BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

CITY OF MONMOUTH,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 17-055
	)	(UST Appeal)
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	DATE
001-108	CWM Stage 3 Site Investigation Plan and Budget	07/29/2016
109-115	Illinois EPA Leaking UST Technical Review Notes	08/08/2016
116-123	CWM/Illinois EPA e-mails	08/12/2016
124-131	Illinois EPA decision letter	08/17/2016
132-226	CWM Site Investigation Completion Report and Stage 3 Budget	11/10/2016
227-230	Illinois EPA Leaking UST Technical Review Notes	11/23/2016
231-235	CWM/Illinois EPA e-mails	12/05/2016
236-242	Illinois EPA decision letter	02/02/2017

I, DAVE MYERS, 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: _____

Dave Myers
Project Manager/Environmental Protection Specialist III
Leaking Underground Storage Tank Section
Illinois Environmental Protection Agency

CW³M Company
Environmental Consulting Services

701 W. South Grand Avenue
Springfield, IL 62704

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

July 26, 2016

1870155032 – Warren County
Wareco Service, Inc.
Incident # 20140510
Leaking UST Technical File

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

[illegible] OF RECORDS MANAGEMENT
RELEASABLE

SEP 07 2016

REVIEWER: MJK

RE: **LPC #1870155032 –Warren County**
City of Monmouth
1125 North Main Street
Incident Number: 2014-0510
LUST Technical Reports—Stage 3 Site Investigation Plan and Budget

Dear Mr. Myers,

On behalf of the City of Monmouth, owner of the USTs at the above-referenced site, we are submitting the attached Stage 3 Site Investigation Plan and Budget. This includes the results of the Stage 2 investigation as well as a summary of the costs.

CW³M Company works in a similar structure as the Agency. Numerous personnel are involved with various components, i.e. phase review and approval of plans, budgets, reimbursements, and correspondence. In our opinion, this is a highly efficient work plan that limits mistakes, keeps costs down, and ensures quality work. Please note multiple personnel are listed for the completion of certain tasks. Some reviewers have mistakenly interpreted this as an error or duplication; it is not. The method for calculating personnel time in the proposed budget has been approved by the Agency in other incidents, such as, incident numbers 2013-0876, 2014-1417, 2014-0944, 2014-0673, 2014-1190, 2013-0198, 2015-0158, 2014-0510, 2012-0515, 2013-0906, 2014-0556, 2015-0257, 2011-0837, 2011-0822, 2011-0516, 2012-0575, 2009-0929, 2009-0948, 2009-1410, and 2007-0082. These hours have been found reasonable and justified as an estimate for the work proposal. These hours should be deemed reasonable as more than one person is required to develop plans and budgets and to check for accuracy of the plan, budget, bore logs, reimbursement claims, and analytical, which is needed to finalize the plan and budget. This is no different than the Agency's review process, which includes project managers, unit managers, Section Managers, fiscal reviewers, etc. Multiple personnel touch each letter or plan with different individual tasks on assignments. Many plans and budgets are even taken to committees.

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IEPA/BOL

In addition, we have had prior discussions with managers and project managers about personnel in the budgets and reimbursements. Some Agency reviewers have been cutting budget and reimbursement line items for technical personnel. Similar to the Agency, technical personnel are required to prepare and review reimbursement claims. Some plans span several years, include multiple drilling events, and have multiple personnel involved. With such complexity, technical personnel familiar with the project are required to work with the accounting technicians to develop reimbursement claims. As the Agency's technical personnel or project should well know, there are many technical and regulatory components to the reimbursement side of the equation. It is not all just accounting. Currently, the Agency has technical staff conduct the review of any claim that is not simplistic or requires decision making and judgment versus just checking for accounting errors, line items, and that totals not in an excess of their budgeted approval totals. The project managers also assist with reviews to prevent a backlog, while conducting work reviewing claims. These project managers do not change their titles or billing codes (i.e. - their take home pay is not decreased). Their expertise of the program is valued and their pay is left therefore intact. The merit of their technical input is valuable as is the technical input into the development of the claims by consultants as well, if not more so. Consultants are actually putting together all the pieces and preparing the claim as opposed to reviewing it.

Cutting the rate of a title in the budget is the same as cutting personnel pay and is beyond the purpose of the personnel descriptions. It violates the Professional Engineer and Professional Geologist Acts as well. Technically, the Professional Engineer should never change his or her rate and should be billed at that rate regardless of what they do; they are functioning at that capacity at all times oversighting, asking questions, modifying drilling plans, and developing less experienced engineer/geologists, for example.

As a solid group of personnel gain experience and seniority and no new positions need filling, those present take on all roles and do whatever is needed to get the job done. An Environmental Protection Specialist (EPS) III who may have performed the work of an EPS I or an Account Technician I-IV does not suddenly get a pay cut. However, once the Agency starts assigning titles because they do not like the rate, they try to force fit a new job title that may or may not fit that person's real title and work (perhaps one title in a budget) in their company. Forcing rates forces pay cuts. If the rates of titles assigned by companies are not obtained, that person cannot be paid at their full rate of compensation.

We use the comparison to the Agency only to attempt to explain the situation in a way that might show the net effect of altering titles and rates. While the dollar amount in one budget may be seemingly small, even to us, the net effect over a year means so much more. That hourly rate must pay not only that person, but collectively aid costs and overhead of the business: rent, utilities, multiple forms of insurance (liability, workers, compensation, pollution liability, health insurance umbrella, fiduciary, accountants, attorneys, business licenses, state licenses, computers, office supplies,

copies – the list is endless). The hourly rate of billable personnel pays for personnel conducting non-billable work, such as paying bills, data entry for invoicing, staff meetings, business development, etc. Again, like the Agency, who has personnel dedicated to special tasks, and projects, ongoing reports to address regulations or policy changes, reports to USEPA, the Director and Governor's Office, etc. While our worlds seem polar and miles apart, the function of staff is similar; again why we attempted to use an example. The one difference is that the private sector has to be profitable. The Agency has to be accountable and achieve goals.

Finally, please note that the number of copies budgeted for reports and claims are not just the number of pages submitted to the Agency. The number of copies also includes drafts, client copies, and our own copies of reports, budgets, and claims. We trust that you'll give serious weight to our requests and consider the necessity of a reimbursement budget that mirrors the way we work in actuality as does the Agency.

