bold indicate actual quantities, but are below the TACO Tier 1 Most Stringent Soil Clean-up Objective.									
BOLD & SHADING -- Exceeds the TACO Tier 1 Most Stringent Soil Clean-up Objective.									
ND – Not Detected									

ABP - Gibson City
Site Assessment Data

Early Action - Soil

	Location	9	10	11	12	13	14	15	16
	Date	11/17/2016	11/17/2016	11/17/2016	11/18/2016	11/18/2016	11/18/2016	11/18/2016	11/21/2016
	Depth	7'	13'	7'	7'	7'	7'	7'	13'
Parameter	Tier I CUO								
Benzene	**0.03**	ND	ND	ND	ND	ND	ND	**0.103**	0.0172
Ethylbenzene	**13.0**	ND	ND	ND	ND	ND	ND	0.423	ND
Toluene	**12.0**	ND	0.0549	ND	ND	ND	ND	ND	0.109
Total Xylenes	**5.6**	ND	0.133	ND	ND	ND	ND	ND	0.0766
MTBE	**0.32**	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	**570**	ND	ND	ND	ND	ND	ND	ND	
Acenaphthylene	**30**	ND	ND	ND	ND	ND	ND	ND	
Anthracene	**12,000**	ND	ND	ND	ND	ND	ND	ND	
Benzo(a)anthracene	**0.9**	ND	ND	ND	ND	ND	ND	ND	
Benzo(a)pyrene	**0.09**	ND	ND	ND	ND	ND	ND	ND	
Benzo(b)flouranthene	**0.9**	ND	ND	ND	ND	ND	ND	ND	
Benzo(g,h,i)perylene	**160**	ND	ND	ND	ND	ND	ND	ND	
Benzo(k)flouranthene	**9**	ND	ND	ND	ND	ND	ND	ND	
Chrysene	**88**	ND	ND	ND	ND	ND	ND	ND	
Dibenzo(a,h)anthracene	**0.09**	ND	ND	ND	ND	ND	ND	ND	
Flouranthene	**3,100**	ND	ND	ND	ND	ND	ND	ND	
Fluorene	**560**	ND	ND	ND	ND	ND	ND	ND	
Indeno(1,2,3-c,d)pyrene	**0.9**	ND	ND	ND	ND	ND	ND	ND	
Napthalene	**1.8**	ND	ND	ND	ND	ND	ND	0.587	
Phenanthrene	**280**	ND	ND	ND	ND	ND	ND	ND	
Pyrene	**2,300**	ND	ND	ND	ND	ND	ND	ND	
Results in mg/kg									
Numbers not bold indicate actual quantities									
BOLD & SHADING -- Exceeds the TAC									
ND -- Not Detected									

ABP - Gibson City
Site Assessment Data

Early Action - Soil

	Location	17	18	19	20	21
	Date	11/22/2016	11/22/2016	11/22/2016	11/23/2016	11/23/2016
	Depth	7'	13'	13'	7'	7'
Parameter	Tier I CUO					
Benzene	0.03	ND	ND	0.83	0.2	ND
Ethylbenzene	13.0	ND	ND	ND	0.707	ND
Toluene	12.0	ND	ND	ND	1.79	ND
Total Xylenes	5.6	ND	ND	ND	0.39	ND
MTBE	0.32	ND	ND	ND	ND	ND
Acenaphthene	570					
Acenaphthylene	30					
Anthracene	12,000					
Benzo(a)anthracene	0.9					
Benzo(a)pyrene	0.09					
Benzo(b)flouranthene	0.9					
Benzo(g,h,i)perylene	160					
Benzo(k)flouranthene	9					
Chrysene	88					
Dibenzo(a,h)anthracene	0.09					
Flouranthene	3,100					
Fluorene	560					
Indeno(1,2,3-c,d)pyrene	0.9					
Napthalene	1.8					
Phenanthrene	280					
Pyrene	2,300					
Results in mg/kg						
Numbers not bold indicate actual quantitie						
BOLD & SHADING = Exceeds the TAC						
ND -- Not Detected						

ABP - Gibson City
Site Assessment Data

Stage 1 - Soil

	Location	MW-1A	MW-1B	MW-2A	MW-2B	MW-3A	MW-3B	MW-4A	MW-4B
	Date	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017
	Depth	2.5'	7.5'	2.5'	7.5'	2.5'	7.5'	2.5'	7.5'
Parameter	Tier I CUO								
Benzene	**0.03**	ND	ND	0.0219	ND	0.0159	ND	**0.0891**	ND
Ethylbenzene	**13.0**	ND	ND	ND	ND	ND	ND	0.199	ND
Toluene	**12.0**	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	**5.6**	ND	ND	0.304	ND	ND	ND	0.784	ND
MTBE	**0.32**	ND	ND	ND	ND	ND	ND	ND	ND
Results in mg/kg									
Numbers not bold indicate actual quantities, but are below the TACO Tier 1 Most Stringent Soil Clean-up Objective.									
BOLD & SHADING -- Exceeds the TACO Tier 1 Most Stringent Soil Clean-up Objective.									
ND -- Not Detected									

ABP - Gibson City
Site Assessment Data

Stage 1 - Soil

	Location	SB-1A	SB-1B	SB-2A	SB-2B	SB-3A	SB-3B
	Date	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017	3/7/2017
	Depth	2.5'	7.5'	2.5'	7.5'	2.5'	7.5'
Parameter	Tier I CUO						
Benzene	**0.03**	ND	ND	ND	ND	ND	ND
Ethylbenzene	**13.0**	ND	ND	ND	ND	ND	ND
Toluene	**12.0**	ND	ND	ND	ND	ND	ND
Total Xylenes	**5.6**	ND	ND	ND	ND	ND	ND
MTBE	**0.32**	ND	ND	ND	ND	ND	ND
Results in mg/kg							
Numbers not bold indicate actual quantities							
BOLD & SHADING -- Exceeds the TAC							
ND -- Not Detected							

ABP - Gibson City
Site Assessment Data

Stage 1 Groundwater

	Location	MW-1	MW-2	MW-3	MW-4	MW-5
	Date	3/9/2017*	3/9/2017*	3/9/2017*	3/9/2017*	3/9/2017*
Parameter	Class I CUO					
Benzene	**0.005**	ND	**0.009**	ND	ND	**1.18**
Ethylbenzene	**0.7**	ND	0.064	ND	ND	**2.69**
Toluene	**1.0**	ND	0.001	ND	ND	0.038
Total Xylenes	**10.0**	ND	0.008	ND	ND	0.893
MTBE	**0.07**	ND	ND	ND	ND	ND
Acenaphthene	**0.42**	ND	ND	ND	0.0004	0.0002
Acenaphtylene	**0.010**	ND	ND	ND	0.0001	ND
Anthracene	**2.1**	ND	ND	ND	ND	ND
Benzo(a)anthracene	**0.00013**	ND	ND	ND	ND	ND
Benzo(a)pyrene	**0.0002**	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	**0.00018**	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	**0.00076**	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	**0.00017**	ND	ND	ND	ND	ND
Chrysene	**0.0015**	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	**0.0003**	ND	ND	ND	ND	ND
Fluoranthene	**0.28**	ND	ND	ND	ND	ND
Fluorene	**0.28**	ND	ND	ND	0.0002	0.0001
Indeno(1,2,3-cd)pyrene	**0.00043**	ND	ND	ND	ND	ND
Naphthalene	**0.14**	ND	0.001	ND	**0.349**	0.004
Phenanthrene	**0.0064**	ND	ND	ND	0.0002	0.0001
Pyrene	**0.21**	ND	ND	ND	ND	ND
Exceeds Tier 1 Class I COUs						
values in mg/L						
*BETX/MTBE Samples Taken 3/9/17 - PNA Samples Taken 10/13/17						

ABP - Gibson City
Site Assessment Data
Stage 3 Soil

	Location	SB-4A	SB-4B				
	Date	8/8/2018	8/8/2018				
	Depth	2.5'	7.5'				
Parameter	Tier I CUO						
Benzene	**0.03**	ND	**0.0792**				
Ethylbenzene	**13.0**	ND	ND				
Toluene	**12.0**	ND	ND				
Total Xylenes	**5.6**	ND	ND				
MTBE	**0.32**	ND	ND				
Results in mg/kg							
Numbers not bold indicate actual quantities, but are below the TACO Tier 1 Most Stringent Soil Clean-up Objective.							
BOLD & SHADING -- Exceeds the TACO Tier 1 Most Stringent Soil Clean-up Objective.							
ND -- Not Detected							

Site	ABP Properties, LLC
Sample ID	TACO-1
Date	8/8/2018
FOC	0.0343%
Gravel	8.5%
Sand	81.2%
Silt	7.2%
Clay	0.6%
Bulk Density	1.233 g/cm3
Percent Moisture	22.00%
Specific Gravity	2.634 g/cm3

ABP - Gibson City
Site Assessment Data

Corrective Action Soil

	Location	CA-1	CA-2	CA-3
	Date	2/12/2020	2/12/2020	2/12/2020
	Depth	3'	2.5'	2.5'
Parameter	Tier I CUO			
Benzene	0.03	ND	ND	ND
Results in mg/kg				
Numbers not bold indicate actual quantities, but are below the TACO Tier 1 Most Stringe				
BOLD & SHADING -- Exceeds the TACO Tier 1 Most Stringent Soil Clean-up Objecti				
ND -- Not Detected				

SUBURBAN LABORATORIES, Inc.

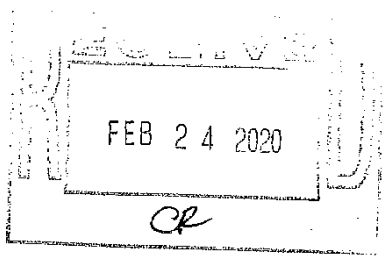
1950 S. Batavia Ave., Suite 150 Geneva, Illinois 60134
Tel. (708) 544-3260 • Toll Free (800) 783-LABS
Fax (708) 544-8587
www.suburbanlabs.com

February 24, 2020

Carol Rowe
CWM Company, Inc
701 West South Grand
Springfield, IL 62704

Workorder: 2002824

TEL: (217) 522-8001
FAX: (217) 522-8009
RE: ABP Gibson



Dear Carol Rowe:

Suburban Laboratories, Inc. received 3 sample(s) on 2/17/2020 for the analyses presented in the following report.

All data for the associated quality control (QC) met EPA, method, or internal laboratory specifications except where noted in the case narrative. If you are comparing these results to external QC specifications or compliance limits and have any questions, please contact us.

This final report of laboratory analysis consists of this cover letter, case narrative, analytical report, dates report, and any accompanying documentation including, but not limited to, chain of custody records, raw data, and letters of explanation or reliance. This report may not be reproduced, except in full, without the prior written approval of Suburban Laboratories, Inc.

If you have any questions regarding these test results, please call me at (708) 544-3260.

Sincerely,

Keith Sinon
Project Manager
708-544-3260 ext 212
keith@suburbanlabs.com

Suburban Laboratories, Inc.
1950 S. Batavia Ave., Suite 150, Geneva, IL 60134 (708) 544-3260

Case Narrative

Client: CWM Company, Inc
Project: ABP Gibson
WorkOrder: 2002B24
Temperature of samples upon receipt at SLI: 1 C

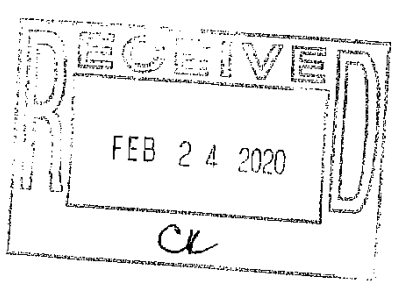
Date: February 24, 2020
PO #:
QC Level:
Chain of Custody #:

General Comments:
- All results reported in wet weight unless otherwise indicated. (dry = Dry Weight)
- Sample results relate only to the analytes of interest tested and to sample as received by the laboratory.
- Environmental compliance sample results meet the requirements of 35 IAC Part 186 unless otherwise indicated.
- Waste water analysis follows the rules set forth in 40 CFR part 136 except where otherwise noted.
- Accreditation by the State of Illinois is not an endorsement or a guarantee of the validity of data generated.
- For more information about the laboratories' scope of accreditation, please contact us at (708) 544-3260 or the Agency at (217) 782-6455.
- All radiological results are reported to the 95% confidence level.

Abbreviations:
- Reporting Limit: The concentration at which an analyte can be routinely detected on a day to day basis, and which also meets regulatory and client needs.
- Quantitation Limit: The lowest concentration at which results can be accurately quantitated.
- J: The analyte was positively identified above our Method Detection Limit and is considered detectable and usable; however, the associated numerical value is the approximate concentration of the analyte in the sample.
- ATC: Automatic Temperature Correction. - TNTC: Too Numerous To Count
- TIC: Tentatively Identified Compound (GCMS library search identification, concentration estimated to nearest internal standard).
- SS (Surrogate Standard): Quality control compound added to the sample by the lab.

Method References:
For a complete list of method references please contact us.
- E: USEPA Reference methods
- SW: USEPA, Test Methods for Evaluating Solid Waste (SW-846)
- M: Standard Methods for the Examination of Water and Wastewater
- USP: Latest version of United States Pharmacopeia

Workorder Specific Comments:



Suburban Laboratories, Inc.
1950 S. Batavia Ave., Suite 150, Geneva, IL 60134 (708) 544-3260

Laboratory Results

Client ID: CWM Company, Inc
Project Name: ABP Gibson

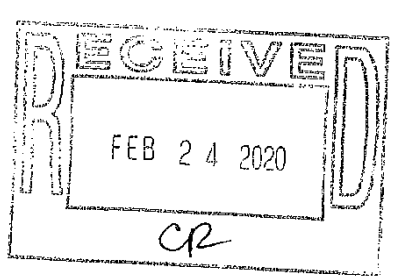
Report Date: February 24, 2020
Workorder: 2002B24

Client Sample ID: CA-1
Lab ID: 2002B24-001 **Date Received:** 02/17/2020 11:15 AM **Matrix:** SOIL **Collection Date:** 02/12/2020 10:25 AM

Parameter	Result	Report Limit	Qual.	Units	Dilution Factor	Date Analyzed	Batch ID
VOLATILE ORGANIC COMPOUNDS		Method: EPA-8260B-Rev 2, Dec-96				Analyst: RWM	
Benzene	ND	0.0133		mg/Kg-dry	41.83	02/18/2020 5:04 PM	R117024
Internal Quality Control Compounds							
SS: 4-Bromofluorobenzene	138	80-130	S	%Rec	41.83	02/18/2020 5:04 PM	R117024
SS: Dibromofluoromethane	107	76.1-120		%Rec	41.83	02/18/2020 5:04 PM	R117024
SS: Toluene-d8	111	85-115		%Rec	41.83	02/18/2020 5:04 PM	R117024
PERCENT MOISTURE		Method: ASTM-D2216-Rev 2005				Analyst: LT	
Percent Moisture	21	1.0	c	wt%	1	02/20/2020 2:38 PM	R117079

Client Sample ID: CA-2
Lab ID: 2002B24-002 **Date Received:** 02/17/2020 11:15 AM **Matrix:** SOIL **Collection Date:** 02/12/2020 10:35 AM

Parameter	Result	Report Limit	Qual.	Units	Dilution Factor	Date Analyzed	Batch ID
VOLATILE ORGANIC COMPOUNDS		Method: EPA-8260B-Rev 2, Dec-96				Analyst: RWM	
Benzene	ND	0.0132		mg/Kg-dry	42.05	02/18/2020 5:30 PM	R117024
Internal Quality Control Compounds							
SS: 4-Bromofluorobenzene	135	80-130	S	%Rec	42.05	02/18/2020 5:30 PM	R117024
SS: Dibromofluoromethane	109	76.1-120		%Rec	42.05	02/18/2020 5:30 PM	R117024
SS: Toluene-d8	99.0	85-115		%Rec	42.05	02/18/2020 5:30 PM	R117024
PERCENT MOISTURE		Method: ASTM-D2216-Rev 2005				Analyst: LT	
Percent Moisture	20	1.0	c	wt%	1	02/20/2020 2:38 PM	R117079



Suburban Laboratories, Inc.
1950 S. Batavia Ave., Suite 150, Geneva, IL 60134 (708) 544-3260

Laboratory Results

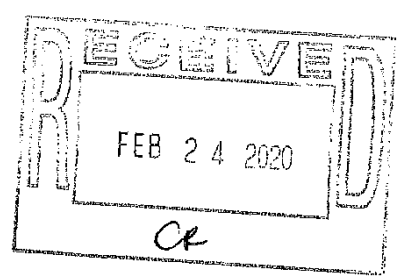
Client ID: CWM Company, Inc
Project Name: ABP Gibson

Report Date: February 24, 2020
Workorder: 2002B24

Client Sample ID: CA-3
Lab ID: 2002B24-003

Matrix: SOIL
Date Received: 02/17/2020 11:15 AM
Collection Date: 02/12/2020 10:45 AM

Parameter	Result	Report Limit	Qual.	Units	Dilution Factor	Date Analyzed	Batch ID
VOLATILE ORGANIC COMPOUNDS		Method: EPA-8260B-Rev 2, Dec-96				Analyst: RWM	
Benzene	ND	0.0148		mg/Kg-dry	46.31	02/18/2020 5:55 PM	R117024
Internal Quality Control Compounds							
SS: 4-Bromofluorobenzene	103	80-130		%Rec	46.31	02/18/2020 5:55 PM	R117024
SS: Dibromofluoromethane	107	76.1-120		%Rec	46.31	02/18/2020 5:55 PM	R117024
SS: Toluene-d8	98.7	85-115		%Rec	46.31	02/18/2020 5:55 PM	R117024
PERCENT MOISTURE		Method: ASTM-D2216-Rev 2005				Analyst: LT	
Percent Moisture	22	1.0	c	wt%	1	02/20/2020 2:38 PM	R117079



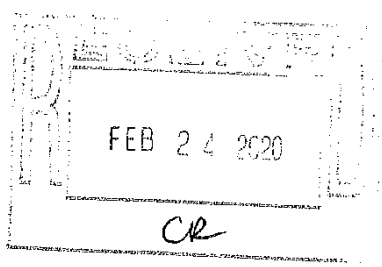
Suburban Laboratories, Inc.
1950 S. Batavia Ave., Suite 150, Geneva, IL 60134 (708) 544-3260

PREP DATES REPORT

Client: CWM Company, Inc
Project: ABP Gibson

Report Date: February 24, 2020
Lab Order: 2002B24

Sample ID	Collection Date	Batch ID	Prep Test Name	TCLP Date	Prep Date
2002B24-001A	2/12/2020 10:25:00 AM	64615	CLOSED SYSTEM P&T VOC Prep		2/18/2020
2002B24-002A	2/12/2020 10:35:00 AM	64615	CLOSED SYSTEM P&T VOC Prep		2/18/2020
2002B24-003A	2/12/2020 10:45:00 AM	64615	CLOSED SYSTEM P&T VOC Prep		2/18/2020



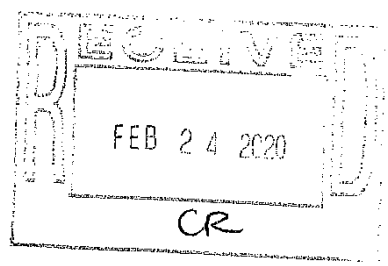
Suburban Laboratories, Inc.
1950 S. Batavia Ave., Suite 150, Geneva, IL 60134 (708) 544-3260

Qualifier Definitions

WO#: **2002B24**
Date: **2/24/2020**

Qualifiers:

*/x	Value exceeds Maximum Contaminant Level
B	Analyte detected in the associated Method Blank
C	Value is below Minimum Concentration Limit
c	Analyte not in SLI scope of accreditation
E	Estimated, detected above quantitation range
G	Refer to case narrative page for specific comments
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit (QL)
N	Tentatively identified compounds
ND	Not Detected at the Reporting Limit
P	Present
Q	Accreditation is not available from Wisconsin
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
T	Analyte detected in sample trip blank
V	EPA requires field analysis/filtration. Lab analysis would be considered past hold time.



SUBURBAN LABORATORIES, Inc.

1950 S. Batavia Ave. Ste. 150 Geneva, IL 60134 Tel. 708.544.3260 login@suburbanlabs.com www.suburbanlabs.com

CHAIN OF CUSTODY RECORD

Page 1 of 1

Company Name: CWM Company Inc.
Company Address: 701 W. South Grand Ave.
City: Springfield State: IL Zip: 62704
Office: (217) 522-8001 / 8009 Mobile: Fax:
Email Address: CWM@CWMCompany.com
Project ID / Location: ABP- Gibson
Project Manager (Report to): Carol L. Rowe
Sample Collector(s): MJS / JKK

TURNAROUND TIME REQUESTED
[X] Normal [ ] RUSH*
* Must be pre-approved and surcharges apply. Checking this box indicates your approval of surcharges.
Date and Time Report Needed:

Specify Regulatory Program: [ ] None/Info Only
[X] LUST [ ] SRP [ ] SDWA
[ ] 503 Sludge [ ] NPDES [ ] MWRDGC
[ ] Disposal [ ] CCDD [ ] OTHER - Specify Below

ANALYSIS & METHOD REQUESTED
Enter an "X" in box below for request

	SAMPLE IDENTIFICATION (Use 1 line per container type)	COLLECTION DATE	COLLECTION TIME	MATRIX	GRAB/ COMP.	CONTAINERS Qty	CONTAINERS SIZE & TYPE	PRESERVATIVE	Benzene	Lab Comment	LAB #
1	CA-1	2-12-20	10:25	Soil	G	3/1	40 ml/4oz	MeOH/NA	X		1AB
2	CA-2	"	10:35	"	"	"	"	"	X		1
3	CA-3	"	10:45	"	"	"	"	"	X		1AB
4											
5											
6											
7											
8											
9											
10											
11											
12											

Report Type: [X] Normal [ ] Special*
* Additional charges apply for QC reports and raw data. Specify in comments section
Shipping Method

LAB USE ONLY
Work Order # 2002B24
Temperature of Received Samples: 1 °C
Received within 24 hours of collection? [ ] No [ ] Yes

MATRIX: Drinking Water (DW), Soil (S), Waste Water (WW), Surface Water(SW), Ground Water (GW), Solid Waste (WA), Sludge (U), Wipe (P) CONTAINER: 2oz, 4oz, 8oz, 40ml Vial, 500ml, Liter (L), Tube, Glass (G), Plastic (P) PRESERVATIVE: H_2SO_4, HCl, HNO_3, Methanol (MeOH) NaOH, Sodium Bisulfate (NaB), NaThio

COMMENTS & SPECIAL INSTRUCTIONS:

RECEIVED
FEB 24 2020
CR

1. Relinquished By	Date	2. Relinquished By	Date	3. Relinquished By	Date	4. Relinquished By	Date
John Vs	2-17-20	[illegible]	2-17-2020				
Received By: [illegible] Ice	Time 8:03	Received By 258 Ice	Time 11:45	Received By Ice	Time	Received By Ice	Time

THIS FORM MUST BE FILLED OUT COMPLETELY BY THE SAMPLE COLLECTOR OR SUBMITTER AND ORIGINAL FORM MUST ACCOMPANY SAMPLES AT ALL TIMES. Rev 2/17

Page 7 of 7

000153

Illinois Environmental Protection Agency

Bureau of Land • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

The Agency is authorized to require this information under Section 4 and Title XVI of the Environmental Protection Act (415 ILCS 5/4, 5/57 – 57.17). Failure to disclose this information may result in a civil penalty of not to exceed $50,000.00 for the violation and an additional civil penalty of not to exceed $10,000.00 for each day during which the violation continues (415 ILCS 5/42). Any person who knowingly makes a false material statement or representation, orally or in writing, in any label, manifest, record, report, permit, or license, or other document filed, maintained or used for the purpose of compliance with Title XVI commits a Class 4 felony. Any second or subsequent offense after conviction hereunder is a Class 3 felony (415 ILCS 5/44 and 57.17). This form has been approved by the Forms Management Center.