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

Sincerely,

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

xc: Mr. Lowell Crow, *City Administrator for the City of Monmouth*
Mr. William T. Sinnott, *CW³M Company, Inc.*

STAGE 3 SITE INVESTIGATION PLAN AND BUDGET

CITY OF MONMOUTH

Monmouth, Illinois
LPC # 1870155032 — Warren County
Incident Number 2014-0510

Presented to:
Illinois Environmental Protection Agency
Leaking Underground Storage Tank Section, Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois

Prepared by:
CW³M COMPANY, INC.

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

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

July 2016

CONTENTS

APPENDICES

TABLES

ACRONYMS AND ABBREVIATIONS

BETX	Benzene, Ethylbenzene, Toluene, and Total Xylenes
CUOs	Clean-up Objectives
CW³M	CW³M Company, Inc.
CWS	Community Water Supply
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
L	Liter
LUST	Leaking Underground Storage Tank
MTBE	Methyl Tert-Butyl Ether
ml	Milliliter
OSFM	Office of the State Fire Marshal
PID	Photoionization Detector
PNAs	Polynuclear Aromatic Hydrocarbons
PVC	Polyvinyl Chloride
TACO	Tiered Approach to Corrective Action Objectives
SICR	Site Investigation Completion Report
SIP	Site Investigation Plan
SWAP	Source Water Assessment Program
USTs	Underground Storage Tanks
WCRs	Well Completion Reports

1. SITE HISTORY/EXECUTIVE SUMMARY

1.1 GENERAL

Mr. John Cratty, City Administrator for the city of Monmouth, the owner of the underground storage tanks (USTs) at the City of Monmouth site in Monmouth, Illinois reported a release to the Illinois Emergency Management Agency (IEMA). Incident Number 2014-0510 was assigned to the notification on May 5, 2014. Mr. Cratty then requested CW³M Company, Inc. (CW³M) to proceed with the reporting and early action requirements in accordance with 35 Illinois Administrative Code (Ill. Adm. Code) § 734. This Stage 3 Site Investigation Plan (SIP) and Budget is being prepared in response to Incident Number 2014-0510.

The 20-Day Certification was submitted to the Illinois Environmental Protection Agency (IEPA) on May 13, 2014 (CW³M, 2014a). The 45-Day Report was submitted to the Agency on July 3, 2014 (CW³M, 2014b) and was approved by the Agency on July 29, 2014 (IEPA, 2014). The Stage 2 Plan was submitted to the Agency on May 12, 2015 (CW³M, 2015) and was approved with modifications by the Agency on May 20, 2015 (IEPA, 2015).

This Stage 3 SIP and Budget has been prepared by CW³M in accordance with the requirements of 35 Ill. Adm. Code 734. The Site Investigation Plan certification form, which has been prescribed and provided by the IEPA, has been included herein as Appendix A. The Stage 2 actual costs and the Stage 3 proposed budget and certification are included herein as Appendix F.

This report is certified by an Illinois Licensed Professional Engineer. The geological investigation and site investigation was 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, now known as City of Monmouth, formerly Clark Fueling Station and Convenience Store, is located at 1125 North Main Street, Monmouth, Warren County, Illinois 61462. The site is located in the NW ¼ of the NE ¼ of the SE ¼ of Section 33, Township 8 South of the Centralia Baseline and Range 2 West of the Third Principal Meridian.

1.3 UNDERGROUND STORAGE TANK INFORMATION

A permit for the removal of four USTs was approved by the Office of the State Fire Marshal (OSFM) on May 9, 2014 (OSFM, 2014). Tank removal activities were conducted by CW³M personnel, in conjunction with the city of Monmouth and OSFM Tank Specialist Jeff Hindman, on June 1, 2014 and June 2, 2014. Following tank removal activities, the City of Monmouth requested that CW³M proceed with reporting requirements and early action activities necessary for compliance with 35 Ill. Adm. Code § 734.

CW³M personnel returned to the site on June 4, 2014 to conduct early action excavation of the contaminated soil from the former tank pit area and properly complete early action requirements. Early action excavation was completed June 6, 2014. As the OSFM Field Specialists have been instructed not to make the official determination of the release, 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.

Tank 7: This fiberglass tank was found to be in fair condition. OSFM Tank Specialist Hindman in conjunction with CW³M personnel determined the release was a result of overfills and piping leaks.

Tank 8: This fiberglass tank was found to be in fair condition. OSFM Tank Specialist Hindman in conjunction with CW³M personnel determined the release was a result of overfills and piping leaks.

Tank 9: This fiberglass tank was found to be in fair condition. OSFM Tank Specialist Hindman in conjunction with CW³M personnel determined the release was a result of overfills and piping leaks.

Tank 10: This fiberglass tank was found to be in fair condition. OSFM Tank Specialist Hindman in conjunction with CW³M personnel determined the release was a result of overfills and piping leaks.

Table 1-1. Underground Storage Tank Summary

Tank Number	Tank Volume (gallons)	Tank Contents	Incident Number	Release Information	Current Status
1	4,000	Gasoline	92-0055	Unknown	Removed 1/1/1992
2	3,000	Gasoline	92-0055	Unknown	Removed 1/1/1992
3	3,000	Gasoline	92-0055	Unknown	Removed 4/16/1992
4	3,000	Gasoline	92-0055	Unknown	Removed 1/1/1992
5	1,000	Gasoline	92-0055	Unknown	Removed 1/1/1992
6	500	Gasoline	92-0055	Unknown	Removed 1/1/1992
7	8,000	Gasoline	2014-0510	Overfills	Removed 6/3/2014
8	8,000	Gasoline	2014-0510	Overfills	Removed 6/3/2014
9	8,000	Gasoline	2014-0510	Overfills	Removed 6/3/2014
10	4,000	Diesel	2014-0510	Overfills	Removed 6/3/2014

1.4 EARLY ACTION SUMMARY

Approximately 1027.54 tons (685.03 cubic yards) of contaminated backfill was removed from the former tank pit and taken to Upper Rock Island Landfill in East Moline, Illinois. Soil samples were collected for every 20 feet of the excavation walls. Floor samples were obtained beneath each tank at a depth of around 14 to 15 feet. Samples were also collected at each of the four product pump islands at a depth of around 5 feet. All four tanks, as well as product piping, were removed. During excavation of contaminated soils, groundwater recharged into the tank excavation and an oily water mixture totaling 12,000 gallons was pumped out and properly collected and managed by Future Environmental, Inc. Manifests for the groundwater pumping were provided in the 45-Day Report (CW³M, 2014b). Despite the large amount of

groundwater entering the excavation, soil samples from the floor of the excavation pit were obtainable and were collected and analyzed for benzene, ethylbenzene, toluene, and total xylenes (BETX), methyl tert-butyl ether (MTBE), and polynuclear aromatic hydrocarbons (PNAs). The release confirmation and early action analytical results indicate that the most stringent Tier 1 Clean-up Objectives (CUOs) have been exceeded for BETX, MTBE, and PNAs at various locations in the tank pit area and pump islands. Analytical results and a map of the contaminants can be found in Appendix E and Appendix B, respectively.

1.5 SITE INVESTIGATION SUMMARY

Soil analytical results from early action indicate that the most stringent Tier 1 Clean-up Objectives for the site were exceeded at multiple locations, however the soil contamination plume has been fully defined on site following completion of Stage 1 investigation activities.

Groundwater analytical results indicate that the Class I Groundwater Clean-up Objectives have been exceeded on site at MW-4, MW-5, and MW-7 for the indicator contaminant ethylbenzene and multiple PNA indicator contaminants. Based on the contaminated groundwater analytical results at MW-4 and MW-7, the groundwater contamination plume remains undefined to the north of the property, thus indicating that an off-site investigation will be necessary to define the groundwater contamination plume. Therefore, this Stage 3 Site Investigation Plan proposes advancing four monitoring wells depicted on Drawing 0009 of Appendix B to determine the remaining extent of groundwater contamination off site at the following locations: three encompassing the north property line, and one at the northeast corner.

2. SITE CHARACTERIZATION

2.1 CURRENT AND PROJECTED POST-REMEDIATION USES

The site lies on the north side of Monmouth on North Main Street and is surrounded by commercial properties. The City of Monmouth site is currently awaiting assessment of the site and the future use of the site is unknown but remains vacant at this time.

2.2 PHYSICAL SETTING

The physical setting, including environmental, geologic, hydrogeologic, hydrologic, geographic, and topographic conditions was described in the 45-Day Report (CW³M, 2014b). Additionally, this information is supplemented by the boring logs from the Stage 2 Site Investigation, which are included in Appendix D of this report.

3. SITE INVESTIGATION RESULTS

3.1 DESCRIPTION OF ACTIVITIES COMPLETED

On December 11, 2014, CW³M personnel were on site to conduct Stage 1 investigation activities. Two soil borings (SB-1 and SB-2), and five monitoring wells (MW-1 through MW-5) were advanced as part of the plume delineation activities. Following IEPA regulations, soil samples were also collected from monitoring wells MW-1 through MW-3. Soil samples were analyzed for BETX, MTBE, and PNA contamination. The soil analytical results are summarized in a table included in Appendix E. Soil analytical results from Stage 1 investigations indicate that the most stringent Tier 1 CUOs for the site have been exceeded, but the contamination plume has been defined on site.

CW³M personnel returned to the site on December 12, 2014 to sample and survey the newly installed monitoring wells. Groundwater samples were analyzed for BETX, MTBE, and PNA contamination. Soil boring logs and well completion reports (WCRs) are included in Appendix D. The groundwater analytical results are summarized in a table included in Appendix E. Groundwater analytical results indicate that the Class I Groundwater CUOs have been exceeded on site at MW-4, along the northern property line, and at MW-5, on the south side of the former tank pit. While an off-site investigation will be needed to the north of the site, contamination remained undefined along the site's east-northeastern, western, and southwestern property lines.

On June 26, 2015, CW³M personnel were on site to conduct Stage 2 investigation activities. One soil boring (TACO-1) was advanced for analyses of site specific parameters for development of the Tier 2 COUs for the site, and three monitoring wells (MW-6 through MW-8) were advanced as part of the groundwater plume delineation activities. The three monitoring wells installed were not sampled for soil analytical results since results from Stage 1 investigations indicate that the most stringent Tier 1 CUOs for the site have been exceeded, but the soil contamination plume has been defined on site.

CW³M personnel returned to the site on April 19, 2016 to conduct a slug test on MW-2 and April 20, 2016 to sample and survey the newly installed monitoring wells. Groundwater samples were analyzed for BETX, MTBE, and PNA contamination. Soil boring logs and well completion reports (WCRs) are included in Appendix D. The groundwater analytical results and a table summarizing the results are included in Appendix E. Groundwater analytical results indicate that the Class I Groundwater CUOs have been exceeded on site at MW-4 and MW-7, along the northern property line. Off-site investigation will be needed to the north of the site.

3.2 GROUNDWATER FLOW DIRECTION

Based on the groundwater survey conducted on April 20, 2016 the groundwater appears to flow to the north and east across the site. Refer to Drawings 0006 and 0006A in Appendix B for the groundwater flow maps. The groundwater flow direction will continue to be evaluated as additional monitoring wells are installed during investigation activities.

3.3 POTABLE WATER SUPPLY 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 is in progress. 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 May 22, 2014 (EPA.STATE.IL.US, 2014). The response indicated that eight ISGS wells and three CWS wells are located within 2,500 feet of the site.

Table 3-1. Water Supply Well Information

Well ID	Type	Distance From USTs *(feet)*	Setback Zone *(feet)*
00117	ISGS	1,214	200
21765	ISGS	1,478	200
21787	ISGS	2,376	200
21788	ISGS	2,376	200
21789	ISGS	2,376	200
21790	ISGS	2,376	200
21791	ISGS	2,376	200
21872	ISGS	1,637	200
50421	CWS	2,112	200
01647	CWS	2,006	200
50242	CWS	1,214	200

3.4 SITE SPECIFIC PHYSICAL PARAMETERS

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

Hydraulic Conductivity (K), = 3.85x10^{-4}
Soil bulk density (r_b), = 1.686
Soil particle density (r_s), = 2.638
Moisture content (w), = 23%
Organic carbon content (f_{oc}) = .0098
Soil Classification = Silt Loam

In order to determine the hydraulic conductivity, a slug test was performed during Stage 2 Site Investigation activities. The test was performed by lowering a "slug" constructed of polyvinyl chloride (PVC) into a MW-2. 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 will be plotted on a semi-logarithmic graph and the curve will be 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 was calculated using the hydraulic conductivity results determined at the site, as well as the hydraulic gradient. The hydraulic gradient of 0.014947 was found by calculating the change in gradient between the most up-gradient well (MW-2, 95.66 feet) and the down-gradient well in the direction of flow (MW-2, 94.24 feet), then dividing this answer by the distance in feet between the two wells (95 feet). Formula R24, ($U_{gw} = K \bullet i$) of 35 Ill. Adm. Code § 742 Appendix C, Table C. The resulting velocity is 5.75 x 10^{-6} cm/sec.