Leaking Underground Storage Tank Program
Laboratory Certification for Chemical Analysis

A. Site Identification

IEMA Incident # (6- or 8-digit): 20160917 IEPA LPC# (10-digit): 0530100002

Site Name: ABP Gibson City

Site Address (Not a P.O. Box): 120 West 1st Street

City: Gibson City County: Ford ZIP Code: 60936

Leaking UST Technical File

B. Sample Collector

I certify that:

1. Appropriate sampling equipment/methods were utilized to obtain representative samples. JKK (Initial)
2. Chain-of-custody procedures were followed in the field. JKK (Initial)
3. Sample integrity was maintained by proper preservation. JKK (Initial)
4. All samples were properly labeled. JKK (Initial)

RECEIVED
MAR 10 2020
RA

C. Laboratory Representative

I certify that:

1. Proper chain-of-custody procedures were followed as documented on the chain-of-custody forms 2SS (Initial)
2. Sample integrity was maintained by proper preservation. 2SS (Initial)
3. All samples were properly labeled. 2SS (Initial)
4. Quality assurance/quality control procedures were established and carried out. 2SS (Initial)
5. Sample holding times were not exceeded. 2SS (Initial)

6. SW-846 Analytical Laboratory Procedure (USEPA) methods were used for the analyses. (Initial)

7. An accredited lab performed quantitative analysis using test methods identified in 35 IAC 186.180 (for samples collected on or after January 1, 2003). (Initial)

D. Signatures

I hereby affirm that all information contained in this form is true and accurate to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sample Collector

Name John Kuston
Title Supervisor
Company CWM Company, Inc.
Address 701 South Grand Ave. West
City Springfield
State IL
Zip Code 62704
Phone 217-522-8001
Signature John Kuston
Date 2-12-20

Laboratory Representative

Name Keith Sinon
Title Project Manager
Company Suburban Laboratories, Inc.
Address 1950 S. Batavia Ave Ste 150
City Geneva
State IL
Zip Code 60134
Phone 708-544-3260
Signature Keith Sinon
Date 3/4/20

RECEIVED
MAR 10 2020
R4

Teklab Inc.
Environmental Laboratory

http://www.teklabinc.com/

Client Project: ABP-Gibson City

Work Order: 20020904

Report to: CW3M Co. Inc.	**Invoice to:** CW3M Company Inc.
Attn: Carol Rowe	Attn: Accounts Payable
701 W. South Grand Ave.	701 W. South Grand Ave.
Springfield	Springfield
IL 62704	IL 62704

DateReceived: 2/17/2020 8:25:00 AM Date Due: Standard TAT QClevel: LVL2

Project Manager: Marvin L. Darling Tel: (618)344-1004 ex 41 Email: mdarling@teklabinc.com

NOTICE Teklab will proceed with analysis as reported below unless otherwise notified. Call your Project Manager with questions.

Shipping container in good condition?	Yes
Ice present?	No
Chain of custody present?	Yes
Chain of custody signed when relinquished?	Yes
Chain of custody agrees with sample labels?	Yes
Samples in proper container/bottle?	Yes
Sample container intact?	Yes
Sufficient sample volume for indicated tests?	Yes
All samples received within holding time?	Yes
Container/Temp Blank temperature compliant?	Yes n/a Celcius

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.

Field parameters measured in Lab?	N/A
Water - TOX containers have zero headspace?	No TOX containers
Water - VOA vials have zero headspace?	No VOA Vials submitted
Water - pH acceptable upon receipt?	N/A
NPDES/CWA TCN interference checked/treated in field?	N/A

Comments

Sample was transferred to Collinsville Air Lab on 2/18/20 at 0930. - ehurley - 2/18/2020 10:37:43 AM

Clients sample id, canister id and clients final pressure readings followed by readings taken upon arrival at the laboratory. - HRiley - 2/18/2020 1:22:17 PM
SV-1 5094 -10/-9

20020904-001 SV-1 **Collected:** 2/12/2020 10:45:00 AM AIR CANISTER

Test	Hold	MS/MSD	Rush	Sub
TO-15, Air	☐	☐	☐	☐

5445 Horsest[illegible]ake Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-100[illegible]

pg 1 of 1 Lab Work Order # 6020904

AIR SAMPLING FIELD FORM AND CHAIN OF CUSTODY

Client Name: CWM Company, Inc.
Address: 701 W. South Grand Ave.
Phone: (217) 522-
Email: CWM@CWMCompany.com
Project ID: ABP-Gibson City
Project Manager: Carol L. Rowe
Sampler: MJS / JKK
PO Number:

Results Requested (check one)
X Standard (7-10 day)
___ 1 Day (200% surcharge)
___ 2-3 Day (100% surcharge)
___ 4-5 Day (50% surcharge)

Sample Type (check one)
___ Ambient Air
___ Indoor Air
___ Indoor Sub-Slab
___ Stack
X Soil Gas/Vapor
___ Landfill Gas
___ Other (specify)

Lab Use Only: Sample pick up: ✓ Y ___ N, Samples on: ___ Ice/Blue, ✓ No Ice, ND Temp. ° C
Comments:

Lab Use Only				Sample Start Parameters			Sample Stop Parameters			Requested Analysis (list metals/other below in comments)						
Laboratory ID	Sample Identification	Canister Number	Controller Number	Date	Time	Vacuum (in. Hg)	Date	Time	Vacuum (in. Hg)	TO-15 Lists (circle) Standard / Extended	TO-15-select BTEX MBTE Naphthalene Isopropanol TPH-GRO	TO-13	TO-4	PM10/ TSP	Metals	Other
6020904-01	SV-1	5094	40	2-12-20	10:10	29	2-12-20	10:45	10	X	X					

Are these samples known to be involved in litigation? If yes, a level IV data package will be generated and a surcharge will apply. ___ Yes X No
Are these samples known to be hazardous? ___ Yes X No
Special QC Requirements/Special Instructions/Comments:

Shipping Company and Tracking Number:

Relinquished By	Date/Time	Received By	Date/Time
	2/14/20 15:43		2/14/20 13:43
	2/17/20 8:25		2/17/20 0825
	2/18/20 0930		2/18/20 0930

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.

White & Yellow Copy - Laboratory Pink Copy - Sampler

Rev C 12.16.2019

2/17/20

000157

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

February 24, 2020

Carol Rowe
CW3M Co. Inc.
701 W. South Grand Ave.
Springfield, IL 62704
TEL: (217) 522-8001
FAX: (217) 522-8009

NELAP ACCREDITED TNI LABORATORY

RE: ABP-Gibson City

WorkOrder: 20020904

Dear Carol Rowe:

TEKLAB, INC received 1 sample on 2/17/2020 8:25:00 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,

Marvin L. Darling II

Marvin L. Darling
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Report Contents

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

This reporting package includes the following:

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Work Order: 20020904

Client Project: ABP-Gibson City
Report Date: 24-Feb-2020

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
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)

Qualifiers

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

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

Cooler Receipt Temp: n/a °C

TO15 analysis was performed at the North Bluff Road facility in Collinsville Illinois, Agency Interest No. 166578.

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

Teklab, Inc.
Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	3/3/2020	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2020	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2020	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2020	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2020	Collinsville
Arkansas	ADEQ	88-0966		3/14/2021	Collinsville
Illinois	IDPH	17584		5/31/2021	Collinsville
Kentucky	UST	0073		1/31/2020	Collinsville
Missouri	MDNR	00930		5/31/2021	Collinsville
Missouri	MDNR	930		1/31/2022	Collinsville
Tennessee	TDEC	04905		3/3/2020	Collinsville

Teklab Inc
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City
Lab ID: 20020904-001
Matrix: AIR CANISTER

Work Order: 20020904
Report Date: 24-Feb-2020
Client Sample ID: SV-1
Collection Date: 02/12/2020 10:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS								
1,1,1-Trichloroethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,1,2,2-Tetrachloroethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,1,2-Trichloroethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,1,2-Trichlorotrifluoroethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,1-Dichloroethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,1-Dichloroethene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,2,4-Trichlorobenzene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,2,4-Trimethylbenzene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,2-Dibromoethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,2-Dichlorobenzene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,2-Dichloroethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,2-Dichloropropane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,3,5-Trimethylbenzene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,3-Butadiene	NELAP	20000		ND	ppbv	20000	02/20/2020 18:49	162440
1,3-Dichlorobenzene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
1,4-Dichlorobenzene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
2-Butanone	NELAP	20000		ND	ppbv	20000	02/20/2020 18:49	162440
2-Hexanone	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
4-Methyl-2-pentanone	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Acetone	NELAP	40000		ND	ppbv	20000	02/20/2020 18:49	162440
Benzene	NELAP	10000		50600	ppbv	20000	02/20/2020 18:49	162440
Bromodichloromethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Bromoform	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Bromomethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Carbon disulfide	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Carbon tetrachloride	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Chlorobenzene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Chloroethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Chloroform	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Chloromethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
cis-1,2-Dichloroethene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
cis-1,3-dichloropropene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Cyclohexane	NELAP	10000		240000	ppbv	20000	02/20/2020 18:49	162440
Dibromochloromethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Dichlorodifluoromethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Dichlorotetrafluoroethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Ethyl acetate	NELAP	20000		ND	ppbv	20000	02/20/2020 18:49	162440
Ethylbenzene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Hexachlorobutadiene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Isopropanol	NELAP	60000		ND	ppbv	20000	02/20/2020 18:49	162440
m,p-Xylene	NELAP	20000		ND	ppbv	20000	02/20/2020 18:49	162440
Methyl tert-butyl ether	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Methylene chloride	NELAP	20000		ND	ppbv	20000	02/20/2020 18:49	162440
n-Heptane	NELAP	10000		176000	ppbv	20000	02/20/2020 18:49	162440
n-Hexane	NELAP	500000		2510000	ppbv	1E+06	02/22/2020 13:38	162484
o-Xylene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
p-Ethyltoluene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Work Order: 20020904
Client Project: ABP-Gibson City
Report Date: 24-Feb-2020
Lab ID: 20020904-001
Client Sample ID: SV-1
Matrix: AIR CANISTER
Collection Date: 02/12/2020 10:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS								
Propylene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Styrene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Tetrachloroethene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Tetrahydrofuran	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Toluene	NELAP	10000		87200	ppbv	20000	02/20/2020 18:49	162440
trans-1,2-Dichloroethene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
trans-1,3-dichloropropene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Trichloroethene	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Trichlorofluoromethane	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Vinyl acetate	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Vinyl chloride	NELAP	10000		ND	ppbv	20000	02/20/2020 18:49	162440
Xylenes, Total	NELAP	30000		ND	ppbv	20000	02/20/2020 18:49	162440
Surr: 4-Bromofluorobenzene	*	46.9-145		95.6	%REC	20000	02/20/2020 18:49	162440

Elevated reporting limit due to high levels of target and/or non-target analytes.

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Work Order: 20020904

Client Project: ABP-Gibson City
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162400 **SampType:** MBLK Units ppbv

SampID: MBLK-AG200219-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1-Trichloroethane	0.50		ND						02/19/2020
1,1,2,2-Tetrachloroethane	0.50		ND						02/19/2020
1,1,2-Trichloroethane	0.50		ND						02/19/2020
1,1,2-Trichlorotrifluoroethane	0.50		ND						02/19/2020
1,1-Dichloroethane	0.50		ND						02/19/2020
1,1-Dichloroethene	0.50		ND						02/19/2020
1,2,4-Trichlorobenzene	0.50		ND						02/19/2020
1,2,4-Trimethylbenzene	0.50		ND						02/19/2020
1,2-Dibromoethane	0.50		ND						02/19/2020
1,2-Dichlorobenzene	0.50		ND						02/19/2020
1,2-Dichloroethane	0.50		ND						02/19/2020
1,2-Dichloropropane	0.50		ND						02/19/2020
1,3,5-Trimethylbenzene	0.50		ND						02/19/2020
1,3-Butadiene	1.00		ND						02/19/2020
1,3-Dichlorobenzene	0.50		ND						02/19/2020
1,4-Dichlorobenzene	0.50		ND						02/19/2020
2-Butanone	1.00		ND						02/19/2020
2-Hexanone	0.50		ND						02/19/2020
4-Methyl-2-pentanone	0.50		ND						02/19/2020
Acetone	2.00		ND						02/19/2020
Benzene	0.50		ND						02/19/2020
Bromodichloromethane	0.50		ND						02/19/2020
Bromoform	0.50		ND						02/19/2020
Bromomethane	0.50		ND						02/19/2020
Carbon disulfide	0.50		ND						02/19/2020
Carbon tetrachloride	0.50		ND						02/19/2020
Chlorobenzene	0.50		ND						02/19/2020
Chloroethane	0.50		ND						02/19/2020
Chloroform	0.50		ND						02/19/2020
Chloromethane	0.50		ND						02/19/2020
cis-1,2-Dichloroethene	0.50		ND						02/19/2020
cis-1,3-dichloropropene	0.50		ND						02/19/2020
Cyclohexane	0.50		ND						02/19/2020
Dibromochloromethane	0.50		ND						02/19/2020
Dichlorodifluoromethane	0.50		ND						02/19/2020
Dichlorotetrafluoroethane	0.50		ND						02/19/2020
Ethyl acetate	1.00		ND						02/19/2020
Ethylbenzene	0.50		ND						02/19/2020
Hexachlorobutadiene	0.50		ND						02/19/2020
Isopropanol	3.00		ND						02/19/2020
m,p-Xylene	1.00		ND						02/19/2020
Methyl tert-butyl ether	0.50		ND						02/19/2020
Methylene chloride	1.00		ND						02/19/2020
n-Heptane	0.50		ND						02/19/2020
n-Hexane	0.50		ND						02/19/2020
o-Xylene	0.50		ND						02/19/2020
p-Ethyltoluene	0.50		ND						02/19/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Work Order: 20020904

Client Project: ABP-Gibson City
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162400 **SampType:** MBLK Units ppbv

SampID: MBLK-AG200219-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Propylene	0.50		ND						02/19/2020
Styrene	0.50		ND						02/19/2020
Tetrachloroethene	0.50		ND						02/19/2020
Tetrahydrofuran	0.50		ND						02/19/2020
Toluene	0.50		ND						02/19/2020
trans-1,2-Dichloroethene	0.50		ND						02/19/2020
trans-1,3-dichloropropene	0.50		ND						02/19/2020
Trichloroethene	0.50		ND						02/19/2020
Trichlorofluoromethane	0.50		ND						02/19/2020
Vinyl acetate	0.50		ND						02/19/2020
Vinyl chloride	0.50		ND						02/19/2020
Xylenes, Total	1.50		ND						02/19/2020
Surr: 4-Bromofluorobenzene			9.40	10.00		94.0	46.9	145	02/19/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162400 SampType: LCS Units ppbv
SampID: LCS-AG200219-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1-Trichloroethane	0.50		10.6	10.70	0	99.3	51.4	141	02/19/2020
1,1,2,2-Tetrachloroethane	0.50		11.0	10.10	0	109.2	57.6	163	02/19/2020
1,1,2-Trichloroethane	0.50		10.8	10.50	0	103.3	60.1	159	02/19/2020
1,1,2-Trichlorotrifluoroethane	0.50		10.3	10.80	0	95.4	56	145	02/19/2020
1,1-Dichloroethane	0.50		9.88	9.900	0	99.8	51.6	150	02/19/2020
1,1-Dichloroethene	0.50		10.8	10.70	0	100.8	48.5	139	02/19/2020
1,2,4-Trichlorobenzene	0.50		7.44	9.500	0	78.3	33	262	02/19/2020
1,2,4-Trimethylbenzene	0.50		10.9	10.00	0	109.4	62.7	174	02/19/2020
1,2-Dibromoethane	0.50		11.2	10.40	0	107.4	61.6	160	02/19/2020
1,2-Dichlorobenzene	0.50		10.6	9.800	0	108.0	59.8	169	02/19/2020
1,2-Dichloroethane	0.50		10.3	10.20	0	101.4	52	149	02/19/2020
1,2-Dichloropropane	0.50		10.2	10.30	0	99.2	53.2	155	02/19/2020
1,3,5-Trimethylbenzene	0.50		10.9	10.10	0	107.7	64.6	176	02/19/2020
1,3-Butadiene	1.00		10.5	10.30	0	102.1	58.6	131	02/19/2020
1,3-Dichlorobenzene	0.50		10.6	10.00	0	105.9	59.7	167	02/19/2020
1,4-Dichlorobenzene	0.50		10.4	9.600	0	107.8	58.8	165	02/19/2020
2-Butanone	1.00		10.9	10.60	0	102.9	41.7	159	02/19/2020
2-Hexanone	0.50		12.8	10.30	0	124.3	49	159	02/19/2020
4-Methyl-2-pentanone	0.50		10.7	10.20	0	105.2	42.4	152	02/19/2020
Acetone	2.00		10.8	10.50	0	102.6	42.1	163	02/19/2020
Benzene	0.50		10.2	10.50	0	97.6	83	125	02/19/2020
Bromodichloromethane	0.50		10.5	10.50	0	99.9	54.1	144	02/19/2020
Bromoform	0.50		11.1	10.50	0	105.3	57.6	154	02/19/2020
Bromomethane	0.50		9.73	10.30	0	94.5	48.1	147	02/19/2020
Carbon disulfide	0.50		9.98	10.40	0	96.0	48.5	133	02/19/2020
Carbon tetrachloride	0.50		10.2	10.20	0	100.2	54.7	142	02/19/2020
Chlorobenzene	0.50		11.1	10.40	0	106.7	62.1	163	02/19/2020
Chloroethane	0.50		10.3	10.30	0	100.1	47.3	146	02/19/2020
Chloroform	0.50		10.4	10.60	0	98.5	52.9	143	02/19/2020
Chloromethane	0.50		9.67	10.00	0	96.7	40.2	143	02/19/2020
cis-1,2-Dichloroethene	0.50		10.7	10.40	0	102.5	56.6	145	02/19/2020
cis-1,3-dichloropropene	0.50		11.7	10.40	0	112.1	57.2	162	02/19/2020
Cyclohexane	0.50		11.0	10.70	0	102.8	49.7	146	02/19/2020
Dibromochloromethane	0.50		10.7	10.40	0	102.8	58.3	152	02/19/2020
Dichlorodifluoromethane	0.50		9.37	9.800	0	95.6	55.4	149	02/19/2020
Dichlorotetrafluoroethane	0.50		9.39	9.800	0	95.8	53.7	155	02/19/2020
Ethyl acetate	1.00		11.1	10.50	0	105.6	49.6	163	02/19/2020
Ethylbenzene	0.50		11.3	10.40	0	108.6	85.9	143	02/19/2020
Hexachlorobutadiene	0.50		6.75	10.10	0	66.8	46	208	02/19/2020
Isopropanol	3.00		13.7	10.90	0	125.3	32.8	147	02/19/2020
m,p-Xylene	1.00		21.7	20.40	0	106.5	88.5	141	02/19/2020
Methyl tert-butyl ether	0.50		11.0	10.50	0	105.1	52.1	152	02/19/2020
Methylene chloride	1.00		10.3	10.40	0	99.3	45.6	147	02/19/2020
n-Heptane	0.50		10.8	10.50	0	103.0	43.4	149	02/19/2020
n-Hexane	0.50		10.7	10.50	0	101.5	48.1	146	02/19/2020
o-Xylene	0.50		10.8	10.10	0	106.6	88.7	142	02/19/2020
p-Ethyltoluene	0.50		10.8	10.40	0	103.7	55.1	146	02/19/2020

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Quality Control Results

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162400 SampType: LCS Units ppbv
SampID: LCS-AG200219-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Propylene	0.50		**9.82**	10.00	0	98.2	40.4	143	02/19/2020
Styrene	0.50		**11.1**	10.10	0	110.0	61.4	165	02/19/2020
Tetrachloroethene	0.50		**10.5**	10.30	0	102.0	63.3	160	02/19/2020
Tetrahydrofuran	0.50		**9.88**	9.900	0	99.8	42.9	166	02/19/2020
Toluene	0.50		**10.4**	10.30	0	100.8	87.4	133	02/19/2020
trans-1,2-Dichloroethene	0.50		**10.3**	10.20	0	101.4	45.7	129	02/19/2020
trans-1,3-dichloropropene	0.50		**9.94**	9.100	0	109.2	60	140	02/19/2020
Trichloroethene	0.50		**10.7**	10.90	0	98.0	59.1	148	02/19/2020
Trichlorofluoromethane	0.50		**9.07**	9.700	0	93.5	59.9	166	02/19/2020
Vinyl acetate	0.50		**11.6**	11.00	0	105.0	38.4	132	02/19/2020
Vinyl chloride	0.50		**10.5**	10.70	0	98.4	44.7	146	02/19/2020
Xylenes, Total	1.50		**32.5**	30.50	0	106.6	88.6	141	02/19/2020
Surr: 4-Bromofluorobenzene			**10.2**	10.00		102.2	46.9	145	02/19/2020

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 152400 SampType: LCSD Units ppbv RPD Limit 30
SampID: LCSD-AG200219-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1-Trichloroethane	0.50		10.8	10.70	0	101.2	10.63	1.86	02/19/2020
1,1,2,2-Tetrachloroethane	0.50		11.1	10.10	0	109.8	11.03	0.54	02/19/2020
1,1,2-Trichloroethane	0.50		11.0	10.50	0	105.0	10.85	1.55	02/19/2020
1,1,2-Trichlorotrifluoroethane	0.50		10.4	10.80	0	96.1	10.30	0.77	02/19/2020
1,1-Dichloroethane	0.50		9.98	9.900	0	100.8	9.880	1.01	02/19/2020
1,1-Dichloroethene	0.50		10.9	10.70	0	101.5	10.79	0.65	02/19/2020
1,2,4-Trichlorobenzene	0.50		7.50	9.500	0	78.9	7.440	0.80	02/19/2020
1,2,4-Trimethylbenzene	0.50		11.0	10.00	0	110.3	10.94	0.82	02/19/2020
1,2-Dibromoethane	0.50		11.3	10.40	0	108.4	11.17	0.89	02/19/2020
1,2-Dichlorobenzene	0.50		10.7	9.800	0	109.0	10.58	0.94	02/19/2020
1,2-Dichloroethane	0.50		10.4	10.20	0	102.1	10.34	0.67	02/19/2020
1,2-Dichloropropane	0.50		10.5	10.30	0	101.6	10.22	2.32	02/19/2020
1,3,5-Trimethylbenzene	0.50		10.9	10.10	0	108.1	10.88	0.37	02/19/2020
1,3-Butadiene	1.00		10.6	10.30	0	102.9	10.52	0.76	02/19/2020
1,3-Dichlorobenzene	0.50		10.6	10.00	0	106.2	10.59	0.28	02/19/2020
1,4-Dichlorobenzene	0.50		10.4	9.600	0	108.6	10.35	0.77	02/19/2020
2-Butanone	1.00		10.9	10.60	0	103.0	10.91	0.09	02/19/2020
2-Hexanone	0.50		13.0	10.30	0	125.7	12.80	1.17	02/19/2020
4-Methyl-2-pentanone	0.50		10.9	10.20	0	106.5	10.73	1.20	02/19/2020
Acetone	2.00		11.0	10.50	0	104.6	10.77	1.93	02/19/2020
Benzene	0.50		10.4	10.50	0	99.0	10.25	1.45	02/19/2020
Bromodichloromethane	0.50		10.6	10.50	0	100.7	10.49	0.76	02/19/2020
Bromoform	0.50		11.1	10.50	0	106.0	11.06	0.63	02/19/2020
Bromomethane	0.50		10.4	10.30	0	101.4	9.730	7.04	02/19/2020
Carbon disulfide	0.50		10.1	10.40	0	97.2	9.980	1.29	02/19/2020
Carbon tetrachloride	0.50		10.3	10.20	0	101.0	10.22	0.78	02/19/2020
Chlorobenzene	0.50		11.2	10.40	0	108.1	11.10	1.25	02/19/2020
Chloroethane	0.50		10.6	10.30	0	102.4	10.31	2.30	02/19/2020
Chloroform	0.50		10.5	10.60	0	99.2	10.44	0.76	02/19/2020
Chloromethane	0.50		9.85	10.00	0	98.5	9.670	1.84	02/19/2020
cis-1,2-Dichloroethene	0.50		10.7	10.40	0	103.1	10.66	0.56	02/19/2020
cis-1,3-dichloropropene	0.50		11.9	10.40	0	114.2	11.66	1.87	02/19/2020
Cyclohexane	0.50		11.2	10.70	0	104.4	11.00	1.53	02/19/2020
Dibromochloromethane	0.50		10.8	10.40	0	104.1	10.69	1.30	02/19/2020
Dichlorodifluoromethane	0.50		9.48	9.800	0	96.7	9.370	1.17	02/19/2020
Dichlorotetrafluoroethane	0.50		9.48	9.800	0	96.7	9.390	0.95	02/19/2020
Ethyl acetate	1.00		11.1	10.50	0	105.4	11.09	0.18	02/19/2020
Ethylbenzene	0.50		11.4	10.40	0	109.6	11.29	0.97	02/19/2020
Hexachlorobutadiene	0.50		6.71	10.10	0	66.4	6.750	0.59	02/19/2020
Isopropanol	3.00		13.9	10.90	0	127.6	13.66	1.81	02/19/2020
m,p-Xylene	1.00		21.9	20.40	0	107.5	21.73	0.92	02/19/2020
Methyl tert-butyl ether	0.50		11.2	10.50	0	106.6	11.04	1.35	02/19/2020
Methylene chloride	1.00		10.4	10.40	0	99.5	10.33	0.19	02/19/2020
n-Heptane	0.50		10.9	10.50	0	104.2	10.82	1.10	02/19/2020
n-Hexane	0.50		10.7	10.50	0	101.8	10.66	0.28	02/19/2020
o-Xylene	0.50		10.9	10.10	0	107.8	10.77	1.11	02/19/2020
p-Ethyltoluene	0.50		10.9	10.40	0	104.9	10.78	1.20	02/19/2020