4. SITE INVESTIGATION PROPOSAL

4.1 DESCRIPTION OF ACTIVITIES PROPOSED

A total of four monitoring wells are being proposed to further delineate the groundwater contamination plume off-site. These monitoring wells will further determine if any additional off-site investigations will take place. The locations of the proposed monitoring wells are shown on Drawing 0009 in Appendix B. The proposed location of these wells will be completed as accurately as possible; however, their locations may be adjusted to due to actual site and field conditions during the investigation. The wells are proposed to a depth of 20 feet since the surface elevation of the off-site locations of the proposed wells is elevated approximately 5 feet from the surface level of the site. Groundwater samples will be collected and tested for BETX, MTBE, and PNA contaminants.

4.2 DRILLING METHOD

Five-foot continuous samplers have been and will continue to be used to advance and characterize each boring. This method was selected to minimize the likelihood of gaps in the sample column. Augers were and will continue to be decontaminated with a pressure steam wash between borings to prevent cross-contamination. Soil boring logs have been and will continue to be prepared for all soil borings.

4.3 SOIL SAMPLING PROTOCOL

All samples are collected utilizing proper sampling protocol. Samplers wear new, disposable, latex gloves for each sampling event. Samples are collected at the center of each five-foot sample tube, unless conditions within the soil units warrants otherwise. Each of the samples from the continuous sampler is screened using a photoionization detector (PID). Proper sampling, decontamination, and chain-of-custody procedures are employed. The sample containers are filled, labeled, and kept cool (to 6° C or below) until shipment to the laboratory for BETX, MTBE, and PNA analysis. Sample descriptions are recorded on the boring log prepared for each boring.
All soil samples will be analyzed by an accredited laboratory using test methods identified under 35 Ill. Adm. Code 186.180. As required by the Leaking Underground Storage Tank (LUST) Section, a Laboratory Certification for Chemical Analysis and Laboratory Certification for Physical Soil Analysis accompany each of the appropriate sample results that have been reported.

4.4 MONITOR WELL INSTALLATION AND DEVELOPMENT PROTOCOL

Two-inch diameter wells consist of a 10-foot PVC screen and PVC riser above the well screen. Annular space around the wells is filled with coarse-grained, 20/20, sand. Each well is completed at the surface with a flush-mount manway and a locking protective cover. The manways are slightly elevated and the concrete sloped away from each well to prevent surface water run-in. The elevations of the manways are surveyed to the nearest 0.01 foot. Monitoring wells will be set at the depth that groundwater is encountered during drilling with the center screen set at the depth of groundwater.

Monitoring wells are cleared of foreign sediment by standard well development procedures in order to restore the natural hydraulic conductivity of the formation and to reduce the turbidity of the groundwater samples. All wells are developed by surging the bailer back and forth for several minutes and then withdrawing groundwater. The development process continues until clear water flows into each well. The purpose of the surging is to remove the undersize sediment from the well and filter pack. All wells are developed the day of installation. WCRs will be prepared for each well installed.

4.5 GROUNDWATER SAMPLING PROTOCOL

All samples are collected utilizing proper sampling protocol. Samplers wear clean, disposable latex gloves, which are changed between each sample. The water level in each newly-installed well is measured prior to sampling to determine the direction of the flow of groundwater. Prior to sampling, the water above the well screen is extracted from each well utilizing clean, disposable bailers to purge the well of its contents and collect a fresh sample of groundwater as it flows into the well.

Groundwater samples are gently poured into 40 milliliter (ml) glass vials for BETX and MTBE analysis, and 1 Liter (L) amber jars for PNA analysis. The samples are placed in coolers with ice for delivery to the laboratory. Proper chain-of-custody procedures are followed. Each sample is labeled immediately upon collection and logged onto the chain-of-custody form. The chain-of-custody form is transported with the samples and then relinquished to the laboratory. The data collected is used to determine the groundwater flow directions and whether the applicable groundwater quality standards are exceeded.

5. SITE MAPS

Site maps identifying the UST systems, excavations and sample locations, product and dispenser lines, pumps and pump islands, underground utilities, nearby structures, property boundaries, and the locations of proposed soil borings and monitoring wells are included in Appendix B. All maps are prepared in accordance with 35 Ill. Adm. Code 734.440.

A map of the site and any surrounding areas that may be adversely affected by the release of petroleum from the UST systems will be provided in the Site Investigation Completion Report (SICR). At a minimum, the map will be to scale and will show the location of the leaking UST systems with any associated piping and all identified potential natural and/or man-made pathways which are on the site, in right-of-ways attached to the site, or that are in areas that may be adversely affected as a result of the release.

6. CONCLUSIONS

The City of Monmouth, the owner of the USTs, in conjunction with CW³M, will prepare a SICR upon completion of the Stage 3 Site Investigation activities. If contamination above Tier 1 CUOs is found during these Stage 3 Site Investigation activities an amended Stage 3 plan and budget will be submitted. A description of sampling activities, geologic information, soil boring logs, well completion reports, and analytical results will be included. The SICR will be prepared utilizing all applicable IEPA-prescribed, provided, or approved forms.

7. REFERENCES

CW³M, 2014a. CW³M Company, Inc. *20-Day Certification*. City of Monmouth, Monmouth, Illinois, May 13, 2014.

CW³M, 2014b. CW³M Company, Inc. *45-Day Report*. City of Monmouth, Monmouth, Illinois, July 3, 2014.

CW³M, 2015. CW³M Company, Inc. *Site Investigation Stage 2 Plan and Budget*, City of Monmouth, Monmouth, Illinois, May 12, 2015.

IEPA, 2014. Illinois Environmental Protection Agency, *45-Day Report Correspondence*, City of Monmouth, Monmouth, Illinois, July 29, 2014.