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Quality Control Results

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162400 SampType: LCSD Units ppbv RPD Limit 30
SampID: LCSD-AG200219-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Propylene	0.50		**10.1**	10.00	0	100.9	9.820	2.71	02/19/2020
Styrene	0.50		**11.2**	10.10	0	111.2	11.11	1.07	02/19/2020
Tetrachloroethene	0.50		**10.7**	10.30	0	103.6	10.51	1.51	02/19/2020
Tetrahydrofuran	0.50		**9.94**	9.900	0	100.4	9.880	0.61	02/19/2020
Toluene	0.50		**10.5**	10.30	0	101.7	10.38	0.86	02/19/2020
trans-1,2-Dichloroethene	0.50		**10.4**	10.20	0	102.2	10.34	0.77	02/19/2020
trans-1,3-dichloropropene	0.50		**10.1**	9.100	0	111.2	9.940	1.79	02/19/2020
Trichloroethene	0.50		**10.8**	10.90	0	99.0	10.68	1.02	02/19/2020
Trichlorofluoromethane	0.50		**9.09**	9.700	0	93.7	9.070	0.22	02/19/2020
Vinyl acetate	0.50		**11.5**	11.00	0	104.6	11.55	-0.35	02/19/2020
Vinyl chloride	0.50		**10.7**	10.70	0	99.6	10.53	1.23	02/19/2020
Xylenes, Total	1.50		**32.8**	30.50	0	107.6	32.50	0.98	02/19/2020
Surr: 4-Bromofluorobenzene			**10.2**	10.00		101.9			02/19/2020

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Quality Control Results

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162440 SampType: MBLK Units ppbv
SampID: MBLK-AG200220-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1-Trichloroethane	0.50		ND						02/20/2020
1,1,2,2-Tetrachloroethane	0.50		ND						02/20/2020
1,1,2-Trichloroethane	0.50		ND						02/20/2020
1,1,2-Trichlorotrifluoroethane	0.50		ND						02/20/2020
1,1-Dichloroethane	0.50		ND						02/20/2020
1,1-Dichloroethene	0.50		ND						02/20/2020
1,2,4-Trichlorobenzene	0.50		ND						02/20/2020
1,2,4-Trimethylbenzene	0.50		ND						02/20/2020
1,2-Dibromoethane	0.50		ND						02/20/2020
1,2-Dichlorobenzene	0.50		ND						02/20/2020
1,2-Dichloroethane	0.50		ND						02/20/2020
1,2-Dichloropropane	0.50		ND						02/20/2020
1,3,5-Trimethylbenzene	0.50		ND						02/20/2020
1,3-Butadiene	1.00		ND						02/20/2020
1,3-Dichlorobenzene	0.50		ND						02/20/2020
1,4-Dichlorobenzene	0.50		ND						02/20/2020
2-Butanone	1.00		ND						02/20/2020
2-Hexanone	0.50		ND						02/20/2020
4-Methyl-2-pentanone	0.50		ND						02/20/2020
Acetone	2.00		ND						02/20/2020
Benzene	0.50		ND						02/20/2020
Bromodichloromethane	0.50		ND						02/20/2020
Bromoform	0.50		ND						02/20/2020
Bromomethane	0.50		ND						02/20/2020
Carbon disulfide	0.50		ND						02/20/2020
Carbon tetrachloride	0.50		ND						02/20/2020
Chlorobenzene	0.50		ND						02/20/2020
Chloroethane	0.50		ND						02/20/2020
Chloroform	0.50		ND						02/20/2020
Chloromethane	0.50		ND						02/20/2020
cis-1,2-Dichloroethene	0.50		ND						02/20/2020
cis-1,3-dichloropropene	0.50		ND						02/20/2020
Cyclohexane	0.50		ND						02/20/2020
Dibromochloromethane	0.50		ND						02/20/2020
Dichlorodifluoromethane	0.50		ND						02/20/2020
Dichlorotetrafluoroethane	0.50		ND						02/20/2020
Ethyl acetate	1.00		ND						02/20/2020
Ethylbenzene	0.50		ND						02/20/2020
Hexachlorobutadiene	0.50		ND						02/20/2020
Isopropanol	3.00		ND						02/20/2020
m,p-Xylene	1.00		ND						02/20/2020
Methyl tert-butyl ether	0.50		ND						02/20/2020
Methylene chloride	1.00		ND						02/20/2020
n-Heptane	0.50		ND						02/20/2020
n-Hexane	0.50		ND						02/20/2020
o-Xylene	0.50		ND						02/20/2020
p-Ethyltoluene	0.50		ND						02/20/2020

Teklab, Inc.
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Quality Control Results

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162440 **SampType: MBLK** Units ppbv
SampID: MBLK-AG200220-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Propylene	0.50		ND						02/20/2020
Styrene	0.50		ND						02/20/2020
Tetrachloroethene	0.50		ND						02/20/2020
Tetrahydrofuran	0.50		ND						02/20/2020
Toluene	0.50		ND						02/20/2020
trans-1,2-Dichloroethene	0.50		ND						02/20/2020
trans-1,3-dichloropropene	0.50		ND						02/20/2020
Trichloroethene	0.50		ND						02/20/2020
Trichlorofluoromethane	0.50		ND						02/20/2020
Vinyl acetate	0.50		ND						02/20/2020
Vinyl chloride	0.50		ND						02/20/2020
Xylenes, Total	1.50		ND						02/20/2020
Surr: 4-Bromofluorobenzene			9.46	10.00		94.6	46.9	145	02/20/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162440 SampType: LCS Units ppbv
SampID: LCS-AG200220-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1-Trichloroethane	0.50		11.0	10.70	0	102.9	51.4	141	02/20/2020
1,1,2,2-Tetrachloroethane	0.50		10.8	10.10	0	107.0	57.6	163	02/20/2020
1,1,2-Trichloroethane	0.50		10.8	10.50	0	103.0	60.1	159	02/20/2020
1,1,2-Trichlorotrifluoroethane	0.50		10.4	10.80	0	96.2	56	145	02/20/2020
1,1-Dichloroethane	0.50		9.91	9.900	0	100.1	51.6	150	02/20/2020
1,1-Dichloroethene	0.50		10.8	10.70	0	101.3	48.5	139	02/20/2020
1,2,4-Trichlorobenzene	0.50		7.71	9.500	0	81.2	33	262	02/20/2020
1,2,4-Trimethylbenzene	0.50		11.2	10.00	0	111.5	62.7	174	02/20/2020
1,2-Dibromoethane	0.50		11.4	10.40	0	109.3	61.6	160	02/20/2020
1,2-Dichlorobenzene	0.50		10.9	9.800	0	111.0	59.8	169	02/20/2020
1,2-Dichloroethane	0.50		10.6	10.20	0	103.8	52	149	02/20/2020
1,2-Dichloropropane	0.50		10.1	10.30	0	98.0	53.2	155	02/20/2020
1,3,5-Trimethylbenzene	0.50		11.1	10.10	0	109.9	64.6	176	02/20/2020
1,3-Butadiene	1.00		10.1	10.30	0	98.0	58.6	131	02/20/2020
1,3-Dichlorobenzene	0.50		10.9	10.00	0	109.0	59.7	167	02/20/2020
1,4-Dichlorobenzene	0.50		10.5	9.600	0	109.6	58.8	165	02/20/2020
2-Butanone	1.00		10.6	10.60	0	99.5	41.7	159	02/20/2020
2-Hexanone	0.50		12.6	10.30	0	121.8	49	159	02/20/2020
4-Methyl-2-pentanone	0.50		10.6	10.20	0	103.7	42.4	152	02/20/2020
Acetone	2.00		10.8	10.50	0	102.5	42.1	163	02/20/2020
Benzene	0.50		10.2	10.50	0	97.2	83	125	02/20/2020
Bromodichloromethane	0.50		10.5	10.50	0	100.1	54.1	144	02/20/2020
Bromoform	0.50		11.2	10.50	0	107.1	57.6	154	02/20/2020
Bromomethane	0.50		9.91	10.30	0	96.2	48.1	147	02/20/2020
Carbon disulfide	0.50		9.78	10.40	0	94.0	48.5	133	02/20/2020
Carbon tetrachloride	0.50		10.6	10.20	0	103.5	54.7	142	02/20/2020
Chlorobenzene	0.50		11.4	10.40	0	109.2	62.1	163	02/20/2020
Chloroethane	0.50		10.0	10.30	0	97.4	47.3	146	02/20/2020
Chloroform	0.50		10.5	10.60	0	99.1	52.9	143	02/20/2020
Chloromethane	0.50		8.99	10.00	0	89.9	40.2	143	02/20/2020
cis-1,2-Dichloroethene	0.50		10.5	10.40	0	101.3	56.6	145	02/20/2020
cis-1,3-dichloropropene	0.50		11.8	10.40	0	113.0	57.2	162	02/20/2020
Cyclohexane	0.50		10.7	10.70	0	100.0	49.7	146	02/20/2020
Dibromochloromethane	0.50		10.9	10.40	0	104.6	58.3	152	02/20/2020
Dichlorodifluoromethane	0.50		9.51	9.800	0	97.0	55.4	149	02/20/2020
Dichlorotetrafluoroethane	0.50		9.27	9.800	0	94.6	53.7	155	02/20/2020
Ethyl acetate	1.00		10.5	10.50	0	99.9	49.6	163	02/20/2020
Ethylbenzene	0.50		11.4	10.40	0	109.3	85.9	143	02/20/2020
Hexachlorobutadiene	0.50		7.14	10.10	0	70.7	46	208	02/20/2020
Isopropanol	3.00		13.7	10.90	0	126.0	32.8	147	02/20/2020
m,p-Xylene	1.00		22.1	20.40	0	108.4	88.5	141	02/20/2020
Methyl tert-butyl ether	0.50		11.3	10.50	0	108.0	52.1	152	02/20/2020
Methylene chloride	1.00		10.1	10.40	0	97.0	45.6	147	02/20/2020
n-Heptane	0.50		10.5	10.50	0	99.6	43.4	149	02/20/2020
n-Hexane	0.50		10.4	10.50	0	98.6	48.1	146	02/20/2020
o-Xylene	0.50		10.9	10.10	0	107.8	88.7	142	02/20/2020
p-Ethyltoluene	0.50		11.0	10.40	0	105.5	55.1	146	02/20/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162440 **SampType:** LCS Units ppbv
SampID: LCS-AG200220-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Propylene	0.50		**9.45**	10.00	0	94.5	40.4	143	02/20/2020
Styrene	0.50		**11.2**	10.10	0	110.7	61.4	165	02/20/2020
Tetrachloroethene	0.50		**11.0**	10.30	0	107.1	63.3	160	02/20/2020
Tetrahydrofuran	0.50		**9.50**	9.900	0	96.0	42.9	166	02/20/2020
Toluene	0.50		**10.5**	10.30	0	101.7	87.4	133	02/20/2020
trans-1,2-Dichloroethene	0.50		**10.3**	10.20	0	101.1	45.7	129	02/20/2020
trans-1,3-dichloropropene	0.50		**10.0**	9.100	0	110.0	60	140	02/20/2020
Trichloroethene	0.50		**10.9**	10.90	0	99.9	59.1	148	02/20/2020
Trichlorofluoromethane	0.50		**9.38**	9.700	0	96.7	59.9	166	02/20/2020
Vinyl acetate	0.50		**11.1**	11.00	0	101.3	38.4	132	02/20/2020
Vinyl chloride	0.50		**10.1**	10.70	0	94.2	44.7	146	02/20/2020
Xylenes, Total	1.50		**33.0**	30.50	0	108.2	88.6	141	02/20/2020
Surr: 4-Bromofluorobenzene			**10.4**	10.00		103.5	46.9	145	02/20/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162440 SampType: LCSD Units ppbv
SampID: LCSD-AG200220-1

RPD Limit 30

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1-Trichloroethane	0.50		11.4	10.70	0	106.4	11.01	3.39	02/20/2020
1,1,2,2-Tetrachloroethane	0.50		11.2	10.10	0	110.8	10.81	3.45	02/20/2020
1,1,2-Trichloroethane	0.50		11.2	10.50	0	107.0	10.81	3.81	02/20/2020
1,1,2-Trichlorotrifluoroethane	0.50		10.7	10.80	0	98.7	10.39	2.57	02/20/2020
1,1-Dichloroethane	0.50		10.2	9.900	0	102.9	9.910	2.79	02/20/2020
1,1-Dichloroethene	0.50		11.2	10.70	0	104.4	10.84	3.00	02/20/2020
1,2,4-Trichlorobenzene	0.50		7.94	9.500	0	83.6	7.710	2.94	02/20/2020
1,2,4-Trimethylbenzene	0.50		11.5	10.00	0	115.4	11.15	3.44	02/20/2020
1,2-Dibromoethane	0.50		11.6	10.40	0	111.8	11.37	2.26	02/20/2020
1,2-Dichlorobenzene	0.50		11.2	9.800	0	114.1	10.88	2.72	02/20/2020
1,2-Dichloroethane	0.50		10.9	10.20	0	106.5	10.59	2.52	02/20/2020
1,2-Dichloropropane	0.50		10.3	10.30	0	100.2	10.09	2.25	02/20/2020
1,3,5-Trimethylbenzene	0.50		11.4	10.10	0	113.3	11.10	3.02	02/20/2020
1,3-Butadiene	1.00		10.7	10.30	0	104.1	10.09	6.05	02/20/2020
1,3-Dichlorobenzene	0.50		11.1	10.00	0	111.4	10.90	2.18	02/20/2020
1,4-Dichlorobenzene	0.50		11.0	9.600	0	114.2	10.52	4.10	02/20/2020
2-Butanone	1.00		11.0	10.60	0	103.6	10.55	3.99	02/20/2020
2-Hexanone	0.50		13.0	10.30	0	125.8	12.55	3.21	02/20/2020
4-Methyl-2-pentanone	0.50		10.8	10.20	0	106.3	10.58	2.43	02/20/2020
Acetone	2.00		11.2	10.50	0	106.4	10.76	3.74	02/20/2020
Benzene	0.50		10.5	10.50	0	99.8	10.21	2.61	02/20/2020
Bromodichloromethane	0.50		10.8	10.50	0	102.6	10.51	2.44	02/20/2020
Bromoform	0.50		11.6	10.50	0	110.6	11.25	3.15	02/20/2020
Bromomethane	0.50		10.2	10.30	0	99.4	9.910	3.28	02/20/2020
Carbon disulfide	0.50		10.1	10.40	0	97.0	9.780	3.12	02/20/2020
Carbon tetrachloride	0.50		10.8	10.20	0	106.2	10.56	2.52	02/20/2020
Chlorobenzene	0.50		11.6	10.40	0	111.7	11.36	2.26	02/20/2020
Chloroethane	0.50		10.4	10.30	0	101.0	10.03	3.62	02/20/2020
Chloroform	0.50		10.7	10.60	0	101.3	10.50	2.26	02/20/2020
Chloromethane	0.50		9.93	10.00	0	99.3	8.990	9.94	02/20/2020
cis-1,2-Dichloroethene	0.50		10.9	10.40	0	104.7	10.54	3.27	02/20/2020
cis-1,3-dichloropropene	0.50		12.1	10.40	0	116.3	11.75	2.94	02/20/2020
Cyclohexane	0.50		11.1	10.70	0	103.6	10.70	3.58	02/20/2020
Dibromochloromethane	0.50		11.1	10.40	0	107.0	10.88	2.27	02/20/2020
Dichlorodifluoromethane	0.50		9.79	9.800	0	99.9	9.510	2.90	02/20/2020
Dichlorotetrafluoroethane	0.50		9.83	9.800	0	100.3	9.270	5.86	02/20/2020
Ethyl acetate	1.00		11.0	10.50	0	104.7	10.49	4.66	02/20/2020
Ethylbenzene	0.50		11.7	10.40	0	112.6	11.37	2.95	02/20/2020
Hexachlorobutadiene	0.50		7.32	10.10	0	72.5	7.140	2.49	02/20/2020
Isopropanol	3.00		14.2	10.90	0	130.1	13.73	3.22	02/20/2020
m,p-Xylene	1.00		22.7	20.40	0	111.2	22.12	2.50	02/20/2020
Methyl tert-butyl ether	0.50		11.7	10.50	0	111.5	11.34	3.21	02/20/2020
Methylene chloride	1.00		10.3	10.40	0	99.4	10.09	2.45	02/20/2020
n-Heptane	0.50		10.8	10.50	0	103.2	10.46	3.57	02/20/2020
n-Hexane	0.50		10.6	10.50	0	100.5	10.35	1.91	02/20/2020
o-Xylene	0.50		11.2	10.10	0	111.3	10.89	3.16	02/20/2020
p-Ethyltoluene	0.50		11.3	10.40	0	108.6	10.97	2.88	02/20/2020

Teklab, Inc.
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Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co, Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162440 SampType: LCSD Units ppbv RPD Limit 30
SampID: LCSD-AG200220-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Propylene	0.50		**9.86**	10.00	0	98.6	9.450	4.25	02/20/2020
Styrene	0.50		**11.6**	10.10	0	114.8	11.18	3.60	02/20/2020
Tetrachloroethene	0.50		**11.2**	10.30	0	109.1	11.03	1.89	02/20/2020
Tetrahydrofuran	0.50		**9.78**	9.900	0	98.8	9.500	2.90	02/20/2020
Toluene	0.50		**10.8**	10.30	0	104.4	10.48	2.54	02/20/2020
trans-1,2-Dichloroethene	0.50		**10.6**	10.20	0	103.7	10.31	2.58	02/20/2020
trans-1,3-dichloropropene	0.50		**10.3**	9.100	0	113.5	10.01	3.15	02/20/2020
Trichloroethene	0.50		**11.2**	10.90	0	102.6	10.89	2.63	02/20/2020
Trichlorofluoromethane	0.50		**9.60**	9.700	0	99.0	9.380	2.32	02/20/2020
Vinyl acetate	0.50		**11.7**	11.00	0	106.0	11.14	4.56	02/20/2020
Vinyl chloride	0.50		**10.8**	10.70	0	100.7	10.08	6.62	02/20/2020
Xylenes, Total	1.50		**33.9**	30.50	0	111.2	33.01	2.72	02/20/2020
Surr: 4-Bromofluorobenzene			**10.3**	10.00		102.7			02/20/2020

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Quality Control Results

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Client: CW3M Co. Inc.

Client Project: ABP-Gibson City

Work Order: 20020904

Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162476 SampType: MBLK Units ppbv

SampID: MBLK-AG200221-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1-Trichloroethane	0.50		ND						02/21/2020
1,1,2,2-Tetrachloroethane	0.50		ND						02/21/2020
1,1,2-Trichloroethane	0.50		ND						02/21/2020
1,1,2-Trichlorotrifluoroethane	0.50		ND						02/21/2020
1,1-Dichloroethane	0.50		ND						02/21/2020
1,1-Dichloroethene	0.50		ND						02/21/2020
1,2,4-Trichlorobenzene	0.50		ND						02/21/2020
1,2,4-Trimethylbenzene	0.50		ND						02/21/2020
1,2-Dibromoethane	0.50		ND						02/21/2020
1,2-Dichlorobenzene	0.50		ND						02/21/2020
1,2-Dichloroethane	0.50		ND						02/21/2020
1,2-Dichloropropane	0.50		ND						02/21/2020
1,3,5-Trimethylbenzene	0.50		ND						02/21/2020
1,3-Butadiene	1.00		ND						02/21/2020
1,3-Dichlorobenzene	0.50		ND						02/21/2020
1,4-Dichlorobenzene	0.50		ND						02/21/2020
2-Butanone	1.00		ND						02/21/2020
2-Hexanone	0.50		ND						02/21/2020
4-Methyl-2-pentanone	0.50		ND						02/21/2020
Acetone	2.00		ND						02/21/2020
Benzene	0.50		ND						02/21/2020
Bromodichloromethane	0.50		ND						02/21/2020
Bromoform	0.50		ND						02/21/2020
Bromomethane	0.50		ND						02/21/2020
Carbon disulfide	0.50		ND						02/21/2020
Carbon tetrachloride	0.50		ND						02/21/2020
Chlorobenzene	0.50		ND						02/21/2020
Chloroethane	0.50		ND						02/21/2020
Chloroform	0.50		ND						02/21/2020
Chloromethane	0.50		ND						02/21/2020
cis-1,2-Dichloroethene	0.50		ND						02/21/2020
cis-1,3-dichloropropene	0.50		ND						02/21/2020
Cyclohexane	0.50		ND						02/21/2020
Dibromochloromethane	0.50		ND						02/21/2020
Dichlorodifluoromethane	0.50		ND						02/21/2020
Dichlorotetrafluoroethane	0.50		ND						02/21/2020
Ethyl acetate	1.00		ND						02/21/2020
Ethylbenzene	0.50		ND						02/21/2020
Hexachlorobutadiene	0.50		ND						02/21/2020
Isopropanol	3.00		ND						02/21/2020
m,p-Xylene	1.00		ND						02/21/2020
Methyl tert-butyl ether	0.50		ND						02/21/2020
ethylene chloride	1.00		ND						02/21/2020
-Heptane	0.50		ND						02/21/2020
-Hexane	0.50		ND						02/21/2020
-Xylene	0.50		ND						02/21/2020
-Ethyltoluene	0.50		ND						02/21/2020

Teklab, Inc.
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Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162476 SampType: MBLK Units ppbv
SampID: MBLK-AG200221-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Propylene	0.50		ND						02/21/2020
Styrene	0.50		ND						02/21/2020
Tetrachloroethene	0.50		ND						02/21/2020
Tetrahydrofuran	0.50		ND						02/21/2020
Toluene	0.50		ND						02/21/2020
trans-1,2-Dichloroethene	0.50		ND						02/21/2020
trans-1,3-dichloropropene	0.50		ND						02/21/2020
Trichloroethene	0.50		ND						02/21/2020
Trichlorofluoromethane	0.50		ND						02/21/2020
Vinyl acetate	0.50		ND						02/21/2020
Vinyl chloride	0.50		ND						02/21/2020
Xylenes, Total	1.50		ND						02/21/2020
Surr: 4-Bromofluorobenzene			9.45	10.00		94.5	46.9	145	02/21/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.

Client Project: ABP-Gibson City

Work Order: 20020904

Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162476 SampType: LCS Units ppbv

SampID: LCS-AG200221-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1-Trichloroethane	0.50		11.0	10.70	0	102.5	51.4	141	02/21/2020
1,1,2,2-Tetrachloroethane	0.50		11.0	10.10	0	109.2	57.6	163	02/21/2020
1,1,2-Trichloroethane	0.50		11.0	10.50	0	104.7	60.1	159	02/21/2020
1,1,2-Trichlorotrifluoroethane	0.50		10.4	10.80	0	95.9	56	145	02/21/2020
1,1-Dichloroethane	0.50		9.93	9.900	0	100.3	51.6	150	02/21/2020
1,1-Dichloroethene	0.50		10.8	10.70	0	101.2	48.5	139	02/21/2020
1,2,4-Trichlorobenzene	0.50		7.51	9.500	0	79.1	33	262	02/21/2020
1,2,4-Trimethylbenzene	0.50		11.2	10.00	0	111.9	62.7	174	02/21/2020
1,2-Dibromoethane	0.50		11.3	10.40	0	108.9	61.6	160	02/21/2020
1,2-Dichlorobenzene	0.50		10.8	9.800	0	110.4	59.8	169	02/21/2020
1,2-Dichloroethane	0.50		10.6	10.20	0	103.8	52	149	02/21/2020
1,2-Dichloropropane	0.50		10.3	10.30	0	100.0	53.2	155	02/21/2020
1,3,5-Trimethylbenzene	0.50		11.2	10.10	0	110.5	64.6	176	02/21/2020
1,3-Butadiene	1.00		10.8	10.30	0	105.0	58.6	131	02/21/2020
1,3-Dichlorobenzene	0.50		10.7	10.00	0	107.4	59.7	167	02/21/2020
1,4-Dichlorobenzene	0.50		10.5	9.600	0	109.7	58.8	165	02/21/2020
2-Butanone	1.00		10.9	10.60	0	103.0	41.7	159	02/21/2020
2-Hexanone	0.50		12.9	10.30	0	125.3	49	159	02/21/2020
4-Methyl-2-pentanone	0.50		10.8	10.20	0	106.4	42.4	152	02/21/2020
Acetone	2.00		10.9	10.50	0	103.7	42.1	163	02/21/2020
Benzene	0.50		10.4	10.50	0	98.6	83	125	02/21/2020
Bromodichloromethane	0.50		10.6	10.50	0	100.8	54.1	144	02/21/2020
Bromoform	0.50		11.2	10.50	0	107.0	57.6	154	02/21/2020
Bromomethane	0.50		10.0	10.30	0	97.6	48.1	147	02/21/2020
Carbon disulfide	0.50		9.99	10.40	0	96.1	48.5	133	02/21/2020
Carbon tetrachloride	0.50		10.4	10.20	0	102.4	54.7	142	02/21/2020
Chlorobenzene	0.50		11.3	10.40	0	108.6	62.1	163	02/21/2020
Chloroethane	0.50		10.2	10.30	0	99.5	47.3	146	02/21/2020
Chloroform	0.50		10.6	10.60	0	99.5	52.9	143	02/21/2020
Chloromethane	0.50		9.93	10.00	0	99.3	40.2	143	02/21/2020
cis-1,2-Dichloroethene	0.50		10.7	10.40	0	102.9	56.6	145	02/21/2020
cis-1,3-dichloropropene	0.50		11.9	10.40	0	114.6	57.2	162	02/21/2020
Cyclohexane	0.50		11.0	10.70	0	102.8	49.7	146	02/21/2020
Dibromochloromethane	0.50		10.9	10.40	0	104.6	58.3	152	02/21/2020
Dichlorodifluoromethane	0.50		9.52	9.800	0	97.1	55.4	149	02/21/2020
Dichlorotetrafluoroethane	0.50		9.64	9.800	0	98.4	53.7	155	02/21/2020
Ethyl acetate	1.00		10.8	10.50	0	102.9	49.6	163	02/21/2020
Ethylbenzene	0.50		11.5	10.40	0	110.5	85.9	143	02/21/2020
Hexachlorobutadiene	0.50		7.03	10.10	0	69.6	46	208	02/21/2020
Isopropanol	3.00		13.7	10.90	0	126.1	32.8	147	02/21/2020
m,p-Xylene	1.00		22.2	20.40	0	109.1	88.5	141	02/21/2020
Methyl tert-butyl ether	0.50		11.3	10.50	0	107.6	52.1	152	02/21/2020
Methylene chloride	1.00		10.3	10.40	0	99.0	45.6	147	02/21/2020
n-Heptane	0.50		10.9	10.50	0	103.6	43.4	149	02/21/2020
n-Hexane	0.50		10.6	10.50	0	101.3	48.1	146	02/21/2020
o-Xylene	0.50		11.0	10.10	0	109.1	88.7	142	02/21/2020
p-Ethyltoluene	0.50		11.0	10.40	0	106.0	55.1	146	02/21/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.

Client Project: ABP-Gibson City

Work Order: 20020904

Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162476 SampType: LCS Units ppbv

SampID: LCS-AG200221-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Propylene	0.50		**9.55**	10.00	0	95.5	40.4	143	02/21/2020
Styrene	0.50		**11.3**	10.10	0	112.0	61.4	165	02/21/2020
Tetrachloroethene	0.50		**10.9**	10.30	0	106.0	63.3	160	02/21/2020
Tetrahydrofuran	0.50		**9.83**	9.900	0	99.3	42.9	166	02/21/2020
Toluene	0.50		**10.6**	10.30	0	102.6	87.4	133	02/21/2020
trans-1,2-Dichloroethene	0.50		**10.4**	10.20	0	102.1	45.7	129	02/21/2020
trans-1,3-dichloropropene	0.50		**10.1**	9.100	0	111.1	60	140	02/21/2020
Trichloroethene	0.50		**10.9**	10.90	0	99.8	59.1	148	02/21/2020
Trichlorofluoromethane	0.50		**9.21**	9.700	0	94.9	59.9	166	02/21/2020
Vinyl acetate	0.50		**11.8**	11.00	0	107.6	38.4	132	02/21/2020
Vinyl chloride	0.50		**10.9**	10.70	0	102.1	44.7	146	02/21/2020
Xylenes, Total	1.50		**33.3**	30.50	0	109.1	88.6	141	02/21/2020
Surr: 4-Bromofluorobenzene			**10.3**	10.00		102.6	46.9	145	02/21/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162476 SampType: LCSD Units ppbv RPD Limit 30
SampID: LCSD-AG200221-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1-Trichloroethane	0.50		11.0	10.70	0	102.5	10.97	0.00	02/21/2020
1,1,2,2-Tetrachloroethane	0.50		11.1	10.10	0	110.3	11.03	0.99	02/21/2020
1,1,2-Trichloroethane	0.50		11.0	10.50	0	104.9	10.99	0.18	02/21/2020
1,1,2-Trichlorotrifluoroethane	0.50		10.4	10.80	0	96.1	10.36	0.19	02/21/2020
1,1-Dichloroethane	0.50		9.95	9.900	0	100.5	9.930	0.20	02/21/2020
1,1-Dichloroethene	0.50		10.9	10.70	0	101.5	10.83	0.28	02/21/2020
1,2,4-Trichlorobenzene	0.50		7.60	9.500	0	80.0	7.510	1.19	02/21/2020
1,2,4-Trimethylbenzene	0.50		11.3	10.00	0	113.3	11.19	1.24	02/21/2020
1,2-Dibromoethane	0.50		11.4	10.40	0	110.1	11.33	1.05	02/21/2020
1,2-Dichlorobenzene	0.50		10.9	9.800	0	111.0	10.82	0.55	02/21/2020
1,2-Dichloroethane	0.50		10.6	10.20	0	103.6	10.59	0.19	02/21/2020
1,2-Dichloropropane	0.50		10.2	10.30	0	99.2	10.30	0.78	02/21/2020
1,3,5-Trimethylbenzene	0.50		11.2	10.10	0	110.9	11.16	0.36	02/21/2020
1,3-Butadiene	1.00		10.8	10.30	0	104.7	10.82	0.37	02/21/2020
1,3-Dichlorobenzene	0.50		10.8	10.00	0	108.4	10.74	0.93	02/21/2020
1,4-Dichlorobenzene	0.50		10.6	9.600	0	109.9	10.53	0.19	02/21/2020
2-Butanone	1.00		10.9	10.60	0	102.9	10.92	0.09	02/21/2020
2-Hexanone	0.50		12.9	10.30	0	125.2	12.91	0.08	02/21/2020
4-Methyl-2-pentanone	0.50		10.9	10.20	0	106.5	10.85	0.09	02/21/2020
Acetone	2.00		10.9	10.50	0	104.1	10.89	0.37	02/21/2020
Benzene	0.50		10.4	10.50	0	99.0	10.35	0.39	02/21/2020
Bromodichloromethane	0.50		10.6	10.50	0	100.5	10.58	0.28	02/21/2020
Bromoform	0.50		11.3	10.50	0	107.3	11.23	0.36	02/21/2020
Bromomethane	0.50		10.1	10.30	0	98.2	10.05	0.60	02/21/2020
Carbon disulfide	0.50		10.0	10.40	0	96.2	9.990	0.10	02/21/2020
Carbon tetrachloride	0.50		10.5	10.20	0	102.5	10.44	0.19	02/21/2020
Chlorobenzene	0.50		11.4	10.40	0	109.2	11.29	0.62	02/21/2020
Chloroethane	0.50		10.1	10.30	0	98.4	10.25	1.08	02/21/2020
Chloroform	0.50		10.5	10.60	0	99.3	10.55	0.19	02/21/2020
Chloromethane	0.50		9.85	10.00	0	98.5	9.930	0.81	02/21/2020
cis-1,2-Dichloroethene	0.50		10.8	10.40	0	103.9	10.70	1.02	02/21/2020
cis-1,3-dichloropropene	0.50		12.0	10.40	0	115.1	11.92	0.42	02/21/2020
Cyclohexane	0.50		11.0	10.70	0	103.2	11.00	0.36	02/21/2020
Dibromochloromethane	0.50		10.9	10.40	0	105.1	10.88	0.46	02/21/2020
Dichlorodifluoromethane	0.50		9.48	9.800	0	96.7	9.520	0.42	02/21/2020
Dichlorotetrafluoroethane	0.50		9.60	9.800	0	98.0	9.640	0.42	02/21/2020
Ethyl acetate	1.00		10.9	10.50	0	103.8	10.80	0.92	02/21/2020
Ethylbenzene	0.50		11.5	10.40	0	110.9	11.49	0.35	02/21/2020
Hexachlorobutadiene	0.50		7.03	10.10	0	69.6	7.030	0.00	02/21/2020
Isopropanol	3.00		14.0	10.90	0	128.1	13.74	1.59	02/21/2020
m,p-Xylene	1.00		22.3	20.40	0	109.5	22.25	0.36	02/21/2020
Methyl tert-butyl ether	0.50		11.4	10.50	0	108.6	11.30	0.88	02/21/2020
Methylene chloride	1.00		10.3	10.40	0	99.1	10.30	0.10	02/21/2020
n-Heptane	0.50		10.7	10.50	0	102.0	10.88	1.57	02/21/2020
n-Hexane	0.50		10.6	10.50	0	101.4	10.64	0.09	02/21/2020
o-Xylene	0.50		11.1	10.10	0	109.5	11.02	0.36	02/21/2020
p-Ethyltoluene	0.50		11.1	10.40	0	106.5	11.02	0.54	02/21/2020

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162476 SampType: LCSD Units ppbv RPD Limit 30
SampID: LCSD-AG200221-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Propylene	0.50		9.78	10.00	0	97.8	9.550	2.38	02/21/2020
Styrene	0.50		11.3	10.10	0	112.2	11.31	0.18	02/21/2020
Tetrachloroethene	0.50		10.9	10.30	0	105.5	10.92	0.46	02/21/2020
Tetrahydrofuran	0.50		9.79	9.900	0	98.9	9.830	0.41	02/21/2020
Toluene	0.50		10.6	10.30	0	102.4	10.57	0.19	02/21/2020
trans-1,2-Dichloroethene	0.50		10.4	10.20	0	102.1	10.41	0.00	02/21/2020
trans-1,3-dichloropropene	0.50		10.2	9.100	0	111.8	10.11	0.59	02/21/2020
Trichloroethene	0.50		10.8	10.90	0	99.4	10.88	0.46	02/21/2020
Trichlorofluoromethane	0.50		9.20	9.700	0	94.8	9.210	0.11	02/21/2020
Vinyl acetate	0.50		11.8	11.00	0	107.3	11.84	0.34	02/21/2020
Vinyl chloride	0.50		10.8	10.70	0	101.2	10.93	0.92	02/21/2020
Xylenes, Total	1.50		33.4	30.50	0	109.5	33.27	0.36	02/21/2020
Surr: 4-Bromofluorobenzene			10.3	10.00		102.8			02/21/2020

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162484 SampType: MBLK Units ppbv
SampID: MBLK-AG200222-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1-Trichloroethane	0.50		ND						02/22/2020
1,1,2,2-Tetrachloroethane	0.50		ND						02/22/2020
1,1,2-Trichloroethane	0.50		ND						02/22/2020
1,1,2-Trichlorotrifluoroethane	0.50		ND						02/22/2020
1,1-Dichloroethane	0.50		ND						02/22/2020
1,1-Dichloroethene	0.50		ND						02/22/2020
1,2,4-Trichlorobenzene	0.50		ND						02/22/2020
1,2,4-Trimethylbenzene	0.50		ND						02/22/2020
1,2-Dibromoethane	0.50		ND						02/22/2020
1,2-Dichlorobenzene	0.50		ND						02/22/2020
1,2-Dichloroethane	0.50		ND						02/22/2020
1,2-Dichloropropane	0.50		ND						02/22/2020
1,3,5-Trimethylbenzene	0.50		ND						02/22/2020
1,3-Butadiene	1.00		ND						02/22/2020
1,3-Dichlorobenzene	0.50		ND						02/22/2020
1,4-Dichlorobenzene	0.50		ND						02/22/2020
2-Butanone	1.00		ND						02/22/2020
2-Hexanone	0.50		ND						02/22/2020
4-Methyl-2-pentanone	0.50		ND						02/22/2020
Acetone	2.00		ND						02/22/2020
Benzene	0.50		ND						02/22/2020
Bromodichloromethane	0.50		ND						02/22/2020
Bromoform	0.50		ND						02/22/2020
Bromomethane	0.50		ND						02/22/2020
Carbon disulfide	0.50		ND						02/22/2020
Carbon tetrachloride	0.50		ND						02/22/2020
Chlorobenzene	0.50		ND						02/22/2020
Chloroethane	0.50		ND						02/22/2020
Chloroform	0.50		ND						02/22/2020
Chloromethane	0.50		ND						02/22/2020
cis-1,2-Dichloroethene	0.50		ND						02/22/2020
cis-1,3-dichloropropene	0.50		ND						02/22/2020
Cyclohexane	0.50		ND						02/22/2020
Dibromochloromethane	0.50		ND						02/22/2020
Dichlorodifluoromethane	0.50		ND						02/22/2020
Dichlorotetrafluoroethane	0.50		ND						02/22/2020
Ethyl acetate	1.00		ND						02/22/2020
Ethylbenzene	0.50		ND						02/22/2020
Hexachlorobutadiene	0.50		ND						02/22/2020
Isopropanol	3.00		ND						02/22/2020
m,p-Xylene	1.00		ND						02/22/2020
Methyl tert-butyl ether	0.50		ND						02/22/2020
Methylene chloride	1.00		ND						02/22/2020
n-Heptane	0.50		ND						02/22/2020
n-Hexane	0.50		ND						02/22/2020
o-Xylene	0.50		ND						02/22/2020
p-Ethyltoluene	0.50		ND						02/22/2020

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Quality Control Results

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162484 SampType: **MBLK** Units ppbv
SampID: MBLK-AG200222-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Propylene	0.50		ND						02/22/2020
Styrene	0.50		ND						02/22/2020
Tetrachloroethene	0.50		ND						02/22/2020
Tetrahydrofuran	0.50		ND						02/22/2020
Toluene	0.50		ND						02/22/2020
trans-1,2-Dichloroethene	0.50		ND						02/22/2020
trans-1,3-dichloropropene	0.50		ND						02/22/2020
Trichloroethene	0.50		ND						02/22/2020
Trichlorofluoromethane	0.50		ND						02/22/2020
Vinyl acetate	0.50		ND						02/22/2020
Vinyl chloride	0.50		ND						02/22/2020
Xylenes, Total	1.50		ND						02/22/2020
Surr: 4-Bromofluorobenzene			9.51	10.00		95.1	46.9	145	02/22/2020

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162484 SampType: LCS Units ppbv
SampID: LCS-AG200222-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1-Trichloroethane	0.50		11.1	10.70	0	103.6	51.4	141	02/22/2020
1,1,2,2-Tetrachloroethane	0.50		11.1	10.10	0	110.3	57.6	163	02/22/2020
1,1,2-Trichloroethane	0.50		11.0	10.50	0	105.2	60.1	159	02/22/2020
1,1,2-Trichlorotrifluoroethane	0.50		10.4	10.80	0	96.7	56	145	02/22/2020
1,1-Dichloroethane	0.50		10.0	9.900	0	101.2	51.6	150	02/22/2020
1,1-Dichloroethene	0.50		10.9	10.70	0	102.2	48.5	139	02/22/2020
1,2,4-Trichlorobenzene	0.50		7.58	9.500	0	79.8	33	262	02/22/2020
1,2,4-Trimethylbenzene	0.50		11.3	10.00	0	112.6	62.7	174	02/22/2020
1,2-Dibromoethane	0.50		11.5	10.40	0	110.8	61.6	160	02/22/2020
1,2-Dichlorobenzene	0.50		10.8	9.800	0	110.6	59.8	169	02/22/2020
1,2-Dichloroethane	0.50		10.6	10.20	0	104.3	52	149	02/22/2020
1,2-Dichloropropane	0.50		10.4	10.30	0	101.0	53.2	155	02/22/2020
1,3,5-Trimethylbenzene	0.50		11.2	10.10	0	110.9	64.6	176	02/22/2020
1,3-Butadiene	1.00		10.8	10.30	0	104.8	58.6	131	02/22/2020
1,3-Dichlorobenzene	0.50		10.8	10.00	0	108.1	59.7	167	02/22/2020
1,4-Dichlorobenzene	0.50		10.6	9.600	0	110.6	58.8	165	02/22/2020
2-Butanone	1.00		11.0	10.60	0	103.6	41.7	159	02/22/2020
2-Hexanone	0.50		12.8	10.30	0	124.4	49	159	02/22/2020
4-Methyl-2-pentanone	0.50		11.0	10.20	0	107.5	42.4	152	02/22/2020
Acetone	2.00		11.0	10.50	0	104.9	42.1	163	02/22/2020
Benzene	0.50		10.4	10.50	0	99.2	83	125	02/22/2020
Bromodichloromethane	0.50		10.7	10.50	0	102.2	54.1	144	02/22/2020
Bromoform	0.50		11.4	10.50	0	108.5	57.6	154	02/22/2020
Bromomethane	0.50		10.4	10.30	0	101.0	48.1	147	02/22/2020
Carbon disulfide	0.50		10.0	10.40	0	96.5	48.5	133	02/22/2020
Carbon tetrachloride	0.50		10.6	10.20	0	103.7	54.7	142	02/22/2020
Chlorobenzene	0.50		11.5	10.40	0	110.6	62.1	163	02/22/2020
Chloroethane	0.50		10.4	10.30	0	100.8	47.3	146	02/22/2020
Chloroform	0.50		10.8	10.60	0	101.4	52.9	143	02/22/2020
Chloromethane	0.50		9.87	10.00	0	98.7	40.2	143	02/22/2020
cis-1,2-Dichloroethene	0.50		10.9	10.40	0	104.7	56.6	145	02/22/2020
cis-1,3-dichloropropene	0.50		12.0	10.40	0	115.5	57.2	162	02/22/2020
Cyclohexane	0.50		11.2	10.70	0	104.4	49.7	146	02/22/2020
Dibromochloromethane	0.50		11.0	10.40	0	105.7	58.3	152	02/22/2020
Dichlorodifluoromethane	0.50		9.62	9.800	0	98.2	55.4	149	02/22/2020
Dichlorotetrafluoroethane	0.50		9.67	9.800	0	98.7	53.7	155	02/22/2020
Ethyl acetate	1.00		11.0	10.50	0	104.7	49.6	163	02/22/2020
Ethylbenzene	0.50		11.6	10.40	0	111.1	85.9	143	02/22/2020
Hexachlorobutadiene	0.50		7.04	10.10	0	69.7	46	208	02/22/2020
Isopropanol	3.00		14.0	10.90	0	128.7	32.8	147	02/22/2020
m,p-Xylene	1.00		22.4	20.40	0	109.6	88.5	141	02/22/2020
Methyl tert-butyl ether	0.50		11.4	10.50	0	108.8	52.1	152	02/22/2020
Methylene chloride	1.00		10.4	10.40	0	100.2	45.6	147	02/22/2020
n-Heptane	0.50		11.0	10.50	0	104.6	43.4	149	02/22/2020
n-Hexane	0.50		10.8	10.50	0	102.9	48.1	146	02/22/2020
o-Xylene	0.50		11.1	10.10	0	109.6	88.7	142	02/22/2020
p-Ethyltoluene	0.50		11.1	10.40	0	106.9	55.1	146	02/22/2020

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Quality Control Results

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Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162484 SampType: LCS Units ppbv
SampID: LCS-AG200222-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Propylene	0.50		9.95	10.00	0	99.5	40.4	143	02/22/2020
Styrene	0.50		11.5	10.10	0	113.7	61.4	165	02/22/2020
Tetrachloroethene	0.50		10.9	10.30	0	106.2	63.3	160	02/22/2020
Tetrahydrofuran	0.50		10.0	9.900	0	101.0	42.9	166	02/22/2020
Toluene	0.50		10.7	10.30	0	103.8	87.4	133	02/22/2020
trans-1,2-Dichloroethene	0.50		10.5	10.20	0	102.9	45.7	129	02/22/2020
trans-1,3-dichloropropene	0.50		10.2	9.100	0	112.0	60	140	02/22/2020
Trichloroethene	0.50		11.0	10.90	0	100.7	59.1	148	02/22/2020
Trichlorofluoromethane	0.50		9.32	9.700	0	96.1	59.9	166	02/22/2020
Vinyl acetate	0.50		11.9	11.00	0	108.3	38.4	132	02/22/2020
Vinyl chloride	0.50		10.8	10.70	0	100.6	44.7	146	02/22/2020
Xylenes, Total	1.50		33.4	30.50	0	109.6	88.6	141	02/22/2020
Surr: 4-Bromofluorobenzene			10.2	10.00		102.3	46.9	145	02/22/2020

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Work Order: 20020904

Client Project: ABP-Gibson City
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162484 SampType: LCSD Units ppbv RPD Limit 30

SampID: LCSD-AG200222-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1-Trichloroethane	0.50		11.1	10.70	0	103.7	11.09	0.09	02/22/2020
1,1,2,2-Tetrachloroethane	0.50		11.3	10.10	0	111.5	11.14	1.07	02/22/2020
1,1,2-Trichloroethane	0.50		11.2	10.50	0	106.4	11.05	1.08	02/22/2020
1,1,2-Trichlorotrifluoroethane	0.50		10.4	10.80	0	96.6	10.44	0.10	02/22/2020
1,1-Dichloroethane	0.50		10.1	9.900	0	101.8	10.02	0.60	02/22/2020
1,1-Dichloroethene	0.50		11.0	10.70	0	103.0	10.94	0.73	02/22/2020
1,2,4-Trichlorobenzene	0.50		7.74	9.500	0	81.5	7.580	2.09	02/22/2020
1,2,4-Trimethylbenzene	0.50		11.4	10.00	0	114.4	11.26	1.59	02/22/2020
1,2-Dibromoethane	0.50		11.6	10.40	0	111.3	11.52	0.52	02/22/2020
1,2-Dichlorobenzene	0.50		11.0	9.800	0	112.6	10.84	1.74	02/22/2020
1,2-Dichloroethane	0.50		10.8	10.20	0	105.5	10.64	1.12	02/22/2020
1,2-Dichloropropane	0.50		10.5	10.30	0	101.6	10.40	0.58	02/22/2020
1,3,5-Trimethylbenzene	0.50		11.4	10.10	0	112.6	11.20	1.51	02/22/2020
1,3-Butadiene	1.00		10.8	10.30	0	105.3	10.79	0.55	02/22/2020
1,3-Dichlorobenzene	0.50		11.0	10.00	0	109.8	10.81	1.56	02/22/2020
1,4-Dichlorobenzene	0.50		10.7	9.600	0	111.6	10.62	0.84	02/22/2020
2-Butanone	1.00		11.0	10.60	0	103.3	10.98	0.27	02/22/2020
2-Hexanone	0.50		13.2	10.30	0	128.5	12.81	3.30	02/22/2020
4-Methyl-2-pentanone	0.50		11.1	10.20	0	108.4	10.97	0.82	02/22/2020
Acetone	2.00		11.0	10.50	0	105.1	11.01	0.27	02/22/2020
Benzene	0.50		10.5	10.50	0	99.7	10.42	0.48	02/22/2020
Bromodichloromethane	0.50		10.7	10.50	0	101.7	10.73	0.47	02/22/2020
Bromoform	0.50		11.4	10.50	0	109.0	11.39	0.53	02/22/2020
Bromomethane	0.50		9.99	10.30	0	97.0	10.40	4.02	02/22/2020
Carbon disulfide	0.50		10.0	10.40	0	96.4	10.04	0.10	02/22/2020
Carbon tetrachloride	0.50		10.6	10.20	0	103.4	10.58	0.28	02/22/2020
Chlorobenzene	0.50		11.6	10.40	0	111.1	11.50	0.43	02/22/2020
Chloroethane	0.50		10.4	10.30	0	100.9	10.38	0.10	02/22/2020
Chloroform	0.50		10.7	10.60	0	100.9	10.75	0.47	02/22/2020
Chloromethane	0.50		10.1	10.00	0	100.9	9.870	2.20	02/22/2020
cis-1,2-Dichloroethene	0.50		10.9	10.40	0	104.7	10.89	0.00	02/22/2020
cis-1,3-dichloropropene	0.50		12.1	10.40	0	116.6	12.01	0.99	02/22/2020
Cyclohexane	0.50		11.2	10.70	0	104.2	11.17	0.18	02/22/2020
Dibromochloromethane	0.50		11.1	10.40	0	106.6	10.99	0.91	02/22/2020
Dichlorodifluoromethane	0.50		9.59	9.800	0	97.9	9.620	0.31	02/22/2020
Dichlorotetrafluoroethane	0.50		9.69	9.800	0	98.9	9.670	0.21	02/22/2020
Ethyl acetate	1.00		11.0	10.50	0	104.5	10.99	0.18	02/22/2020
Ethylbenzene	0.50		11.7	10.40	0	112.3	11.55	1.12	02/22/2020
Hexachlorobutadiene	0.50		7.17	10.10	0	71.0	7.040	1.83	02/22/2020
Isopropanol	3.00		14.0	10.90	0	128.8	14.03	0.07	02/22/2020
m,p-Xylene	1.00		22.6	20.40	0	110.8	22.35	1.11	02/22/2020
Methyl tert-butyl ether	0.50		11.5	10.50	0	109.3	11.42	0.52	02/22/2020
Methylene chloride	1.00		10.4	10.40	0	99.8	10.42	0.38	02/22/2020
n-Heptane	0.50		11.0	10.50	0	105.0	10.98	0.36	02/22/2020
n-Hexane	0.50		10.8	10.50	0	102.6	10.80	0.28	02/22/2020
o-Xylene	0.50		11.2	10.10	0	110.8	11.07	1.08	02/22/2020
p-Ethyltoluene	0.50		11.3	10.40	0	108.5	11.12	1.43	02/22/2020

Teklab, Inc.
Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

TO-15, VOLATILE ORGANIC COMPOUNDS, BY GC/MS

Batch 162484 SampType: LCSD Units ppbv RPD Limit 30
SampID: LCSD-AG200222-1

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Propylene	0.50		10.0	10.00	0	100.3	9.950	0.80	02/22/2020
Styrene	0.50		11.5	10.10	0	114.2	11.48	0.43	02/22/2020
Tetrachloroethene	0.50		11.0	10.30	0	107.1	10.94	0.82	02/22/2020
Tetrahydrofuran	0.50		10.0	9.900	0	101.5	10.00	0.50	02/22/2020
Toluene	0.50		10.7	10.30	0	104.1	10.69	0.28	02/22/2020
trans-1,2-Dichloroethene	0.50		10.6	10.20	0	103.4	10.50	0.48	02/22/2020
trans-1,3-dichloropropene	0.50		10.3	9.100	0	112.7	10.19	0.68	02/22/2020
Trichloroethene	0.50		11.1	10.90	0	101.7	10.98	1.00	02/22/2020
Trichlorofluoromethane	0.50		9.32	9.700	0	96.1	9.320	0.00	02/22/2020
Vinyl acetate	0.50		11.8	11.00	0	107.2	11.91	1.01	02/22/2020
Vinyl chloride	0.50		10.8	10.70	0	100.7	10.76	0.19	02/22/2020
Xylenes, Total	1.50		33.8	30.50	0	110.8	33.42	1.10	02/22/2020
Surr: 4-Bromofluorobenzene			10.3	10.00		102.7			02/22/2020

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: CW3M Co. Inc.
Client Project: ABP-Gibson City

Work Order: 20020904
Report Date: 24-Feb-2020

Carrier: John Riley

Received By: KMT

Completed by: Amber M. Dilallo
On: 17-Feb-2020

Reviewed by: Elizabeth A. Hurley
On: 17-Feb-2020

Pages to follow: Chain of custody 1 Extra pages included 2

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	n/a
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.