IEPA, 2015. Illinois Environmental Protection Agency, *Site Investigation Stage 2 Plan and Budget*, City of Monmouth, Monmouth, Illinois, May 12, 2015.

EPA.STATE.IL.US, 2014. Source Water Assessment Program, *Water Well Survey Map* www.maps.epa.state.il.us, accessed May 22, 2014.

OSFM, 2014. Illinois Office of the State Fire Marshal, *Permit for Removal of Underground Storage Tanks(s)*, City of Monmouth, Monmouth, Illinois, May 9, 2014.

APPENDIX A

SITE INVESTIGATION PLAN FORM

STAGE 3 SITE INVESTIGATION PLAN AND BUDGET
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

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
Site Investigation Plan

A. Site Identification

IEMA Incident # (6- or 8- digit): 2014-0510 IEPA LPC # (10- digit): 1870155032

Site Name: City of Monmouth

Site Address (not a P.O. Box): 1125 North Main Street

City: Monmouth County: Warren Zip Code: 61462

Leaking UST Technical File

B. Site Information

1. Will the owner or operator seek payment from the Underground Storage Tank Fund? ☒ Yes ☐ No
2. If yes, is the budget attached? ☒ Yes ☐ No

C. Site Investigation

Provide the following:

1. Stage of investigation
   a. Stage 2 ☐
   b. Stage 3 ☒
2. Summary of Stage 1 ☐ or 2 ☒ site investigation activities;
3. Characterization of site and surrounding area:
   a. Current and projected post-remediation uses;
   b. Physical setting:
      i. Environmental conditions;
      ii. Geologic, hydrogeologic, and hydrologic conditions; and
      iii. Geographic and topographic conditions;
4. Results of Stage 1 or 2 site investigation:
   a. Map(s) showing locations of all borings and groundwater monitoring wells completed to date and groundwater flow direction;
   b. Map(s) showing locations of all samples collected;
   c. Map(s) showing extents of soil and groundwater contamination that exceeds the most stringent Tier 1 remediation objectives;
   d. Cross-section(s) showing the geology and the horizontal and vertical extents of soil and groundwater contamination that exceeds the most stringent Tier 1 remediation objectives;
   e. Analytical results, chain of custody forms, and laboratory certifications;

f. Table(s) comparing analytical results to the most stringent Tier 1 remediation objectives (include sample depth, date collected, and detection limits);

g. Potable water supply well survey (unless provided in previous plan):

i. Map(s) to scale showing:

a) Locations of community water supply wells and other potable wells and the setback zone for each well;

b) Location and extent of regulated recharge areas and wellhead protection areas;

c) Extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives; and

d) Modeled extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives (if performed as part of site investigation);

ii. Table(s) listing the setback zones for each community water supply well and other potable water supply wells;

iii. 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

iv. 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;

h. Soil boring logs and monitoring well construction diagrams;

i. Proposal for determining the following parameters:

i. Hydraulic conductivity (K);

ii. Soil bulk density (ρ_b);

iii. Soil particle density (ρ_s);

iv. Moisture content (w); and

v. Organic carbon content (f_{oc}); and

j. Budget forms of actual costs (documenting actual work performed during the previous stage).

5. Stage 2 or 3 sampling plan:

a. Description of and justification for additional activities proposed as part of the plan;

b. A map depicting locations of proposed borings and groundwater monitoring wells; and

c. Depth of borings/wells and construction details of proposed borings and wells; and

6. Site maps meeting the requirements of 35 Ill. Adm. Code 734.440.

Continue onto next page.

D. 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: City of Monmouth
Contact: Lowell Crow
Address: 100 E. Broadway
City: Monmouth
State: Illinois
Zip Code: 61462
Phone: (309) 734-2141
Signature:
Date: 7/21/2016

Consultant

Company: CW3M Company, Inc.
Contact: Carol L. Rowe, P. G.
Address: 701 South Grand Ave, West
City: Springfield
State: Illinois
Zip Code: 62704
Phone: (217) 522-8001
Signature:
Date: 7/26/2016

RECEIVED
JUL 29 2016
EPA/BOL

I certify under penalty of law that all activities that are the subject of this 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 report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in this report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 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, P. E.
Company: CWM Company, Inc.
Address: 701 South Grand Avenue, West
City: Springfield
State: Illinois
Zip Code: 62704
Phone: (217) 522-8001
Ill. Registration No.: 062-046118
License Expiration Date: Nov 30, 2017
Signature:
Date: 7/25/16

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

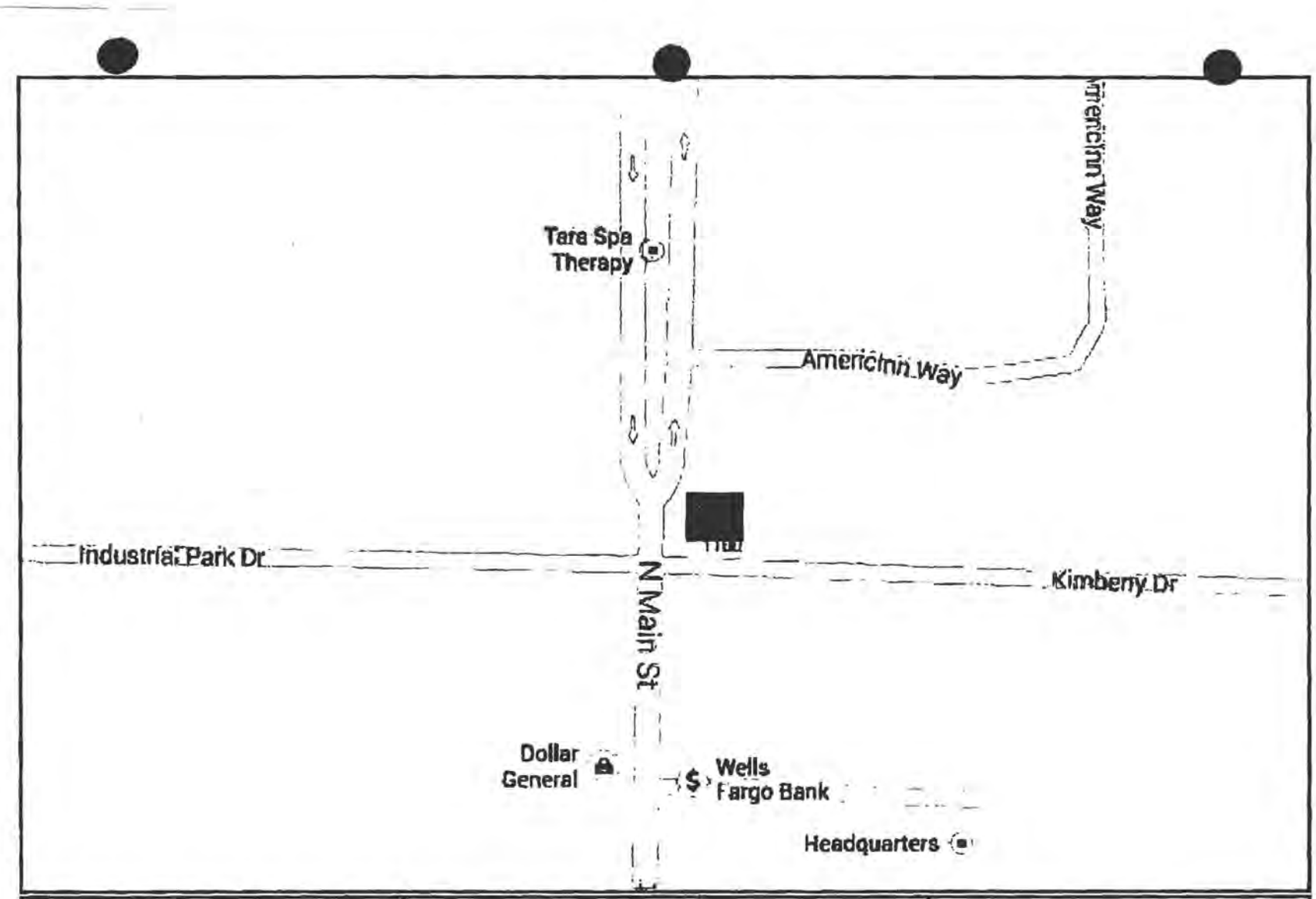
APPENDIX B

SITE MAPS AND ILLUSTRATIONS

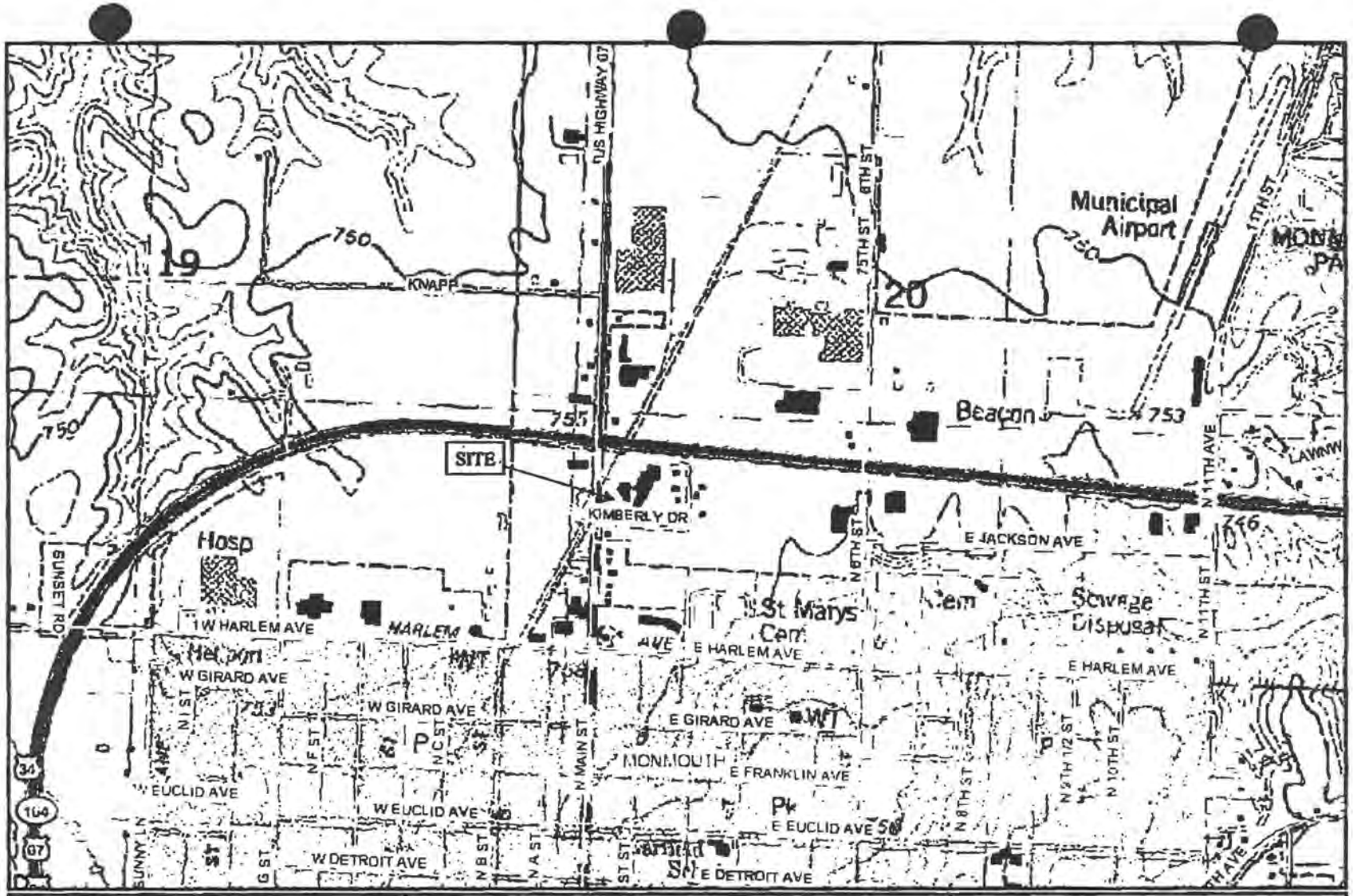
STAGE 3 SITE INVESTIGATION PLAN AND BUDGET
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