Sample was transferred to Collinsville Air Lab on 2/18/20 at 0930. - ehurley - 2/18/2020 10:37:43 AM

Clients sample id, canister id and clients final pressure readings followed by readings taken upon arrival at the laboratory. - HRiley - 2/18/2020 1:22:17 PM
SV-1 5094 -10/-9

5445 Horses[illegible] ...ke Road, Collinsville, IL 62234 Phone (618) 344-1004 Fax (618) 344-100[illegible]

pg 1 of 1   Lab Work Order # 20020104

AIR SAMPLING FIELD FORM AND CHAIN OF CUSTODY

Client Name: CWM Company, Inc.
Address: 701 W. South Grand Ave.
Phone: (217) 522-
Email: CWM@CWMCompany.com
Project ID: ABP-Gibson City
Project Manager: Carol L. Rowe
Sampler: MJS/JKK
PO Number:

Results Requested (check one)
X Standard (7-10 day)
___ 1 Day (200% surcharge)
___ 2-3 Day (100% surcharge)
___ 4-5 Day (50% surcharge)

Sample Type (check one)
___ Ambient Air
___ Indoor Air
___ Indoor Sub-Slab
___ Stack
X Soil Gas/Vapor
___ Landfill Gas
___ Other (specify)

Lab Use Only: Sample pick up: ✓ Y __ N; Samples on: ___ Ice/Blue ✓ No Ice, NA Temp. °C
Comments:

Lab Use Only Laboratory ID	Sample Identification	Canister Number	Controller Number	Sample Start Parameters Date	Time	Vacuum (in. Hg)	Sample Stop Parameters Date	Time	Vacuum (in. Hg)	TO-15 Lists (circle) Standard Extended	TO-15 select BTEX MBTE Naphthalene Isopropanol TPH-GRO	TO-13	TO-4	PM10/ TSP	Metals	Other
20020104.001	SV-1	5094	40	2-12-20	10:10	29	2-12-20	10:45	10	X	X					

Are these samples known to be involved in litigation? If yes, a level IV data package will be generated and a surcharge will apply. ___ Yes X No
Are these samples known to be hazardous? ___ Yes X No
Special QC Requirements/Special Instructions/Comments:

Shipping Company and Tracking Number:

Relinquished By	Date/Time	Received By	Date/Time
[signature]	2/14/20 1343	[signature]	2/14/20 13:43
[signature]	2/17/20 8:25	[signature]	2/17/20 0825
[signature]	2/18/20 0930	Heather R[illegible]	2/18/20 0930

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.

White & Yellow Copy - Laboratory   Pink Copy - Sampler

Rev C 12.16.2019

2/17/20

Illinois Environmental Protection Agency

Bureau of Land • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Leaking Underground Storage Tank Program
Laboratory Certification for Chemical Analysis

A. Site Identification

IEMA Incident # (6- or 8-digit): 20160917 IEPA LPC# (10-digit): 0530100002

Site Name: ABP Gibson City

Site Address (Not a P.O. Box): 120 West 1st Street

City: Gibson City County: Ford ZIP Code: 60936

Leaking UST Technical File

B. Sample Collector

I certify that:

1. Appropriate sampling equipment/methods were utilized to obtain representative samples. JKK (Initial)
2. Chain-of-custody procedures were followed in the field. JKK (Initial)
3. Sample integrity was maintained by proper preservation. JKK (Initial)
4. All samples were properly labeled. JKK (Initial)

C. Laboratory Representative

I certify that: 200209O4

1. Proper chain-of-custody procedures were followed as documented on the chain-of-custody forms MWD II (Initial)
2. Sample integrity was maintained by proper preservation. MWD II (Initial)
3. All samples were properly labeled. MWD II (Initial)
4. Quality assurance/quality control procedures were established and carried out. MWD II (Initial)
5. Sample holding times were not exceeded. MWD II (Initial)

20020904

6. SW-846 Analytical Laboratory Procedure (USEPA) methods were used for the analyses. MLM II (Initial)

7. An accredited lab performed quantitative analysis using test methods identified in 35 IAC 186.180 (for samples collected on or after January 1, 2003). MLM II (Initial)

Signatures

I hereby affirm that all information contained in this form is true and accurate to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sample Collector

Name John Kyser
Title Scientist
Company CWM Company, Inc.
Address 701 South Grand Ave. West
City Springfield
State IL
Zip Code 62704
Phone 217-522-8001
Signature John Kyser
Date 2-12-20

Laboratory Representative

Name Marvin L. Darlings II
Title Project Manager
Company Teklab Inc.
Address 5445 Horseshoe Lake Rd
City Collinsville
State IL
Zip Code 62234
Phone 6183441004
Signature Marvin L. Darlings II
Date 2/25/20

APPENDIX H

PROJECT LABOR AGREEMENT DOCUMENTATION

CORRECTIVE ACTION PLAN AND BUDGET AMENDMET ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS

Project Labor Agreement Form.

The purpose of this form is to provide information with regard to Project Labor Agreement criteria.

Project Labor Agreements potentially apply under the following circumstances: (a) approval is requested of a Corrective Action Plan; (b) the plan involves field work activities; (c) the field work activities would be performed by a subcontractor (as opposed to the consultant); (d) an approval letter would be issued by the Illinois EPA on or after July 25, 2013; and (e) reimbursement would be sought from the Illinois Underground Storage Tank Fund. Project Labor Agreement determinations are required by Section 57.7(c)(3) of the Illinois Environmental Protection Act.

The field work activities which are proposed in the Corrective Action Plan (1 – Waste Characterization Sample, 2- Soil Borings, 1- Canopy Removal, 1- Excavation w/ 10 Samples, 1- Replacement Monitoring Well, 1- Soil-Gas Vapor Boring, and 1- Concrete Replacement) may potentially be subject to the use of a Project Labor Agreement.

Please answer the following questions either "yes" or "no", and please discuss the basis for each answer:

1. Will the use of a Project Labor Agreement advance the state's interest in reducing project costs paid from the Illinois Underground Storage Tank Fund?

   ☐ Yes ☒ No

   Discussion:
   The original intent of PLAs was for large scale construction projects. These projects would include multiple trades working together or in conjunction with one another and could make disputes between parties a potential liability as the project might last a few years. However, LUST sites differ in that one to two trades are typically necessary to complete the work. The "teams" that work together on hazardous sites, such as LUST sites, train together and develop cohesive relationships. Only a handful of workers are necessary to conduct the work; jurisdictional disputes are non-existent as the parties work in harmony.

   Further, the number of trades on this work is minimal as well; the work will be done by separate contractors without a mix of union and non-unionized work force. The site's small project will easily increase the cost of the project with a PLA required, contradicting the idea to minimize site remediation cost.

2. Will the use of a Project Labor Agreement advance the state's interest in efficiency, timeliness, and quality of project work, based upon the overall size, scope, complexity, and remediation objectives of the project?

   ☐ Yes ☒ No

   Discussion:
   PLAs were first used in Illinois for large scale, large cost, and long duration highway development projects. All LUST work, no matter size or scope, is deemed small in comparative size to work normally prescribed a PLA. Collective bargaining agreements are unneeded as the number of facets required for any work does not reach a quantity warranting these agreements.

   Specifically, the ABP Properties, LLC site in Gibson City, Illinois requires a minimal amount of work to be completed during the corrective action stage. 1 – Waste Characterization Sample, 2- Soil Borings, 1- Canopy Removal, 1- Excavation w/ 10 Samples, 1- Replacement Monitoring Well, 1- Soil-Gas Vapor Boring, and 1- Concrete Replacement comprise the entirety of this proposed plan. This can and will be done in a few non-consecutive days.

3. Does the project present safety concerns, including but not limited to the threat to human health and the environment? Will the use of a Project Labor Agreement advance the state's interest in promoting safety?

   ☐ Yes ☒ No

   Discussion:
   LUST sites do not typically involve working within roadways unless the Corrective Action is within rights-of-way, on ingress / egress creates roadway issues which is not commonplace. Specifically, the ABP Properties, LLC site in Gibson City, Illinois is located on a lightly traveled roadway. Construction activities will take a few non-consecutive days and therefore the length of time that safety of the traveling public as an issue is null. As for safety, consultants co-train teams in OSHA HAZWOPER to ensure not only worker safety, but safety for those who may enter or be near the work environment.

4. Will the use of a Project Labor Agreement advance the state's interest in labor continuity and stability in completing the project work in accordance with the plan approved by the Illinois EPA?

☐ Yes ☒ No

Discussion:
The timetable for the work to be performed at the ABP Properties, LLC site is no more than a few non-consecutive days; not exceeding or coming remotely close to 110 days in duration. On a scale of a few days, labor force continuity and stability does not arise as an issue to complete the project as it does not span the duration of collective bargaining agreements. Simply put, the scale of time and scope of work is so small that a labor agreement would not expire, causing workers to walk out of the job.

5. Will the use of a Project Labor Agreement advance the state's interest in performance of the project work by a skilled labor force, thereby achieving the remediation objectives of the project?

☐ Yes ☒ No

Discussion:
Attracting workers from a union hall for only a partial day of work to a few days of work puts them at a disadvantage for the bulk of the time, and is not an enticing option to union workers. Simply put, small LUST projects are not going to attract the workforce that would conduct "efficient" and "safe" work. A PLA, then, does not guarantee skilled workers.

Because of the small scope of work, the bidding process would significantly increase the cost of activities at the ABP Properties, LLC site in Gibson City, Illinois. This would only increase the hardship of the owner and solely be detrimental to the efficiency of the project, which is the opposite of the objective put in place to push the project along towards closure.

6. Will the use of a Project Labor Agreement provide timely completion of the project work, thereby reducing the threat to human health and the environment that would result from delays in achieving the remediation objectives?

☐ Yes ☒ No

Discussion:
With only its consultant and local contractors present at the ABP Properties, LLC site during the "construction event", which will last a few non-consecutive days, there are not multiple trades with closely or paralleled functions to create a work stoppage. The work will be completed within a few non-consecutive days.

7. Will the use of a Project Labor Agreement advance the state's interest of advancing minority owned and women owned businesses and minority and female employment?

☐ Yes ☒ No

Discussion:
By applying a PLA to a project, the Agency may in fact directly negate one of its primary objectives, as stated to advance disadvantaged businesses. The Agency has provided no basis or discussion as to how the PLA will actually increase WBE participation. We believe that the opposite effect will occur.

Furthermore, IEPA correspondence approving PLAs for various projects states that a "PLA will advance the State's interest of advancing minority-owned and women-owned business and minority and female employment". A PLA only requires that if a minority or woman employee or business is used for the project, then additional reports are required. In the competitive bidding process, it is unlikely that all bidders are female or minority; or it is far-fetched to think that all few day construction projects with one to two workers will have either a female or minority represented in the workforce on site. There are no incentives to entice disadvantaged business participation.

In this instance, the box should not be checked if there are no incentives to hire minority workers, for example, the apprenticeship program offers $10.00/hour back to prime contractors when minority participation is required. Use of this screening criteria needs understood and not used loosely. If in fact any disadvantaged businesses are utilized under a PLA, their reporting costs are increased, increasing the project costs.

SCREENING CRITERIA

With the lack of detailed screening criteria from the IEPA for deciding which projects require the use of a PLA, CW³M has followed screening criteria that IDOT uses for government funded programs in their department as that State Agency follows the executive orders of Illinois Governors Blagojevich and Quinn, and President Obama. Attached at the end of this appendix is a copy of the IDOT PLA Determination screening criteria and it lists twelve seemingly ubiquitous standards used to determine the applicability of PLA for construction projects. It has been included for your reference but will be used herein as a systematic way to show how each criterion has been evaluated for applicability for 'yes/no' answers and whether or not the use of a PLA should be considered. CW³M recognizes that these standards may not be the same standards IEPA uses to determine the applicability of PLA for LUST sites, but IEPA correspondence issuing PLA for various sites appears to have very closely matched various IDOT screening criterion as determined in LUST Incidents 2002-0851, 2006-0366, 2009-1397, 2009-0202, 2009-0203, 2011-0859, 2012-0382, 2012-0695, 2013-0906, 2014-0510 and 2013-1123.

1. *The project is being awarded and administered by a governmentally funded program.*

   The "project" is privately contracted, a similar means as when a party secures legal counsel and other services. A contract is in place between a private company or citizen and a consultant or contractor who may also serve as a general contractor. That consultant will interface with governmental agencies on their behalf. They will submit claims for reimbursement after the completion of work, budgets and plan approval, and review of claims. The LUST Fund is a motor fuel tax collected by petroleum distributors, for reimbursement of LUST claims managed by the IEPA, so the answer to this question is "no". The IEPA administers the LUST Program to process claims and review technical plans and budgets not to award or administer the actual work done. As indicated on the PLA documents, the prime contractor is to secure the PLA. There is no "award" or "payment guarantee".

2. *The project is being constructed using state or local funds.*

   The project is constructed using private funds, which ultimately may or may not be reimbursed with state funds. The current rates that the IEPA grants for LUST work have not been modified to reflect the recent changes regarding mandated payment of prevailing wages. That disport is placed on the owner/operator and their contractors. UST owners/operators collect sales tax into the LUST Fund for reimbursement of

remediation work; thus, it is no longer a clear "yes" answer and the owner/operator pays a deductible and is then reimbursed for "eligible" costs. The legislative intent of Public Act was for the IPCB to remedy rates to pay prevailing wages and rectify costs of PLAs and attorney fees.

3. *The overall size, scope, sequencing, logistics, or other aspects of the project make it particularly challenging to manage, and use of a PLA is expected to help assure that the construction work is performed properly and efficiently under the circumstances.*

As stated, PLAs were first used in Illinois for large scale, large cost, and long duration highway development projects. All LUST work, no matter size or scope, is deemed small in comparative size to work normally prescribed a PLA, therefore disqualifying it from any PLA consideration. Collective bargaining agreements are unneeded as the number of facets required for any work does not reach a quantity warranting these agreements.

Specifically, the ABP Properties, LLC site in Gibson City, Illinois requires a minimal amount of work to be completed during the corrective action stage. Excavation of contaminated soil, removal of the existing canopy, and concrete replacement comprises the entirety of the proposed plan. This can and will be done in a few days.

4. *The duration of construction activity on the project is expected to exceed one construction season (110 or more working days), or the nature of the project results in a heightened need for labor force continuity and stability over a substantial period of time.*

The timetable for the work to be performed at the ABP Properties, LLC site is no more than a few days; not exceeding or coming remotely close to 110 days in duration. On a scale of a few days, labor force continuity and stability does not arise as an issue to complete the project as it does not span the duration of collective bargaining agreements. Simply put, the scale of time and scope of work is so small that a labor agreement would not expire, causing workers to walk out of the job.

5. *There is a firm construction completion date established for the project thereby increasing the adverse consequences of any work stoppage or other labor disruption.*

It is on the discretion of the consultant as to how quickly a plan is implemented once it is approved. With the Agency having 120 days to approve, modify, or deny a plan,

consultants cannot pre-plan or schedule the work until approved. Once approved, they coordinate with owners/operators and any subcontractors necessary with weather contingencies. Therefore, adverse consequences of labor disruptions or work stoppage are non-existent on a job that lasts a few hours to a few days for corrective action or for less than two weeks, non-concurrently for actual remediation to complete. Many contractors can perform remediation services in-house or from a pool of reliable subcontractors, with easily adjustable start dates; however, it is fiscally advantageous for the consultant to complete the work as quickly as possible with fewer workers.

The norm on small projects like this is to solicit contractors who provide estimates as to how much the cost to complete each individual task after the contract is awarded. Because this process cannot be completed, prices will ultimately change and push the project into being "stuck" as the costs cannot be met.

6. *The time required to complete the project is expected to extend beyond the expiration date of one or more existing collective bargaining agreements covering trades likely to be involved in the project, thereby increasing the likelihood of work stoppages or other labor disruptions during construction of the project.*

With only its consultant and local contractors present at the ABP Properties, LLC site during the "construction event", which will last a few days, there are not multiple trades with closely or paralleled functions to create a work stoppage. The time required to complete the project will in no way come close to extending beyond the expiration of any existing collective bargaining agreements covering any of the trades.

7. *In the absence of a PLA, there is an increased likelihood of jurisdictional disputes among unions or of conflict between unionized and non-unionized workers on the project that could have a potentially material adverse effect on the time, cost, or quality of work performed on the project.*

As stated, the original intent of PLAs was for large scale construction projects. These projects would include multiple trades working together or in conjunction with one another and could make disputes between parties a potential liability as the project might last a few years. However, LUST sites differ in that one to two trades are typically necessary to complete the work. The "teams" that work together on hazardous sites, such as LUST sites, train together and develop cohesive relationships. Only a handful of workers are necessary to conduct the work; jurisdictional disputes are non-existent as the parties work in harmony.

Further, the number of trades on this work is minimal as well; the work will be done by separate contractors without a mix of union and non-unionized work force.

8. *The project presents specific safety concerns to the travelling public and a PLA will ensure labor force continuity and stability, decreasing the length of the safety concern.*

LUST sites do not typically involve roads unless the Corrective Action is within rights-of-way, on ingress / egress creates roadway issues which is not commonplace. Specifically, the ABP Properties, LLC site in Gibson City, Illinois is located on a lightly traveled roadway. As stated, construction activities will take a few days and therefore the length of time that safety of the traveling public as an issue is null. As for safety, consultants co-train teams in OSHA HAZWOPER to ensure not only worker safety, but safety for those who may enter or be near the work environment.

9. *Use of the PLA is expected to result in improved access to skilled labor, improved efficiency, or improved safety performance on the project.*

Attracting workers from a union hall for only a partial day of work puts them at a disadvantage for the bulk of the time, and is not an enticing option to union workers. Simply put, small LUST projects are not going to attract the workforce that would conduct "efficient" and "safe" work. A PLA, then, does not guarantee skilled workers.

Because of the small scope of work, the bidding process would significantly increase the cost of activities at the ABP Properties, LLC site in Gibson City, Illinois. This would only increase the hardship of the owner and solely be detrimental to the efficiency of the project, which is the opposite of the objective put in place to push the project along towards closure.

10. *Use of the PLA on the project is not expected to have a material adverse effect on the competitive bidding process.*

The use of a PLA on the project does have a material adverse effect on bidding, financing and completion of the project. The contract award process takes place long before the work or construction ever begins. As stated, budgets are approved or modified at the

discretion of the IEPA Project Managers and pre-approved IEPA rates. Competitive bidding is an option when work cannot be performed at the Agency's approved rates. The key factor here is financing. No owner can afford to pay cash for work that is bid on that they would pay double, wait months or even years to get paid for nominal handling charges, no payment guarantee (below what contractors outside of LUST get paid), and be responsible for the extra business costs of the PLA. They are not banks and NATLUST realized very quickly that having an approved budget meant nothing for security of payment, folded its tent, leaving owner/operators no other option than to pay or let contractors carry the burden. The legislative intent was to adjust the rates paid every day to the mandated prevailing wage rate and make the use of PLA's limited in scope.

11. *Use of a PLA on the project is not expected to have an adverse material effect on the ability of the Department to achieve other Departmental goals, (e.g. utilization of disadvantaged business, utilization of Illinois domiciled businesses, development of competitive vendor alternatives over time, etc.).*

By applying a PLA to a project, the Agency may in fact directly negate one of its primary objectives, as stated to advance disadvantaged businesses. The Agency has provided no basis or discussion as to how the PLA will actually increase WBE participation. We believe that the opposite effect will occur.

Furthermore, IEPA correspondence approving PLAs for various projects states that a "PLA will advance the State's interest of advancing minority-owned and women-owned business and minority and female employment". A PLA only requires that if a minority or woman employee or business is used for the project, then additional reports are required. In the competitive bidding process, it is unlikely that all bidders are female or minority; or it is far-fetched to think that all two-day construction projects with one to two workers will have either a female or minority represented in the workforce on site. There are no incentives to entice disadvantaged business participation.

In this instance, the box should not be checked if there are no incentives to hire minority workers, for example, the apprenticeship program offers $10.00/hour back to prime contractors when minority participation is required. Use of this screening criteria needs understood and not used loosely. If in fact any disadvantaged businesses are utilized under a PLA, their reporting costs are increased, increasing the project costs.

12. *There are other material considerations favoring or disfavoring use of a PLA on this project as follows:*

- The total cost for corrective action field activities involving skilled labor totals an estimated $131,687.81, not warranting a PLA in any program.

- The site's small project will easily increase the cost of the project with a PLA required, contradicting the idea to minimize site remediation cost.

- No reason was given by the IEPA for the implementation of a PLA on what may and should be the final step to gain closure on site; this will only further delay the goal of the Agency: closing the project, which the client is eager to finish.

- The common goal of the Agency and owner/operators is closure. A PLA on an extremely small plan will delay or indefinitely stall closure when closure is within the grasp of all parties involved.

Contract Number
County

IDOT PROJECT LABOR AGREEMENT DETERMINATION

To:

From:

Date:

Re:

In accordance with Executive Order 2003-13 (Blagojevich), it is recommended that a project labor agreement (PLA) be utilized for the above-captioned Project. This recommendation is based on the considerations indicated below.

1) The Project is being awarded and administered by IDOT (i.e., not by another governmental agency).

2) The Project is being constructed using state or local funds only (i.e., no federal funds).

3) The overall size, scope, sequencing, logistics or other aspects of the Project make it particularly challenging to manage, and use of a PLA is expected to help assure that the construction work is performed properly and efficiently under the circumstances.

4) The duration of construction activity on the Project is expected to exceed one construction season (i.e., 110 or more working days), or the nature of the Project results in a heightened need for labor force continuity and stability over a substantial period of time.

5) There is a firm construction completion date established for the Project thereby increasing the adverse consequences of any work stoppage or other labor disruption.

6) The time required to complete the Project is expected to extend beyond the expiration date of one or more existing collective bargaining agreements covering trades likely to be involved in the Project, thereby increasing the likelihood of work stoppage(s) or other labor disruption(s) during construction of the Project.

7) In the absence of a PLA, there is an increased likelihood of jurisdictional disputes among unions or of conflict between unionized and non-unionized workers on the Project that could have a potentially material adverse effect on the time, cost, or quality of work performed on the Project.

Contract Number
County

8) This project presents specific safety concerns to the traveling public and a PLA, will ensure labor force continuity and stability, decreasing the length of the safety concern.

9) Use of a PLA is expected to result in improved access to skilled labor, improved efficiency, or improved safety performance on the Project.

10) Use of a PLA on the Project is not expected to have a material adverse effect on the competitive bidding process.

11) Use of a PLA on the Project is not expected to have a material adverse effect on the ability of the Department to achieve other Departmental goals (e.g., utilization of disadvantaged businesses, utilization of Illinois domiciled businesses, development of competitive vendor alternatives over time, etc.).

12) There are other material considerations favoring or disfavoring use of a PLA on this Project as follows:

_____

_____

_____

Based upon the identified considerations, we recommend that you approve use of a PLA on this Project. Upon your approval, the Department shall undertake to negotiate in good faith a PLA with the relevant labor organization(s), and shall include in all necessary bid specifications and other documents information regarding the actual or form of PLA that is binding upon all contractors and their employees.

Agreed: _____
{Division Chief} (Date)

Agreed: _____
{Bureau of Design & Environment} (Date)

Agreed: _____
{Regional Engineer} (Date)

Approved: _____
Gary Hannig, Secretary (Date)

FHWA concurrence in the PLA for the above mentioned contract.

_____
Division Administrator FHWA (Date)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Ann L. Schneider, Secretary

PROJECT LABOR AGREEMENTS

Illinois Department of Transportation

Revised 01/01/13

TABLE OF CONTENTS

STATE OF ILLINOIS
PROJECT LABOR AGREEMENTS

- **Definition of (Project Labor Agreement)** – A Project Labor Agreement is a comprehensive pre-hire collective bargaining agreement that is negotiated between a project's owner (a state for example) and an appropriate labor organization (an area or state building and construction trades council) which sets out the basic terms and work conditions for that particular project.

- **Intent of a Project Labor Agreement** – A Project Labor Agreement's intent is to ensure the efficient, timely and most cost-effective completion of a construction project.