INDEX OF DRAWINGS

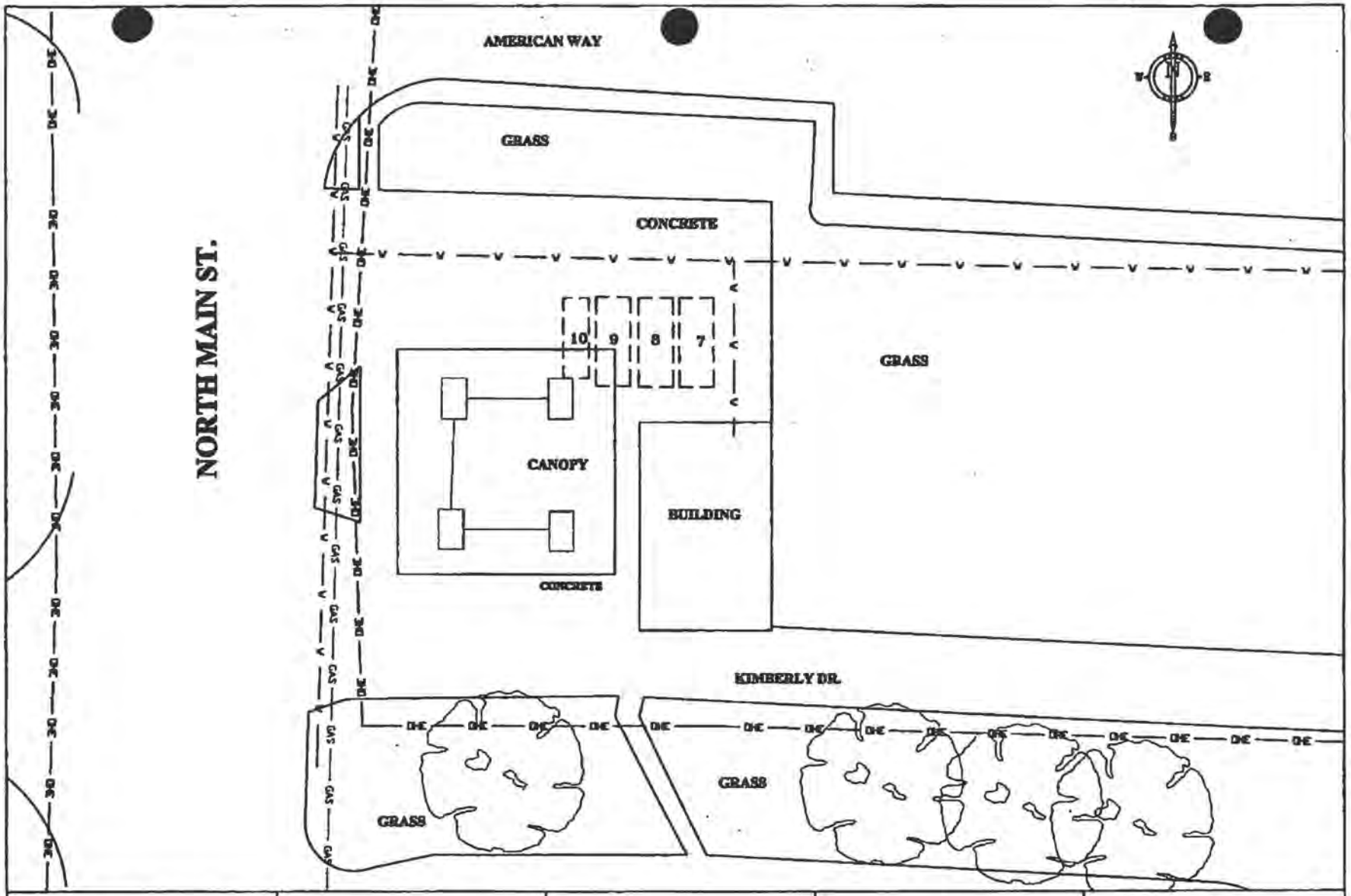
Drawing Number	Description
0001A	Site Location Map
0001B	Topographic Map
0001C	Surrounding Populations Map
0002	Site Map
0003	Soil Boring Location Map
0004	Monitoring Well Location Map
0005	Monitoring Well Elevation Map
0006	Groundwater Flow Map (December 2014)
0006A	Groundwater Flow Map (April 2016)
0007	Soil Contamination Values Map
0008	Groundwater Contamination Values Map
0009	Proposed Monitoring Well Location Map