- **General Provisions Contained in a Project Labor Agreement**

  - A skilled and trained workforce is available through the craft's hiring halls.
  - Work schedules and general terms for labor are made uniform among the crafts.
  - Monthly meetings established throughout the project with the trade unions and contractors to help coordinate manpower and settle disputes.
  - Dispute resolution procedures are put into place addressing contractual and jurisdictional disputes.
  - Ensures a timely completion of the project with no work stoppages.
  - Levels the playing field for potential bidders.
  - Prevailing wage laws are applied to wage rates and fringe benefits.

- **History of the Project Labor Agreement** – Project Labor Agreements (PLAs) have a long history of use in the construction industry dating back before World War II. PLAs have been used on federal construction projects since the 1930s. Some examples include the Grand Coulee Dam 1937-1938, Kennedy Space Center and Nuclear missile sites.

  In February of 1993, President Clinton signed Executive Order 12836, which revoked Executive Order 12818 issued in October of 1992 by President Bush that prohibited the use of PLAs on federal construction contracts. In June of 1997, President Clinton issued a presidential memorandum for the Heads of Executive Departments and Agencies expressing his support for the use of PLAs and encouraging their use within the federal government. President Clinton asked department heads to consider their use on a project-by-project basis for use on large scale projects where cost savings, efficiency and quality could be advanced.

  On February 6, 2009, President Obama signed Executive Order 13502 allowing the use of PLAs by Executive Agencies on projects where federal funds will be obligated in excess of $25 million. This order revokes Executive Orders 13202 and 13208, signed by President George W. Bush in 2001, and which prohibited the use of PLAs on federally-funded construction projects. President Obama's Executive Order lists the same advantages and the same requirements for a PLA that IDOT has recognized and required for many years. Importantly, the use of PLAs is not precluded for projects receiving federal financial assistance. Illinois received the first PLA granted on a federal-aid project under the Obama administration. (See Attachments A-E for complete text of Executive Orders referenced herein.)

- **History of the Project Labor Agreement in Illinois** – Project Labor Agreements have been used on a limited basis since 1992. The first agreement was implemented on the Supermax Prison project in Tamms, Illinois. The agreement was negotiated by the Building & Construction Trades Council, the Builder's Association and the Capital Development Board (state of Illinois). The agreements have been used on a project-by-project basis when they meet the criteria for their use.

  In May of 2003, the Governor issued an executive order on Project Labor Agreements. The executive order allows a state department, agency, authority, board or instrumentality, which is under the control of the Governor, to include a PLA on a public works project where said department, agency, authority, board or instrumentality has determined that such agreement advances the state's interests of cost, efficiency, quality, safety, timeliness, skilled labor force, labor stability or the state's policy to advance minority- and female-owned businesses and minority and female employment.

  After months of experience with Executive Order 2003-13, it became apparent that a statewide PLA committee needed to be established to provide better communication and efficiency between the state of Illinois and Labor. As a result, beginning February 25, 2005 an Illinois AFL-CIO Statewide Project Labor Agreement Committee was created.

  On March 31, 2010, Executive Order 2010-03 was issued by Governor Pat Quinn which supersedes Executive Order 2003-13.

  The Project Labor Agreements Act (30 ILCS 571) became effective July 27, 2011. Additional diversity language and reporting provisions were included.

- **Criteria for Use of a Project Labor Agreement**

  - project size
  - complexity
  - length of project
  - disruption to the public
  - impact on quality of life
  - availability of skilled workforce
  - history of workforce harmony
  - cost savings from use of a PLA
  - geographical area (benefit to the state for keeping payrolls within the state)
  - request by Using Agencies
  - other factors as determined by the department

- **Strategy for Use of Project Labor Agreements**

  - Continue to meet with the 21 Building and Construction Trades Councils promoting the use of PLAs on projects that meet the criteria for their use.

  - Meet with AFL-CIO and other labor organizations at their quarterly meetings.

  - Meet with other Using Agencies including the Capital Development Board to share language and discuss the benefits of PLAs.

ILLINOIS AFL-CIO BUILDING & CONSTRUCTION TRADES STATEWIDE PROJECT LABOR AGREEMENT COMMITTEE

On May 7, 2003 Executive Order 2003-13 was signed allowing the use of Project Labor Agreements on a project-by-project basis for a state department, an agency, an authority, a board or instrumentality, which is under the control of the Governor. The Governor ordered that Project Labor Agreements should be utilized on a public works project where said department, agency, authority, board or instrumentality had determined that such agreement advances the state's interests.

After months of experience with Executive Order 2003-13, it became apparent that a statewide PLA committee needed to be established to provide better communication and efficiency between the state of Illinois and Labor.

As a result, beginning February 25, 2005 an Illinois AFL-CIO Statewide Project Labor Agreement Committee was created. The PLA committee members will:

- Meet as determined by the Illinois AFL-CIO. The meeting will be chaired by an officer (or their designee) of the Illinois AFL-CIO.
- Be comprised of one authorized representative from each craft from the Illinois Building and Construction Trades.
- Seek input from and work in concert with the twenty-one (21) Illinois Building and Construction Trades councils.
- Will have full authority and responsibility to attend statewide PLA committee meetings and to negotiate PLAs with the state of Illinois; to sign PLAs with the state of Illinois; and, to have decision-making capabilities on any and all matters which may arise regarding Executive Order 2003-13 on behalf of their respective craft.
- Promulgate PLA committee procedures and rules as necessary in order to conduct business in an efficient and respectful manner and to bring a unified bargaining team to the PLA negotiating process.

On March 31, 2010, Executive Order 2003-13 was superseded by Executive Order 2010-03.

The Project Labor Agreements Act (30 ILCS 571) became effective July 27, 2011. Additional diversity language and reporting provisions were included.

FINANCE

(30 ILCS 571/) Project Labor Agreements Act.

(30 ILCS 571/1)

Sec. 1. Short title. This Act may be cited as the Project Labor Agreements Act. (Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/5)

Sec. 5. Findings.

(a) The State of Illinois has a compelling interest in awarding public works contracts so as to ensure the highest standards of quality and efficiency at the lowest responsible cost.

(b) A project labor agreement, which is a form of pre-hire collective bargaining agreement covering all terms and conditions of employment on a specific project, can ensure the highest standards of quality and efficiency at the lowest responsible cost on appropriate public works projects.

(c) The State of Illinois has a compelling interest that a highly skilled workforce be employed on public works projects to ensure lower costs over the lifetime of the completed project for building, repairs, and maintenance.

(d) Project labor agreements provide the State of Illinois with a guarantee that public works projects will be completed with highly skilled workers.

(e) Project labor agreements provide for peaceful, orderly, and mutually binding procedures for resolving labor issues without labor disruption, preventing significant lost-time on construction projects.

(f) Project labor agreements allow public agencies to predict more accurately the actual cost of the public works project.

(g) The use of project labor agreements can be of particular benefit to complex construction projects.

(Source: P.A. 97-199, eff. 7-27-11; 97-813, eff. 7-13-12.)

(30 ILCS 571/10)

Sec. 10. Public works projects. On a project-by-project basis, a State department, agency, authority, board, or instrumentality that is under the control of the Governor shall include a project labor agreement on a public works project when that department, agency, authority, board, or instrumentality has determined that the agreement advances the State's interests of cost, efficiency, quality, safety, timeliness, skilled labor force, labor stability, or the State's policy to advance minority-owned and women-owned businesses and minority and female employment.

(Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/15)

Sec. 15. Public works projects funded with federal funds. When it has been determined that a project labor agreement is appropriate, and in furtherance of the President's Executive Order 13502, the State department, agency, authority, board, or instrumentality responsible for awarding the project may include a project labor agreement on a public works project funded in whole or in part with federal funds.

(Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/20)

Sec. 20. Negotiation of agreement. When it has been determined that a project labor agreement is appropriate for a particular public works project, the State department, agency, authority, board, or instrumentality responsible for awarding the project shall in good faith negotiate a project

labor agreement with labor organizations engaged in the construction industry. If the State department, agency, authority, board, or instrumentality and the labor organizations engaged in the construction industry ("the parties") cannot agree to the terms of the project labor agreement, the Governor shall appoint a designee to assist the parties in reaching an agreement.
(Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/25)
Sec. 25. Contents of agreement. Pursuant to this Act, any project labor agreement shall:
(a) Set forth effective, immediate, and mutually binding procedures for resolving jurisdictional labor disputes and grievances arising before the completion of work.
(b) Contain guarantees against strikes, lockouts, or similar actions.
(c) Ensure a reliable source of skilled and experienced labor.
(d) For minorities and females as defined under the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, set forth goals for apprenticeship hours to be performed by minorities and females and set forth goals for total hours to be performed by underrepresented minorities and females.
(e) Permit the selection of the lowest qualified responsible bidder, without regard to union or non-union status at other construction sites.
(f) Bind all contractors and subcontractors on the public works project through the inclusion of appropriate bid specifications in all relevant bid documents.
(g) Include such other terms as the parties deem appropriate.
(Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/30)
Sec. 30. Publicly disclosed finding. Any decision to use a project labor agreement in connection with a public works project by a State department, agency, authority, board, or instrumentality shall be supported by a written, publicly disclosed finding by the department, agency, authority, board, or instrumentality, setting forth the justification for use of the project labor agreement.
(Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/35)
Sec. 35. Compliance. All State departments, agencies, authorities, boards, and instrumentalities shall ensure that all public works projects are implemented in a manner consistent with the terms of this Act and are in full compliance with all statutes, regulations, and Executive Orders.
(Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/37)
Sec. 37. Quarterly report; annual report. A State department, agency, authority, board, or instrumentality that has a project labor agreement in connection with a public works project shall prepare a quarterly report that includes workforce participation under the agreement by minorities and

females as defined under the Business Enterprise for Minorities, Females, and Persons with Disabilities Act. These reports shall be submitted to the Illinois Department of Labor. The Illinois Department of Labor shall submit to the General Assembly and the Governor an annual report that details the number of minorities and females employed under all public labor agreements within the State.
(Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/40)
Sec. 40. Severability. Nothing in this Act shall be construed to contravene any state or federal law or to jeopardize the State's entitlement to federal funding. If any provision of this Act or its application to any person or circumstance is held invalid by any court of competent jurisdiction, this invalidity does not affect any other provision or application of this Act that can be given effect without the invalid provision or application. To achieve this purpose, the provisions of this Act are declared to be severable.
(Source: P.A. 97-199, eff. 7-27-11.)

(30 ILCS 571/45)
Sec. 45. (Amendatory provisions; text omitted).
(Source: P.A. 97-199, eff. 7-27-11; text omitted.)

(30 ILCS 571/99)
Sec. 99. Effective date. This Act takes effect upon becoming law.
(Source: P.A. 97-199, eff. 7-27-11.)

STATE OF ILLINOIS
EXECUTIVE DEPARTMENT
SPRINGFIELD, ILLINOIS

EXECUTIVE ORDER ON PROJECT LABOR AGREEMENTS (2010-03)

WHEREAS, the State of Illinois has a compelling interest in awarding public works contracts so as to ensure the highest standards of quality and efficiency at the lowest responsible cost; and

WHEREAS, a project labor agreement, which is a form of pre-hire collective bargaining agreement covering all terms and conditions of employment on a specific project, can ensure the highest standards of quality and efficiency at the lowest responsible cost on appropriate public works projects; and

WHEREAS, the State of Illinois has a compelling interest that a highly skilled workforce be employed on public works projects to ensure lower costs over the lifetime of the completed project for building, repairs and maintenance; and

WHEREAS, project labor agreements provide the State of Illinois with a guarantee that public works projects will be completed with highly skilled workers; and

WHEREAS, project labor agreements provide for peaceful, orderly and mutually binding procedures for resolving labor issues without labor disruption, preventing significant lost-time on construction projects; and

WHEREAS, project labor agreements allow public agencies to predict more accurately the actual cost of the public works project; and

WHEREAS, the use of project labor agreements can be of particular benefit to complex construction projects; and

THEREFORE, I, Pat Quinn, Governor of the State of Illinois, pursuant to the supreme executive authority of the Governor as set forth in Article V, Section 8 of the Illinois Constitution, do hereby order as follows:

1. On a project-by-project basis, a State department, agency, authority, board or instrumentality, which is under the control of the Governor, shall include a project labor agreement on a public works project where said department, agency, authority, board or instrumentality has determined that such agreement advances the State's interests of cost, efficiency, quality, safety, timeliness, skilled labor force, labor stability or the State's policy to advance minority- and women-owned businesses and minority and female employment.
2. Where it has been determined that a project labor agreement is appropriate, and in furtherance of the President's Executive Order 13502, the State department, agency, authority, board or instrumentality responsible for awarding the project may include a project labor agreement on a public works project funded in whole or in part with Federal funds.
3. Where it has been determined that a project labor agreement is appropriate for a particular public works project, the State department, agency, authority, board or instrumentality responsible for awarding the project shall in good faith negotiate a project labor agreement with labor organizations engaged in the construction industry. In the event that the State department, agency, authority, board or instrumentality and the labor organizations engaged in the construction industry ("the parties") cannot agree to the terms of the project labor agreement, the Governor shall appoint a designee to assist the parties in reaching an agreement.
4. Pursuant to this Order, any project labor agreement:
   a. shall set forth effective, immediate and mutually binding procedures for resolving jurisdictional labor disputes and grievances arising before the completion of work;
   b. shall contain guarantees against strikes, lockouts, or similar actions;
   c shall ensure a reliable source of skilled and experienced labor;
   d shall further public policy objectives as to improved employment opportunities for minorities and women in the construction industry to the extent permitted by state and federal law;

e. shall permit the selection of the lowest qualified responsible bidder, without regard to union or non-union status at other construction sites;

f. shall be made binding on all contractors and subcontractors on the public works project through the inclusion of appropriate bid specifications in all relevant bid documents; and

g. shall include such other terms as the parties deem appropriate.

5. Any decision to use a project labor agreement in connection with a public works project by a State department, agency, authority, board or instrumentality shall be supported by a written, publicly disclosed finding by such department, agency, authority, board or instrumentality, setting forth the justification for use of the project labor agreement.

6. All State departments, agencies, authorities, boards and instrumentalities are hereby ordered to ensure that all public works projects are implemented in a manner consistent with the terms of this Order and are in full compliance with all statutes, regulations and Executive Orders.

7. Nothing in this Executive Order shall be construed to contravene any state or federal law or to jeopardize the State's entitlement to federal funding. If any provision of this Executive Order or its application to any person or circumstance is held invalid by any court of competent jurisdiction, this invalidity does not affect any other provision or application of this Executive Order that can be given effect without the invalid provision or application. To achieve this purpose, the provisions of this Executive Order are declared to be severable.

8. This Order supersedes Executive Order 2003-13.

9. This Order shall be in full force and effect upon its filing with the Secretary of State.

Pat Quinn

Pat Quinn
Governor

Issued by the Governor: March 31, 2010
Filed with the Secretary of State: March 31, 2010

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Construction Program Guide

IDOT Project Labor Agreement Determination

Contract Number
County

To:

From:

Date:

Re:

In accordance with Executive Order 2003-13 (Blagojevich), it is recommended that a project labor agreement (PLA) be utilized for the above-captioned Project. This recommendation is based on the considerations indicated below.

1. The Project is being awarded and administered by IDOT (i.e., not by another governmental agency).
2. The Project is being constructed using state or local funds only (i.e., no federal funds).
3. The overall size, scope, sequencing, logistics or other aspects of the Project make it particularly challenging to manage, and use of a PLA is expected to help assure that the construction work is performed properly and efficiently under the circumstances.
4. The duration of construction activity on the Project is expected to exceed one construction season (i.e., 110 or more working days), or the nature of the Project results in a heightened need for labor force continuity and stability over a substantial period of time.
5. There is a firm construction completion date established for the Project thereby increasing the adverse consequences of any work stoppage or other labor disruption.
6. The time required to complete the Project is expected to extend beyond the expiration date of one or more existing collective bargaining agreements covering trades likely to be involved in the Project, thereby increasing the likelihood of work stoppage(s) or other labor disruption(s) during construction of the Project.
7. In the absence of a PLA, there is an increased likelihood of jurisdictional disputes among unions or of conflict between unionized and non-unionized workers on the Project that could have a potentially material adverse effect on the time, cost, or quality of work performed on the Project.

More Information

- Contract Administration

Contact

Julie Trunk
Office of Program Administration
202-366-4639
E-mail Julie

Construction Feedback
E-mail Construction

8. This project presents specific safety concerns to the traveling public and a PLA, will ensure labor force continuity and stability, decreasing the length of the safety concern.
9. Use of a PLA is expected to result in improved access to skilled labor, improved efficiency, or improved safety performance on the Project.
10. Use of a PLA on the Project is not expected to have a material adverse effect on the competitive bidding process.
11. Use of a PLA on the Project is not expected to have a material adverse effect on the ability of the Department to achieve other Departmental goals (e.g., utilization of disadvantaged businesses, utilization of Illinois domiciled businesses, development of competitive vendor alternatives over time, etc.).
12. There are other material considerations favoring or disfavoring use of a PLA on this Project as follows:

Based upon the identified considerations, we recommend that you approve use of a PLA on this Project. Upon your approval, the Department shall undertake to negotiate in good faith a PLA with the relevant labor organization(s), and shall include in all necessary bid specifications and other documents information regarding the actual or form of PLA that is binding upon all contractors and their employees.

Agreed: _____
{Division Chief} (Date)

Agreed: _____
{Bureau of Design & Environment} (Date)

Agreed: _____
{Regional Engineer} (Date)

Approved: _____
Gary Hannig, Secretary (Date)

FHWA concurrence in the PLA for the above mentioned contract.

_____
Division Administrator FHWA (Date)

Word files can be viewed with the Word Viewer

Updated: 04/04/2011

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Project Labor Agreement

A project labor agreement (PLA) is a pre-hire collective bargaining agreement with one or more labor organizations that establishes the terms and conditions of employment for a specific construction project. For highway projects, PLAs are typically negotiated between a State department of transportation, or another relevant contracting agency, and an appropriate labor organization (such as an area or state building and construction trades councils and relevant local unions). As a condition of being awarded a contract, the contractor must sign the negotiated PLA with the relevant union organizations.

On February 6, 2009 President Obama signed an Executive Order 13502 titled "Use of Project Labor Agreement for Federal Construction Projects." This Executive Order encourages executive agencies to consider requiring the use of PLAs on large-scale direct Federal construction projects (defined as a project with a total cost of $25 million or more). Specifically, section 3 allows agencies to require the use of a PLA in Federal contracts where such use will: " . . . (i) advance the Federal Government's interest in achieving economy and efficiency in Federal procurement, producing labor-management stability, and ensuring compliance with laws and regulations governing safety and health, equal employment opportunity, labor and employment standards, and other matters, and (ii) be consistent with law." By its terms, section 3 applies only to Federal procurement, not contracts awarded under Federal financial assistance programs. With respect to projects receiving Federal financial assistance, section 5 provides, "This order does not require an agency to use a project labor agreement on any construction project, nor does it preclude the use of a project labor agreement in circumstances not covered by the order, including leasehold arrangements and projects receiving Federal financial assistance."

Executive Order 13502 revokes Executive Order 13202 of February 17, 2001, and Executive Order 13208 of April 6, 2001, and directs agencies, to the extent permitted by law to revoke any orders, rules or regulations implementing the two Executive Orders.

Authority/Legal Basis

1. *Laws*
   - None
2. *Regulations*
   - None

More Information

- Contract Administration

Contact

Julie Trunk
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202-366-4639
E-mail Julie

Construction Feedback
E-mail Construction

3. *Orders*
   - Executive Order 13502 of February 6, 2009
4. *Policy*
   - FHWA Interim Guidance - May 7, 2010 (Note: FHWA Division Offices should forward a copy of the State's justification and PLA to Michael Harkins (HCC-30) and Julie Trunk (HIPA-30) for review. A recommendation will then be forwarded to the Deputy Administrator for a final determination.)

Guidance

1. General Information
   - Illinois Department of Transportation Project Labor Agreement Master Plan (.pdf)
   - Illinois Department of Transportation PLA Project Determination Criteria
2. 2. Training
   - None

PDF files can be viewed with the Acrobat® Reader®

Updated: 03/15/2012

FAP Route 729(US 136)
Project ACF-0729(014)
Section 36(W,RS-1) & 34Z-2(W,RS)
Vermilion County
Contract No. 90939

Illinois Department of Transportation
PROJECT LABOR AGREEMENT

This Project Labor Agreement ("PLA") is entered into this _____ day of _____, by and between the Illinois Department of Transportation ("IDOT" or "Department") in its proprietary capacity, and each relevant Illinois AFL-CIO Building Trades Council made signatory hereto by the Illinois AFL-CIO Statewide Project Labor Agreement Committee on behalf of itself and each of its affiliated members (individually and collectively, the "Union"). This PLA shall apply to Construction Work (as defined herein) to be performed by IDOT's Prime Contractor and each of its relevant subcontractors of whatever tier ("Subcontractor" or "Subcontractors") on [redacted] (hereinafter, the "Project").

ARTICLE 1 - INTENT AND PURPOSES

1.1. This PLA is entered into in furtherance of Illinois Executive Order No. 2010-03 and P.A. 097-0199. It is mutually understood and agreed that the terms and conditions of this PLA are intended to promote the public interest in obtaining timely and economical completion of the Project by encouraging productive and efficient construction operations; by establishing a spirit of harmony and cooperation among the parties; and by providing for peaceful and prompt settlement of any and all labor grievances or jurisdictional disputes of any kind without strikes, lockouts, slowdowns, delays or other disruptions to the prosecution of the work.

1.2. As a condition of the award of the contract for performance of work on the Project, IDOT's Prime Contractor and each of its Subcontractors shall be required to sign a "Contractor Letter of Assent", in the form attached hereto as Exhibit A, prior to commencing Construction Work on the Project. Each Union affiliate and separate local representing workers engaged in Construction Work on the Project in accordance with this PLA are bound to this agreement by the Illinois AFL-CIO Statewide Project Labor Agreement Committee which is the central committee established with full authority to negotiate and sign PLAs with the State on behalf of all respective crafts. Upon their signing the Letter of Assent, the Prime Contractor, each Subcontractor, and the individual Unions shall thereafter be deemed a party to this PLA. No party signatory to this PLA shall, contract or subcontract, nor permit any other person, firm, company or entity to contract or subcontract for the performance of Construction Work for the Project to any person, firm, company or entity that does not agree in writing to become bound by the terms of this PLA prior to commencing such work.

1.3. It is understood that the Prime Contractor(s) and each Subcontractor will be considered and accepted by the Unions as separate employers for the purposes of collective bargaining, and it is further agreed that the employees working under this PLA shall constitute a bargaining unit separate and distinct from all others. The Parties hereto also agree that this PLA shall be applicable solely with respect to this Project, and shall have no bearing on the interpretation of any other collective bargaining agreement or as to the recognition of any bargaining unit other than for the specific purposes of this Project.

1.8. In the event that the applicable collective bargaining agreement between a Prime Contractor and the Union or between the Subcontractor and the Union expires prior to the completion of this Project, the expired applicable contract's terms will be maintained until a new applicable collective bargaining agreement is ratified. The wages and fringe benefits included in any new applicable collective bargaining agreement will apply on and after the effective date of the newly negotiated collective bargaining agreement, except to the extent wage and fringe benefit retroactivity is specifically agreed upon by the relevant bargaining parties.

ARTICLE II – APPLICABILITY, RECOGNITION, AND COMMITMENTS

2.1 The term Construction Work as used herein shall include all "construction, prosecution, completion, or repair" work performed by a "laborer or mechanic" at the "site of the work" for the purpose of "building" the specific structures and improvements that constitute the Project. Terms appearing within quotation marks in the preceding sentence shall have the meaning ascribed to them pursuant to 29 CFR Part 5.

2.2 By executing the Letters of Assent, Prime Contractor and each of its Subcontractors recognizes the Unions signatory to this PLA as the sole and exclusive bargaining representatives for their craft employees employed on the jobsite for this Project. Unions who are signatory to this PLA will have recognition on the Project for their craft.

2.3 The Prime Contractor and each of its Subcontractors retains and shall be permitted to exercise full and exclusive authority and responsibility for the management of its operations, except as expressly limited by the terms of this PLA or by the terms and conditions of the applicable collective bargaining agreement.

2.4 Except to the extent contrary to an express provision of the relevant collective bargaining agreement, equipment or materials used in the Project may be pre-assembled or pre-fabricated, and there shall be no refusal by the Union to handle, transport, install, or connect such equipment or materials. Equipment or materials delivered to the job-site will be unloaded and handled promptly without regard to potential jurisdictional disputes; any such disputes shall be handled in accordance with the provisions of this PLA.

2.5 Unions commit to furnishing qualified and skilled craft persons as required by the Prime Contractor and its Subcontractors in fulfillment of their obligations to complete the Project. In order to promote the long-term development of a skilled and knowledgeable work force, the parties are encouraged to utilize apprentices to the maximum extent permitted by the applicable collective bargaining agreement.

3.4 Not later than the earlier of (a) five business days following the pre-job conference, or (b) commencement of Construction Work, the Unions and Prime Contractor (on behalf of itself and all its subcontractors of whatever tier) shall confer and jointly designate a slate of three (3) permanent arbitrators (each a "Permanent Arbitrator") for the purpose of hearing disputes pursuant to Articles V and VII of this PLA. The slate of Permanent Arbitrators shall be selected from among the following individuals: Thomas F. Gibbons, Robert Perkovich, Byron Yaffee, and Glenn A. Zipp. In the event that the Unions and Prime Contractor are not able to agree on a full slate of three Permanent Arbitrators, the Department, after consultation with the Unions and Prime Contractor, shall designate such additional Permanent Arbitrators as may be necessary to establish the full slate. A single Permanent Arbitrator shall be selected from the slate of three on a rotating basis to adjudicate each arbitrable matter as it arises. In the event a Permanent Arbitrator is not available to adjudicate a particular matter in the order of rotation, the arbitration assignment shall pass to the next available Permanent Arbitrator.

ARTICLE IV - HOURS OF WORK AND GENERAL CONDITIONS

4.1 The standard work day for Construction Work on the Project shall be an established consecutive eight (8) hour period between the hours of 7:00 a.m. and 5:00 p.m. with one-half hour designated as unpaid period for lunch. The standard work week shall be five (5) consecutive days of work commencing on Monday. Starting time shall be established at the pre-job conference, and shall be applicable to all craft employees on the Project unless otherwise expressly agreed in writing. In the event Project site or other job conditions dictate a change in the established starting time and/or a staggered lunch period for portions of the Project or for specific crafts, the Prime Contractor, relevant Subcontractors and business managers of the specific crafts involved shall confer and mutually agree to such changes as appropriate.

If proposed work schedule changes cannot be mutually agreed upon between the parties, the hours fixed at the time of the pre-job meeting shall prevail.

4.2 Shift work may be established and directed by the Prime Contractor or relevant Subcontractor as reasonably necessary or appropriate to fulfill the terms of its contract with the Department. If used, shift hours, rates and conditions shall be as provided in the applicable collective bargaining agreement.

4.3 The parties agree that chronic and/or unexcused absenteeism is undesirable and must be controlled in accordance with procedures established by the applicable collective bargaining agreement. Any employee disciplined for absenteeism in accordance with such procedures shall be suspended from all work on the Project for not less than the maximum period permitted under the applicable collective bargaining agreement.

5.2.B. Step 2. In the event that the Steward and the contractors' representatives at the job-site cannot reach agreement within two (2) working days after a meeting is arranged and held, the matter shall be referred to the Union Business Manager and to executive representatives of the Prime Contractor and relevant Subcontractor.

5.2.C. Step 3. In the event the dispute is not resolved within five (5) working days after completion of Step 2, the relevant parties shall request a Permanent Arbitrator as determined in accordance with paragraph 3.4 of this PLA, who shall, within ten (10) working days, hear the grievance and make a written decision. Such decisions shall be final and binding on all parties. The parties shall each pay the expense of their own representative. The expense of the Permanent Arbitrator shall be divided equally between (1) the Prime Contractor and/or relevant Subcontractor, and (2) the involved Union.

5.3 Any failure of a party to comply fully with such final and binding decision of the Permanent Arbitrator may result in removal of the non-complying party from the site, in a holdback from the Prime Contractor or Subcontractor of any amounts awarded, or in such other relief as the Department may reasonably determine is necessary to promote final resolution of the dispute.

5.4 In the event any dispute or grievance should arise, the parties expressly agree that it shall be resolved without occurrence of any strike, work stoppage, slow-down or other prohibited activities as provided in Article VII of this PLA. Individuals or parties violating this section shall be subject to immediate discharge or other discipline.

ARTICLE VI - JURISDICTIONAL DISPUTES

6.1 As used in this Agreement, the term "jurisdictional dispute" shall be defined as any dispute, difference or disagreement involving the assignment of particular work to one class or craft of employees rather than to a different class or craft of employees, regardless of that Contractor's contractual relationship to any other employer, contractor, or organization on the site.

6.2 It is agreed by and between the parties to this Agreement that any and all jurisdictional disputes shall be resolved in the following manner; each of the steps hereinafter listed shall be initiated by the parties in sequence as set forth:

(a) Negotiation by and between the Local Business Representative of the disputing Union and Employer shall take place within two (2) business days. Business days are defined as Monday through Friday excluding contract holidays. Such negotiations shall be pursued until it is apparent that the dispute cannot be resolved at the local level.

(3) If the Arbitrator finds that a previous decision of record governs the case, the Arbitrator shall apply the decision of record in rendering his decision except under the following circumstances. After notice to the other parties to the dispute prior to the hearing that it intends to challenge the decision of record, if a trade challenging the decision of record is able to demonstrate that the recognized and established prevailing practice in the locality of the work has been contrary to the applicable decision of record, and that historically in that locality the work in dispute has not been performed by the other craft or crafts, the Arbitrator may rely on such prevailing practice rather than the decision of record.

If the craft relying on the decision of record demonstrates that it has performed the work in dispute in the locality of the job, then the Arbitrator shall apply the decision of record in rendering his decision. If the Arbitrator finds that a craft has improperly obtained the prevailing practice in the locality through raiding, the undercutting of wages or by the use of vertical agreements, the Arbitrator shall rely on the decision of record rather than the prevailing practice in the locality.

(4) If no decision of record is applicable, the Arbitrator shall then consider the established trade practice in the industry and prevailing practice in the locality; and

(5) Only if none of the above criteria is found to exist, the Arbitrator shall then consider that because efficiency, cost or continuity and good management are essential to the well being of the industry, the interest of the consumer or the past practice of the employer shall not be ignored.

The Arbitrator shall set forth the basis for his decision and shall explain his findings regarding the applicability of the above criteria. If lower-ranked criteria are relied upon, the Arbitrator shall explain why the higher-ranked criteria were not deemed applicable. The Arbitrator's decision shall only apply to the job in dispute.

(6) Agreements of record are applicable only to the party's signatory to such agreements. Decisions of record are applicable to all trades.

(7) The Arbitrator is not authorized to award back pay or any other damages for a mis-assignment of work. Nor may any party bring an independent action for back pay or any other damages, based upon a decision of an Arbitrator.

7.4 Upon notification of violations of this Article, the principal officer or officers of the local area Building and Construction Trades Council, and the Illinois AFL-CIO Statewide Project Labor Agreement Committee as appropriate, will immediately instruct, order and use their best efforts to cause the affiliated union or unions to cease any violations of this Article. A Trades Council and the Committee otherwise in compliance with the obligations under this paragraph shall not be liable for unauthorized acts of its affiliates.

7.5 In the event that activities in violation of this Article are not immediately halted through the efforts of the parties, any aggrieved party may invoke the special arbitration provisions set forth in paragraph 7.6 of this Article.

7.6 Upon written notice to the other involved parties by the most expeditious means available, any aggrieved party may institute the following special arbitration procedure when a breach of this Article is alleged:

7.6.A The party invoking this procedure shall notify the individual designated as the Permanent Arbitrator pursuant to Article III of the nature of the alleged violation; such notice shall be by the most expeditious means possible. The initiating party may also furnish such additional factual information as may be reasonably necessary for the Permanent Arbitrator to understand the relevant circumstances. Copies of any written materials provided to the arbitrator shall also be contemporaneously provided by the most expeditious means possible to the party alleged to be in violation and to all other involved parties.

7.6.B Upon receipt of said notice the Permanent Arbitrator shall set and hold a hearing within twenty-four (24) hours if it is contended the violation is ongoing, but not before twenty-four (24) hours after the written notice to all parties involved as required above.

7.6.C The Permanent Arbitrator shall notify the parties by facsimile or any other effective written means, of the place and time chosen by the Permanent Arbitrator for this hearing. Said hearing shall be completed in one session. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an Award by the Permanent Arbitrator.

7.6.D The sole issue at the hearing shall be whether a violation of this Article has, in fact, occurred. An Award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The Permanent Arbitrator may order cessation of the violation of this Article, and such Award shall be served on all parties by hand or registered mail upon issuance.

8.5 The failure or refusal of a party to exercise its rights hereunder in one or more instances shall not be deemed a waiver of any such rights in respect of a separate instance of the same or similar nature.

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APPENDIX I

GROUNDWATER ORDINANCE

CORRECTIVE ACTION PLAN AND BUDGET AMENDMENT ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS

ORDINANCE NUMBER 2020-O-10

AN ORDINANCE PROHIBITING THE USE OF GROUNDWATER AS A POTABLE WATER SUPPLY BY THE INSTALLATION OR USE OF POTABLE WATER SUPPLY WELLS OR BY ANY OTHER METHOD WITHIN A LIMITED AREA OF THE CITY

WHEREAS, certain properties in the City of Gibson City have been used over a period of time for commercial/industrial purposes; and

WHEREAS, because of said use, concentrations of certain chemical constituents in the groundwater beneath the designated parcels within the City may exceed Class I groundwater quality standards for potable resource groundwater as set forth in *35* Illinois Administrative Code 620 or Tier I remediation objectives as set forth in *35* Illinois Administrative Code 742; and

WHEREAS, the City of Gibson City desires to limit potential threats to human health from groundwater contamination while facilitating the redevelopment and productive use of properties that are the source of said chemical constituents;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GIBSON CITY, ILLINOIS:

Section One. Use of groundwater as a potable water supply prohibited.

The use or attempted use of groundwater as a potable water supply from within the area shown on Exhibit A, a copy of such being attached hereto and made a part hereof, by the installation of wells or by any other method, is hereby prohibited. This prohibition expressly applies to the City of Gibson City.

Section Two. Penalties.

Any person violating the provisions of this ordinance shall be subject to a fine of not less than $ 75 or more than $750 for each violation.

Section Three. Definitions.

"Person" is any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, or any other legal entity, or their legal representatives, agents or assigns.

"Potable water" *is* any water used for human or domestic consumption, including, but not limited to, water used for drinking, bathing, swimming, washing dishes, or preparing foods.

Section Five. Repealer.

All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed insofar as they are in conflict with this ordinance.

Section Six. Severability.

If any provision of this ordinance or its application to any person or under any circumstances is adjudged invalid, such adjudication shall not affect the validity of the ordinance as a whole or of any portion not adjudged invalid.

Section Seven. Effective date.

This ordinance shall be in full force and effect from and after its passage, approval and publication as required by law.

ADOPTED: Cindy Moxley
(Date)
7/27/2020

Cindy Moxley
City Clerk

APPROVED:
(Date)
7/27/2020

Daniel Dickey
Mayor

CITY OF GIBSON CORPORATE SEAL FORD COUNTY, ILL

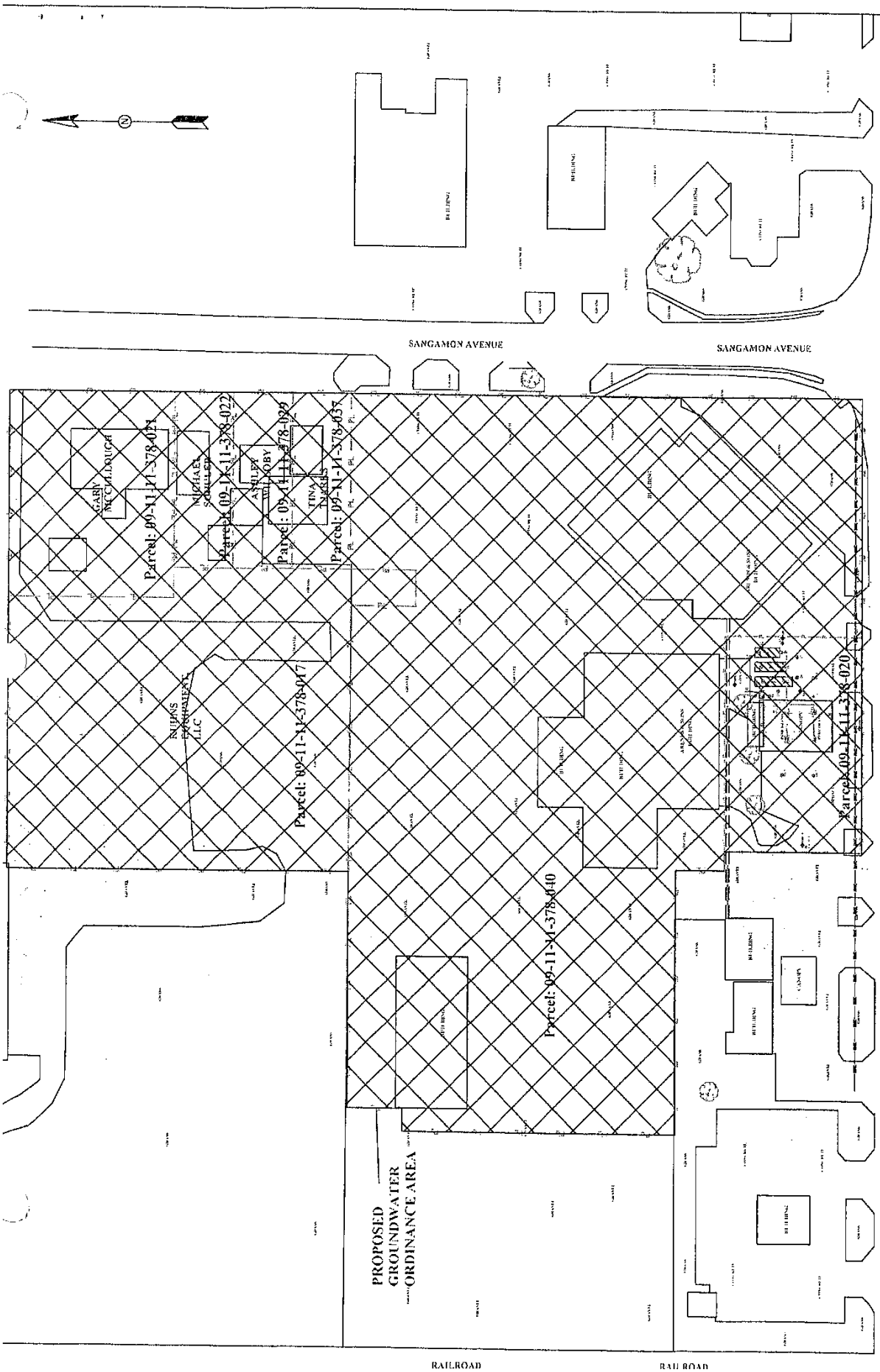
Officially published this 27 day of July 2020.

AYES 5

NAYS —

ABSENT 3

Exhibit A



CWM COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	ABP PROPERTIES, LLC GIBSON CITY, ILLINOIS INCIDENT #2016-0917 FORD COUNTY	PROPOSED GROUNDWATER ORDINANCE LOCATION MAP	DATE: 8/2/19 REVISED DATE: 3/27/2020 SCALE 1"=110' DRAWING: 0014	DRAWN BY: MJS REVISED BY: JKK REVIEWED BY: CLR GWORD.DWG

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397
JB PRITZKER, GOVERNOR JOHN J. KIM, DIRECTOR

(217) 524-3300

CERTIFIED MAIL

7017 2680 0001 0206 2794

FEB 09 2022

Yogi Bhardwaj
ABP Properties, LLC
159 North Greenleaf Street, Suite #2
Gurnee, IL 60031

Re: 0530100002 -- Ford County
Gibson City / ABP Properties, LLC
120 West 1st Street
Leaking UST Incident 20160917
Leaking UST Technical File

Dear Yogi Bhardwaj:

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed the Corrective Action Plan (plan) submitted for the above-referenced incident. This plan, dated October 7, 2021, was received by the Illinois EPA on October 12, 2021. Citations in this letter are from the Environmental Protection Act (415 ILCS 5) (Act) and Title 35 of the Illinois Administrative Code (35 Ill. Adm. Code).

Pursuant to Sections 57.7(b)(2) and 57.7(c) of the Act and 35 Ill. Adm. Code 734.505(b) and 734.510(a), the plan is approved. The activities proposed in the plan are appropriate to demonstrate compliance with Title XVI of the Act. Please note that all activities associated with the remediation of this release proposed in the plan must be executed in accordance with all applicable regulatory and statutory requirements, including compliance with the proper permits.

In addition, the budget is modified pursuant to Sections 57.7(b)(3) and 57.7(c) of the Act and 35 Ill. Adm. Code 734.505(b) and 734.510(b). Based on the modifications listed in Section 2 of Attachment A, the amounts listed in Section 1 of Attachment A have been approved. Please note that the costs must be incurred in accordance with the approved plan. Be aware that the amount of payment from the Fund may be limited by Sections 57.7(c), 57.8(d), 57.8(e), and 57.8(g) of the Act, as well as 35 Ill. Adm. Code 734.630 and 734.655.

If the owner or operator agrees with the Illinois EPA's modifications, submittal of an amended budget is not required (Section 57.7(c) of the Act).

Further, pursuant to 35 Ill. Adm. Code 734.145, it is required that the Illinois EPA be notified of field activities prior to the date the field activities take place. This notice must include a description of the field activities to be conducted; the name of the person conducting the activities; and the date, time, and place the activities will be conducted and

shall be made to EPA.FieldNotifications@illinois.gov. This notification of field activities must be provided at least two weeks prior to the scheduled field activities.

Pursuant to Sections 57.12(c) and (d) of the Act and 35 Ill. Adm. Code 734.100 and 734.125, the Illinois EPA requires that an amended Corrective Action Plan or Corrective Action Completion Report, as applicable, be submitted within 30 days after completion of the plan to:

Illinois Environmental Protection Agency
Bureau of Land - #24
Leaking Underground Storage Tank Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

Please submit all correspondence in duplicate and include the Re: block shown at the beginning of this letter.

If, within four years after the approval of this plan, compliance with the applicable remediation objectives has not been achieved and a Corrective Action Completion Report has not been submitted, the Illinois EPA requires the submission of a status report pursuant to Section 57.7(b)(6) of the Act.

An underground storage tank system owner or operator may appeal this decision to the Illinois Pollution Control Board. Appeal rights are attached.

If you have any questions or need further assistance, please contact the undersigned at (217) 785-1858 or at Scott.Rothering@illinois.gov.

Sincerely,

Scott Rothering
Project Manager
Leaking Underground Storage Tank Section
Bureau of Land

SP:TB TB

Attachments: Attachment A
Appeal Rights

c: Carol Rowe, CWM Company, Inc. (electronic copy)
BOL File

Attachment A

Re: 0530100002 -- Ford County
Gibson City / ABP Properties, LLC
120 West 1st Street
Leaking UST Incident 20160917
Leaking UST Technical File

SECTION 1

As a result of Illinois EPA's modification(s) in Section 2 of this Attachment A, the following amounts are approved:

$3,993.45	Drilling and Monitoring Well Costs
$5,971.79	Analytical Costs
$72,822.34	Remediation and Disposal Costs
$0.00	UST Removal and Abandonment Costs
$29,942.24	Paving, Demolition, and Well Abandonment Costs
$27,515.22	Consulting Personnel Costs
$1,862.40	Consultant's Materials Costs

Handling charges will be determined at the time a billing package is reviewed by the Illinois EPA. The amount of allowable handling charges will be determined in accordance with Section 57.1(a) of the Environmental Protection Act (415 ILCS 5) (Act) and 35 Illinois Administrative Code (35 Ill. Adm. Code) 734.635.

In accordance with an email from CWM Company dated January 27, 2022, the budget is requesting $300.00 for VOC AIR by GC/MS, not VOC – Water. The budget is also requesting $25.00 for regulator rental, not Vapor Intrusion Sampling. The budget is further requesting $35.00 for air canister rental, not regulator rental.

SECTION 2

1. $20,825.84 for costs for Excavation, Transportation, and Disposal of contaminated soil, which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

   The budget includes costs for the excavation, transportation, and disposal of 967.66 cubic yards of contaminated soil. The corrective action plan indicates 698 cubic yards of contaminated soil above Tier 2 remediation objectives is to be removed from the site. In an email received January 27, 2022, CWM Company agreed the amount in the budget is erroneous, and the correct number of cubic yards to be removed is 698.

Based upon the above deduction, a total of $20,825.84 was deducted from the Remediation and Disposal Costs Form.

2. $7,307.79 for costs for Backfilling the Excavation, which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

   The budget includes costs for the backfilling of 967.66 cubic yards of contaminated soil. The corrective action plan indicates 698 cubic yards of contaminated soil above Tier 2 remediation objectives is to be removed from the site. Therefore, the actual amount to be backfilled is 698 cubic yards. In an email received January 27, 2022, CWM Company agreed the amount in the budget is erroneous, and the correct number of cubic yards to be backfilled is 698.

   Based upon the above deduction, a total of $7,307.79 was deducted from the Remediation and Disposal Costs Form.

3. $789.60 for site investigation or corrective action costs for Canopy Removal that are not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

   The budget requests $10,000.00 for Canopy Removal. An estimate submitted by the consultant indicates the cost of removing the canopy is $9,210.40. Therefore, a total of $789.60 was deducted from the Paving, Demolition, and Well Abandonment Costs Form.

4. $352.26 for costs for Senior Professional Engineer (Reimbursement Review and Certification), which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

   Additionally, the costs are not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

   The Illinois EPA deducted the Senior Professional Engineer costs associated with a third billing package. This results in a deduction of $352.26 from the Consulting Personnel Costs Form.

5. $1,341.18 for costs for Senior Account Technician (Reimbursement Preparation), which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

   Additionally, the costs are not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

   The Illinois EPA deducted the Senior Account Technician costs associated with a third billing package. This results in a deduction of $1,341.18 from the Consulting Personnel Costs Form.

6. $121.94 for costs for Senior Administrative Assistant (Billing Package Preparation and Assembly), which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

   Additionally, the costs are not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

   The Illinois EPA deducted the Senior Administrative Assistant costs associated with a third billing package. This results in a deduction of $121.94 from the Consulting Personnel Costs Form.

7. Personnel Lacking Supporting Documentation

   $2,709.60 for costs for personnel hours requested under the Senior Project Manager title (TACO 2 or 3) that lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities exceeding the minimum requirements of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

   In addition, without supporting documentation, the personnel hours for Senior Project Manager are unreasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The proposed budget includes 12 hours at a Senior Project Manager rate for TACO 2 or 3. The proposed budget also includes 8 hours at a Senior Project Manager rate for Illinois EPA correspondence, discussion, document review, and tabulation of analytical results. In an email received by the Illinois EPA on February 7, 2022, CWM Company, Inc. states that the 12 hours included in the budget under the remediation category TACO 2 or 3 will be used to revise the remediation objectives and update the modeling. The 8 hours will be used to clarify proposed budget amounts, to correspond with the Illinois EPA after approval of the Corrective Action Plan but before development of the Corrective Action Completion Report, to tabulate the analytical results of the proposed soil, groundwater, and soil gas samples, and to update existing tables to identify those samples that have been removed or resampled. At present there are no plans to prepare an amended Corrective Action Plan. As such, the 12 hours included in the budget under the remediation category TACO 2 or 3 and some of the 8 hours included in the budget for Illinois EPA correspondence, discussion, document review, and tabulation of analytical results will be used to prepare the future Corrective Action Completion Report. The Illinois EPA has already approved 36 hours at an Engineer III rate and 4 hours at a Senior Draftsperson rate for preparation of the future Corrective Action Completion Report. The owner or operator has not demonstrated an additional 12 to 20 hours will be necessary or reasonable to prepare the future Corrective Action Completion Report.

Appeal Rights

An underground storage tank owner or operator may appeal this final decision to the Illinois Pollution Control Board pursuant to Sections 40 and 57.7(c)(4) of the Act by filing a petition for a hearing within 35 days after the date of issuance of the final decision. However, the 35-day period may be extended for a period not to exceed 90 days by written notice from the owner or operator and the Illinois EPA within the initial 35-day appeal period. If the owner or operator wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the filing of an appeal, please contact:

Clerk of the Board
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, IL 60601
(312) 814-3620

For information regarding the filing of an extension, please contact:

Illinois Environmental Protection Agency
Division of Legal Counsel
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276
(217) 782-5544

CW M Comp
Environmental Consulting Services

0530100002 - Ford County
ABP Properties, LLC
Incident # 20160917
LUST Tech File

701 W. South Grand Avenue
Springfield, IL 62704

Phone: (217) 522-8001
Fax: (217) 522-8009

November 22, 2023

Mr. Scott Rothering, Project Manager
LUST Section, Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, IL 62794-9276

9589 0710 5270 0675 6612 44

RE: LPC # 0530100002 — Ford County
120 West 1st Street
Gibson City, Illinois
Incident Number: 2016-0917
LUST Technical Reports—Corrective Action Budget Amendment

Dear Mr. Rothering:

On behalf of ABP Properties, LLC, owner of the underground storage tanks formerly at the above-referenced site, we are submitting the attached Corrective Action Budget Amendment.

Because the Subpart H Maximum Payment amounts could not be met by any licensed contractor to perform the excavation, the job was put out for bid. This Corrective Action Budget Amendment addresses costs incurred attempting to find a contractor to perform the work for Subpart H Maximum Payment amounts, costs associated with putting the job out for bid, and the difference between the approved Subpart H Maximum Payment amount of $72,822.34 and the winning bid of $128,362.20.

If you have any questions or require additional information, please contact Mr. Matthew Saladino or me at (217) 522-8001.

Sincerely,

Carol L. Rowe, P.G.
Senior Environmental Geologist

Enclosure

xc: Dr. Yogi Bhardwaj, *ABP Properties, LLC*
Mr. and Mrs. Brandon & Tricia Slagel

Budget Summary

0530100002 - Ford County
ABP Properties, LLC
Incident # 20160917
LUST Tech File

Choose the applicable regulation: (•) 734 ( ) 732

734	Free Product	Stage 1 Site Investigation	Stage 2 Site Investigation	Stage 3 Site Investigation	Corrective Action
Drilling and Monitoring Well Costs Form	$	$	$	$	$
Analytical Costs Form	$	$	$	$	$
Remediation and Disposal Costs Form	$	$	$	$	$ 55,539.86
UST Removal and Abandonment Costs Form	$	$	$	$	$
Paving, Demolition, and Well Abandonment Costs Form	$	$	$	$	$
Consulting Personnel Costs Form	$	$	$	$	$ 7,182.88
Consultant's Materials Costs Form	$	$	$	$	$ 168.20
Handling Charges Form	Handling charges will be determined at the time a billing package is submitted to the Illinois EPA. The amount of allowable handling charges will be determined in accordance with the Handling Charges Form.				
Total	$	$	$	$	$ 62,890.94

Remediation and Disposal Costs Form

A. Conventional Technology

Excavation, Transportation, and Disposal of contaminated soil and/or the 4-foot backfill material removal during early action activities:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost
698.00	57.17	$39,904.66

Backfilling the Excavation:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost
698.00	22.40	$15,635.20

Overburden Removal and Return:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost

B. Alternative Technology

Alternative Technology Selected:	
Number of Cubic Yards of Soil to Be Remediated	
Total Non-Consulting Personnel Costs Summary Sheet ($)	
Total Remediation Materials Costs Summary Sheet ($)	
Total Cost of the System	

Remediation and Disposal Costs Form

C. Groundwater Remediation and/or Free Product Removal System

Total Non-Consulting Personnel Costs Summary Sheet ($)	
Total Remediation Materials Costs Summary Sheet ($)	
Total Cost of the System	

D. Groundwater and/or Free Product Removal and Disposal

☐ Subpart H minimum payment amount applies.

Number of Gallons	Cost per Gallon ($)	Total Cost ($)

E. Drum Disposal

☐ Subpart H minimum payment amount applies.

Number of Drums of Solid Waste	Cost per Drum ($)	Total Cost ($)
Number of Drums of Liquid Waste	Cost per Drum ($)	Total Cost ($)
Total Drum Disposal Costs		.00

Total Remediation and Disposal Costs:	$55,539.86

Consulting Personnel Costs Form

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Project Manager	8.00	147.95	$1,183.60
CCA-Field	Search for Contractors for Subpart H Maximum Payment Amounts			
	Senior Project Manager	8.00	147.95	$1,183.60
CCA-Field	Bidding Design / Specifications			
	Senior Project Manager	4.00	147.95	$591.80
CCA-Field	Bid Process / Advertising / Bid Letting			
	Senior Admin. Assistant	2.00	66.58	$133.16
CCA-Field	Bid Process / Advertising / Bid Letting			
	Senior Project Manager	6.00	147.95	$887.70
CCA-Field	Bid Opening Selection / Bid Awards / EPA Documentation and Reporting			
	Senior Admin. Assistant	3.00	66.58	$199.74
CCA-Field	IEPA Documentation and Reporting			
	Senior Project Manager	8.00	147.95	$1,183.60
CCAP-Budget	Budget Amendment and Design and Development, IEPA/Client correspondence			
	Senior Prof. Engineer	2.00	192.33	$384.66
CCAP-Budget	Budget Amendment review and Certification			
	Senior Admin. Assistant	2.00	66.58	$133.16
CCAP-Budget	Budget Amendment Compilation and Distribution			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Prof. Engineer	2.00	192.33	$384.66
CA-Pay	Additional CA Reimbursement Claim Certification			
	Senior Acct. Technician	8.00	81.36	$650.88
CA-Pay	Additional CA Reimbursement Claim Certification			
	Senior Admin. Assistant	4.00	66.58	$266.32
CA-Pay	Additional CA Reimbursement Claim Compilation, Assembly, and Distribution			

*Refer to the applicable Maximum Payment Amounts document.

Total of Consulting Personnel Costs	$7,182.88

Consultant's Materials Costs Form

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Postage	2.00	7.50	/each	$15.00
CCA-Field	Distribution of Corrective Action Forms / Plan			
Bidding Advertisement	1.00	153.20	/each	$153.20
CCA-Field	Publication Fee			

Total of Consultant Materials Costs	$168.20

Illinois Environmental Prc
1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illin

0530100002 - Ford County
ABP Properties, LLC
Incident # 20160917
LUST Tech File

General Information for the Budget and Billing Forms

LPC #: 0530100002 **County:** Ford

City: Gibson City **Site Name:** ABP Gibson City

Site Address: 120 West 1st Street

Date this form was prepared: Nov 21, 2023

List all IEMA Incident numbers associated with this package:

2016-0917

List all other incidents associated with this site that are not associated with this package:

This form is being submitted as a (check one, if applicable):

- ○ Billing Package
- ⊘ Budget Amendment (Budget amendments must include only the costs over the previous budget.)
- ○ Budget Proposal

Please provide the name(s) and date(s) of report(s) documenting the costs requested:

Name(s): CAP BA

Date(s): Nov 21, 2023

This package is being submitted for the site activities indicated below:

35 Ill. Adm. Code 734:

- ☐ Early Action
- ☐ Free Product Removal after Early Action
- ☐ Site Investigation . . . . . Stage 1: ☐ Stage 2: ☐ Stage 3: ☐
- ☑ Corrective Action

35 Ill. Adm. Code 732:

- ☐ Early Action
- ☐ Free Product Removal after Early Action
- ☐ Site Classification
- ☐ Low Priority Corrective Action
- ☐ High Priority Corrective Action

35 Ill. Adm. Code 731:

- ☐ Site Investigation
- ☐ Corrective Action

General Information for the Budget and Billing Forms

The following address will be used as the mailing address for checks and any final determination letters regarding payment from the Fund for this package.

Pay to the order of: ABP Properties, Inc.

Send in care of: CWM Company, Inc.

Address: 701 South Grand Avenue West

City: Springfield State: IL Zip: 62704

The payee is the: Owner ☑ Operator ☐ (Check one or both.)

Signature of the owner or operator of the UST(s) (required) Date: 11/18/23

Dr. Yogi Bhardwaj

Printed name of the owner or operator of the UST(s) (required)

W-9 must be submitted.
Click here to print off a W-9 Form.

Email:

Number of petroleum USTs in Illinois presently owned or operated by the owner or operator; any subsidiary, parent or joint stock company of the owner or operator; and any company owned by any parent, subsidiary or joint stock company of the owner or operator:

Fewer than 101: ⊗ 101 or more: ○

Please list all tanks that have ever been located at the site and tanks that are presently located at the site.

Product Stored in UST	Size (gallons)	Did UST have a release?	Incident No.	Type of Release Tank Leak / Overfill / Piping Leak
Gasoline	4,000	Yes ○ No ⊗	-	
Gasoline	4,000	Yes ○ No ⊗	-	
Gasoline	6,000	Yes ○ No ⊗	-	
Gasoline	6,000	Yes ○ No ⊗	-	
Gasoline	6,000	Yes ○ No ⊗	-	
Kerosene	1,000	Yes ○ No ⊗	-	
Gasoline	12,000	Yes ⊗ No ○	2016-0917	Overfill
Gasoline	10,000	Yes ⊗ No ○	2016-0917	Overfill
Gasoline	8,000	Yes ⊗ No ○	2016-0917	Overfill

Product Stored in UST	Size (gallons)	Did UST have a release?	Incident No.	Type of Release Tank Leak / Overfill / Piping Leak
Heating Oil	500	Yes ☒ No ☐	2016-0917	Tank Leak
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		

Add More Rows | Undo Last Add

Owner/Operator and Licensed Professional Engineer/Geologist Budget Certification Form

I hereby certify that I intend to seek payment from the UST Fund for costs incurred while performing corrective action activities for Leaking UST incident 2016-0917. I further certify that the costs set forth in this budget are for necessary activities and are reasonable and accurate to the best of my knowledge and belief. I also certify that the costs included in this budget are not for corrective action in excess of the minimum requirements of 415 ILCS 5/57, no costs are included in this budget that are not described in the corrective action plan, and no costs exceed Subpart H: Maximum Payment Amounts, Appendix D Sample Handling and Analysis amounts, and Appendix E Personnel Titles and Rates of 35 Ill. Adm. Code 732 or 734. I further certify that costs ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 732.606 or 734.630 are not included in the budget proposal or amendment. Such ineligible costs include but are not limited to:

Costs associated with ineligible tanks.
Costs associated with site restoration (e.g., pump islands, canopies).
Costs associated with utility replacement (e.g., sewers, electrical, telephone, etc.).
Costs incurred prior to IEMA notification.
Costs associated with planned tank pulls.
Legal fees or costs.
Costs incurred prior to July 28, 1989.
Costs associated with installation of new USTs or the repair of existing USTs.

Owner/Operator: ABP Properties, LLC

Authorized Representative: Yogi Bhardwaj Title: Agent

Signature: [signature] Date: 11/10/23

Subscribed and sworn to before me the 10th day of November 2023

[signature]
(Notary Public)

Seal: OFFICIAL SEAL CAROL L. ROWE NOTARY PUBLIC, STATE OF ILLINOIS MY COMMISSION EXPIRES 03-18-2025

In addition, I certify under penalty of law that all activities that are the subject of this plan, budget, or report were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this plan, budget, or report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in the plan, budget, or report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 732 or 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Illinois EPA, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].

L.P.E./L.P.G.: ~~Vince E. Smith~~ MATTHEW SALADINO L.P.E./L.P.G. Seal: LICENSED PROFESSIONAL ENGINEER MATTHEW JOSEPH SALADINO 062-072757 OF ILLINOIS

L.P.E./L.P.G. Signature: [signature] Date: 11/22/23

Subscribed and sworn to before me the 22nd day of November 2023

[signature]
(Notary Public)

Seal: OFFICIAL SEAL CAROL L. ROWE NOTARY PUBLIC, STATE OF ILLINOIS MY COMMISSION EXPIRES 03-18-2025

The Illinois EPA is authorized to require this information under 415 ILCS 5/1. Disclosure of this information is required. Failure to do so may result in the delay or denial of any budget or payment requested hereunder.

CONTRACTOR CERTIFICATION FORM

DATE: 11-6-2023

TO: CWM COMPANY, INC.

FROM: CROSS CONSTRUCTION, INC.

PROJECT: Excavation in Gibson City, Illinois

SUMMARY OF WORK BID:

Excavation, transportation, and disposal of 698 cy of petroleum contamina Soil to authorized special waste landfill. Backfill of excavation area back to original grade.

TOTAL BID AMOUNT: $ 128,781.00

Bid details are attached.

I hereby certify, to the best of my knowledge, that:

1. The prices in the above-described and attached bid have been arrived at by the bidder independently, without consultation, communication, or agreement with any party for the purpose of restricting competition;
2. Unless otherwise required by law, the prices quoted in the bid have not been and will not be disclosed by the bidder to any party, directly or indirectly, prior to the opening of all bids by the party requesting the bids; and
3. No attempt has been made or will be made by the bidder to induce any other party to submit, not submit, or modify a bid for the purpose of restricting competition.

I am aware there are significant criminal penalties, including felony penalties, for submitting false statements or representations to the Illinois EPA and that these penalties include, but are not limited to, fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Illinois Environmental Protection Act [415 ILCS 5/44 and 57.17].

Bidder

Company: Cross Construction, Inc.

Contact: Chad Rothe

Signature: [signature]

Date: 11-6-2023

Attachment

BID SUBMITTAL COVER PAGE

Project Location:
120 West 1st Street
Gibson City, Illinois 60936

Owner/Operator:
ABP Properties, LLC
159 North Greenleaf Suite #2
Gurnee, Illinois 60031

Scope of Work:
Excavation, transportation and disposal of 698 cu yds of soil.

Backfill the excavation with 698 cu yds material.

Owner/Operator Remediation Contractor:
CW³M Company, Inc.
701 South Grand Ave West
Springfield, Il 62704
(217) 522-8001

Bid Submitted by:
Cross Construction, Inc.
3615 N. Countryview Road
Urbana, IL. 61802

Bid Opening on: November 10, 2023
CW³M Company, Inc.
701 South Grand Avenue West
Springfield, Illinois 62704
(217) 522-8001
Bidders Welcome

Bid Submitted To:
CW³M Company, Inc.
701 South Grand Avenue West
Springfield, Illinois 62704
(217) 522-8001

Summary of Work Bid (Attachments may be provided):

Excavation Transportation Disposal of 698 cubic yards: $ 93,881.00

Backfill the excavation with 698 cubic yards of approved material: $ 34,900.00

Total Bid Amount:

Bidder: Cross Construction, Inc.

Contact: Chad Rothe

Signature:

Date: 11-3-23

CONTRACTOR CERTIFICATION FORM

DATE: 11-3-23

TO: CWM

FROM: Carter X LLC.

PROJECT: Excavation in Gibson City, Illinois

SUMMARY OF WORK BID:

TOTAL BID AMOUNT: $ $128,362.20

Bid details are attached.

I hereby certify, to the best of my knowledge, that:

1. The prices in the above-described and attached bid have been arrived at by the bidder independently, without consultation, communication, or agreement with any party for the purpose of restricting competition;
2. Unless otherwise required by law, the prices quoted in the bid have not been and will not be disclosed by the bidder to any party, directly or indirectly, prior to the opening of all bids by the party requesting the bids; and
3. No attempt has been made or will be made by the bidder to induce any other party to submit, not submit, or modify a bid for the purpose of restricting competition.

I am aware there are significant criminal penalties, including felony penalties, for submitting false statements or representations to the Illinois EPA and that these penalties include, but are not limited to, fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Illinois Environmental Protection Act [415 ILCS 5/44 and 57.17].

Bidder

Company: Carter X LLC.

Contact: Cody Robson

Signature: Cody Robson

Date: 11-3-23

Attachment

BID SUBMITTAL COVER PAGE

Project Location:
120 West 1st Street
Gibson City, Illinois 60936

Owner/Operator:
ABP Properties, LLC
159 North Greenleaf Suite #2
Gurnee, Illinois 60031

Scope of Work:
Excavation, transportation and disposal of 698 cu yds of soil.

Backfill the excavation with 698 cu yds material.

Owner/Operator Remediation Contractor:
CW³M Company, Inc.
701 South Grand Ave West
Springfield, Il 62704
(217) 522-8001

Bid Submitted by:
Carter X LLC.
7 Williamson Dr.
Fairfield IL 62837

Bid Opening on: November 10, 2023
CW³M Company, Inc.
701 South Grand Avenue West
Springfield, Illinois 62704
(217) 522-8001
Bidders Welcome

Bid Submitted To:
CW³M Company, Inc.
701 South Grand Avenue West
Springfield, Illinois 62704
(217) 522-8001

Summary of Work Bid (Attachments may be provided):

Excavation Transportation Disposal of 698 cubic yards: $ $93,811.20

Backfill the excavation with 698 cubic yards of approved material: $ $34,551.00

Total Bid Amount:

Bidder: Carter X LLC.

Contact: Cody Robson

Signature: Cody Robson

Date: 11-3-23

LEAKING UST TECHNICAL REVIEW NOTES

Reviewed by: Scott Rothering
Date Reviewed: 1/26/22

Re: 0530100002 -- Ford County
Gibson City / ABP Properties, LLC
120 West 1st Street
Leaking UST Incident 20160917
Leaking UST Technical File

Document(s) Reviewed:
Corrective Action Plan and Budget – dated October 7, 2021 and received October 12, 2021

General Site Information:

Site subject to: 734

IEMA date(s): 10/5/16	Payment from the Fund? (Y/N/unknown): yes
UST system removed? (Y/N): yes	OSFM Fac. ID #: 4-014590
Encountered groundwater? (Y/N/unknown): yes	SWAP mapping and evaluation completion date: 11/26/19
Free product? (Y/N/unknown): no	Site placement correct in SWAP? (Y/N): yes
Current/past land use: I/C	Inspection Required? (Date/Plan):
Size & product of USTs: 1 12,000 gallon, 1 10,000 gallon gasoline, 1 8000 gallon gasoline, 1 560 gallon heating oil	
Is site located in EJ area? no	Is investigation of indoor inhalation exposure route required? yes
Has enough sampling been completed to perform a Right-to-Know Evaluation? yes	PLA Checklist Complete? yes

History of Site:

Incident was reported 10/5/16 it moved through Stage 2 of Site Investigation. SICR was approved 6/13/19. Original CAP and Budget were approved 5/5/20. An amended CAP and Budget were approved 5/5/20. This involved installation of an engineered barrier for CW Inhalation exceedances – which was cut to only the areas which exceeded Tier 2 ROs. Also at this time it was determined that a VI investigation was necessary. Additionally, we requested additional sampling to determine the exact placement of the engineered barrier.

The consultant proceeded to the site and did the sampling which we requested. The soil vapor sample exceeded remediation objectives for benzene and ethylbenzene. The result of the soil gas

sample was 161.3 mg/m^3 benzene and 43.44 mg/m^3ethylbenzene. Since this is the case, the consultant is proposing removing soil which is contaminated and therefore contributing to the vapor problem on site. This includes 968 yd^3 which is located under the canopy. The soil gas vapor sample was taken at SV-1 located at the most contaminated area of the site which is in the location of one of the former dispensers, under the canopy. The volume of soil removal is determined not only by the soil gas result, but also by soil results during earl action which exceed Tier 2 remediation objectives. The area of soil which exceeds Tier 2 remediation objectives appears to fit neatly under the canopy. However, it does extend from clean soil sample to clean soil sample as can be compared in drawing 0007A and 0013. The soil removal is proposed to proceed to 10 feet bgs.

In a previous CAP, the consultant tried to get approval for installing an engineered barrier over the area under the canopy where the dispensers were located. We told them at that time they needed to sample more because part of the area they were proposing to use an engineered barrier did not exceed Tier 2 remediation objectives. We also determined they needed to perform a soil gas sample. Now, with the exceedance of this soil gas sample, and the continued presence of the soil contamination which exceeded Tier 2 numbers for outdoor inhalation the consultant is proposing removing the soil, canopy, and replacing the concrete which was originally over it. They provide the argument that the soil exceeds VI ROs and Tier 2 for CW and IC outdoor inhalation. Both are true. Since they are removing the contaminated soil it appears to be ok. However, the volume of contaminated soil removed on the Budget forms does not match the amount calculated and will be reduced to that amount.

Since they are removing soil, they first have to do a landfill profile sample. While doing this sample, they are proposing performing two more borings and taking samples from them – one north of MW-4 and one northwest of the station building. This could potentially take away the need for an ELUC. This will be covered in the minimum charge for drilling so there really is not additional cost. I can approve these borings.

After excavation and sampling, they are proposing performing another vapor sample to determine the level of vapor contamination on site. This will be performed in the area of the site where the most contamination is present.

Finally, they have submitted in the CAP the costs for replacing the concrete on site. A google image search indicates there is or was concrete at the location.

The budget will be cut for 1) the number of claims submitted – only 2. 2) volume of soil removal cut according to what is on page 10.

UPDATED 5/17/24:

The consultant has submitted an amended CAP Budget. This is for the costs for soil removal which exceeds the amount we approved previously. They state they cannot get the soil removed

for that amount, and they received bids for doing the work. However, we cannot approve these costs because we have already approved a rate for soil removal and the regulations state that once a rate has been approved, a new rate cannot be applied to the work. This entire CAP Budget is for getting bids and a new rate for soil removal. Therefore, it will all be denied.

Illinois EPA Decision:

Denial of budget.

Response Due:

CACR.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
JB PRITZKER, GOVERNOR JOHN J. KIM, DIRECTOR

(217) 524-3300

CERTIFIED MAIL
9589 0710 5270 0477 0525 85

MAY 21 2024

Yogi Bhardwaj
ABP Properties, LLC
159 North Greenleafd Street, Suite #2
Gurnee, IL 60031

Re: 0530100002 -- Ford County
Gibson City/ABP Properties, LLC
120 West 1st Street
Leaking UST Incident 20160917
Leaking UST Technical File

Dear Yogi Bhardwaj:

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed the Corrective Action Plan Budget (budget) submitted for the above-referenced incident. This budget, dated November 22, 2023, was received by the Illinois EPA on November 27, 2023. Citations in this letter are from the Environmental Protection Act (415 ILCS 5) (Act) and Title 35 of the Illinois Administrative Code (35 Ill. Adm. Code).

The budget is rejected for the reason(s) listed in Attachment A (Sections 57.7(b)(3) and 57.7(c) of the Act and 35 Ill. Adm. Code 734.505(b) and 734.510(b)).

All future correspondence must be submitted to:

Illinois Environmental Protection Agency
Bureau of Land - #24
Leaking Underground Storage Tank Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

Please submit all correspondence in duplicate and include the Re: block shown at the beginning of this letter.

An underground storage tank system owner or operator may appeal this decision to the Illinois Pollution Control Board. Appeal rights are attached.

If you have any questions or need further assistance, please contact the undersigned at (217) 785-1858 or at Scott.Rothering@illinois.gov.

Sincerely,

Scott Rothering
Project Manager
Special Projects and Financial Unit
Leaking Underground Storage Tank Section
Bureau of Land

Attachments: Attachment A
Appeal Rights

c: Carol Rowe, CWM Company (electronic copy)
BOL File

Appeal Rights

An underground storage tank owner or operator may appeal this final decision to the Illinois Pollution Control Board pursuant to Sections 40 and 57.7(c)(4) of the Act by filing a petition for a hearing within 35 days after the date of issuance of the final decision. However, the 35-day period may be extended for a period not to exceed 90 days by written notice from the owner or operator and the Illinois EPA within the initial 35-day appeal period. If the owner or operator wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the filing of an appeal, please contact:

Clerk of the Board
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, IL 60601
(312) 814-3620

For information regarding the filing of an extension, please contact:

Illinois Environmental Protection Agency
Division of Legal Counsel
1021 North Grand Avenue East
PO Box 19276
Springfield, IL 62794-9276
(217) 782-5544

Attachment A

Re: 0530100002 -- Ford County
Gibson City / ABP Properties, LLC
120 West 1st Street
Leaking UST Incident 20160917
Leaking UST Technical File

Citations in this attachment are from the Environmental Protection Act (415 ILCS 5) (Act) and Title 35 of the Illinois Administrative Code (35 Ill. Adm. Code).

The budget includes Remediation and Disposal Costs, Consulting Personnel Costs, and Consultant's Material Costs that exceed the maximum payment amounts set forth in Subpart H of 35 Ill. Adm. Code 734. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(zz).

Pursuant to 35 Ill. Adm. Code 734.800(a), Subpart H of 35 Ill. Adm. Code 734 provides three methods for determining the maximum amounts that can be paid from the Fund for eligible corrective action costs. The first method for determining the maximum amount that can be paid for each task is to use the maximum amount for each task set forth in 35 Ill. Adm. Code 734.810 through 734.850 and 734.870. The second method for determining the maximum amount that can be paid for each task is bidding in accordance with 35 Ill. Adm. Code 734.855. The third method for determining the maximum amount that can be paid for each task is to determine the maximum amount for unusual or extraordinary circumstances in accordance with 35 Ill. Adm. Code 734.860. The owner or operator previously requested approval of the maximum amounts set forth in 35 Ill. Adm. Code 734.810 through 734.850 and 734.870. In a letter dated February 9, 2022, the Illinois EPA approved the maximum amounts set forth in 35 Ill. Adm. Code 734.810 through 734.850 and 734.870. Pursuant to 35 Ill. Adm. Code 734.870(d)(1), for costs approved by the Illinois EPA in writing prior to the date the costs are incurred, the applicable maximum amounts must be the amounts in effect on the date the Illinois EPA received the budget in which the costs were proposed. Once the Illinois EPA approves costs, the applicable maximum amounts must not be increased, e.g., by proposing the costs in a subsequent budget. The owner or operator is attempting to increase the applicable maximum amounts by proposing the costs in a subsequent budget.

In addition, bidding costs for which the Illinois EPA approved the maximum amounts set forth in 35 Ill. Adm. Code 734.810 through 734.850 and 734.870 exceeds the minimum requirements necessary to comply with the Act. Costs for corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

Furthermore, bidding costs for which the Illinois EPA approved the maximum amounts set forth in 35 Ill. Adm. Code 734.810 through 734.850 and 734.870 violates a provision of the Act or Illinois Pollution Control Board (Board), Office of the Illinois State Fire Marshal (OSFM), or Illinois EPA regulations. Costs associated with activities that violate any provision of the Act or Board, OSFM, or Illinois EPA regulations are ineligible for payment from the Fund pursuant to Section 57.6(a) of the Act and 35 Ill. Adm. Code 734.630(i).

Appeal Rights

An underground storage tank owner or operator may appeal this final decision to the Illinois Pollution Control Board pursuant to Sections 40 and 57.7(c)(4) of the Act by filing a petition for a hearing within 35 days after the date of issuance of the final decision. However, the 35-day period may be extended for a period not to exceed 90 days by written notice from the owner or operator and the Illinois EPA within the initial 35-day appeal period. If the owner or operator wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the filing of an appeal, please contact:

Clerk of the Board
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, IL 60601
(312) 814-3620

For information regarding the filing of an extension, please contact:

Illinois Environmental Protection Agency
Division of Legal Counsel
1021 North Grand Avenue East
PO Box 19276
Springfield, IL 62794-9276
(217) 782-5544