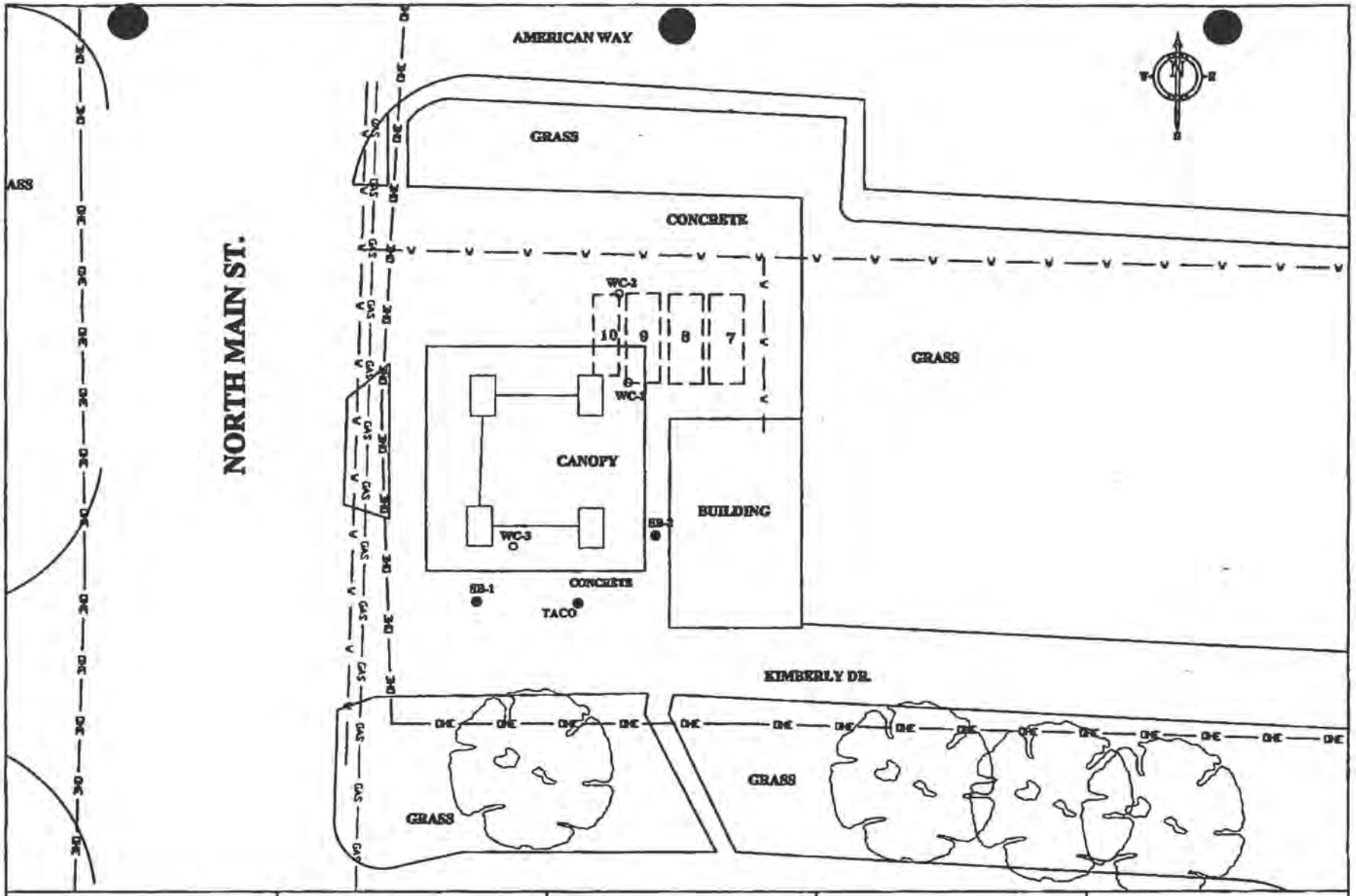
CW³M Company, Inc. 701 South Grand Avenue West Springfield, IL 62704 (217)-522-8001	**Site Location Map** 1125 North Main Street Monmouth, Illinois	Drawn By: BMW Reviewed By: CLR Drawing 0001A SiteMap.doc



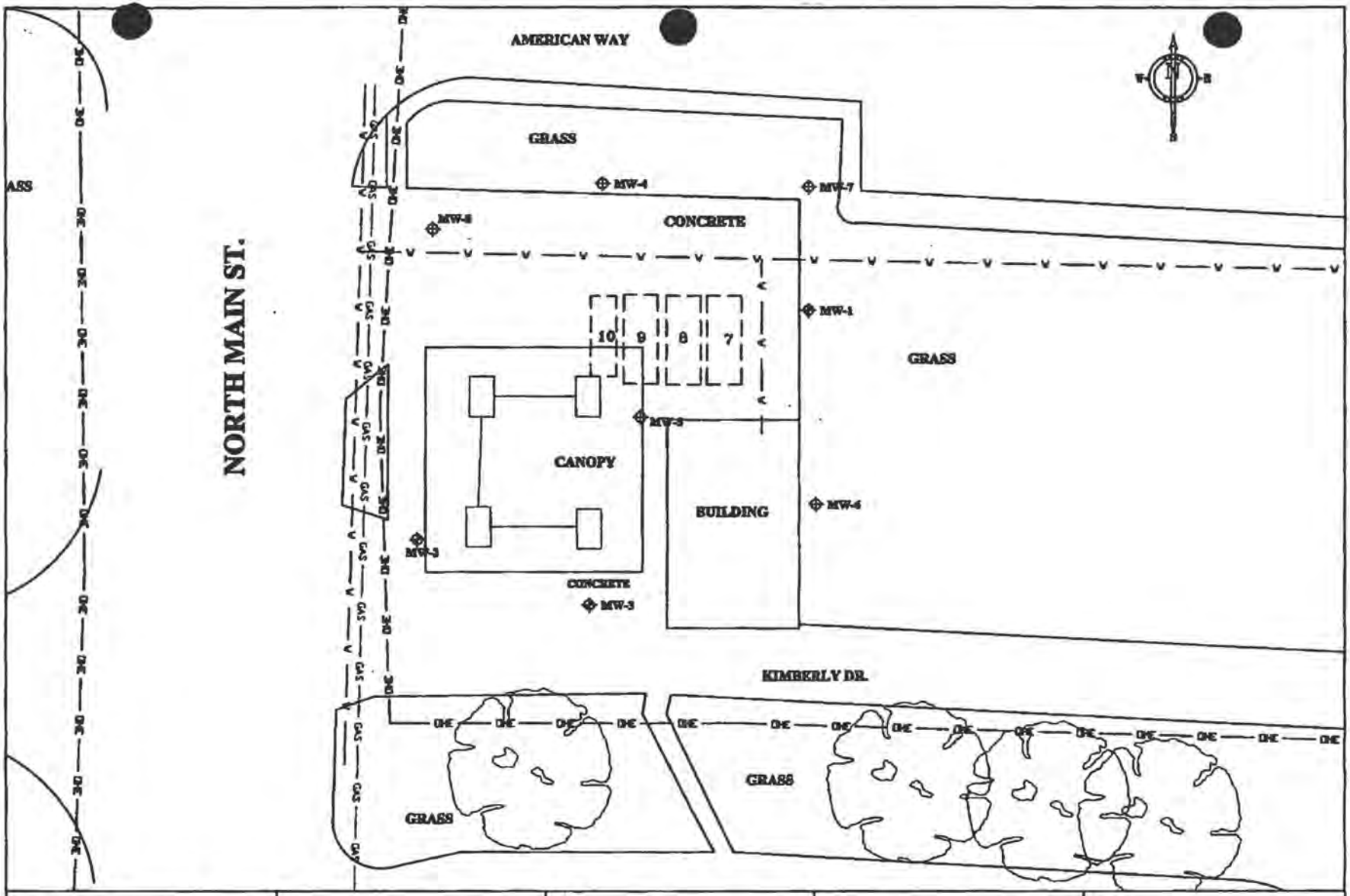
CW³M Company, Inc. 701 South Grand Avenue West Springfield, IL 62704 (217)-522-8001	**Topographic Map** 1125 North Main Street Monmouth, Illinois	Drawn By: BMW Reviewed By: CLR Drawing 0001B TopoMap.doc



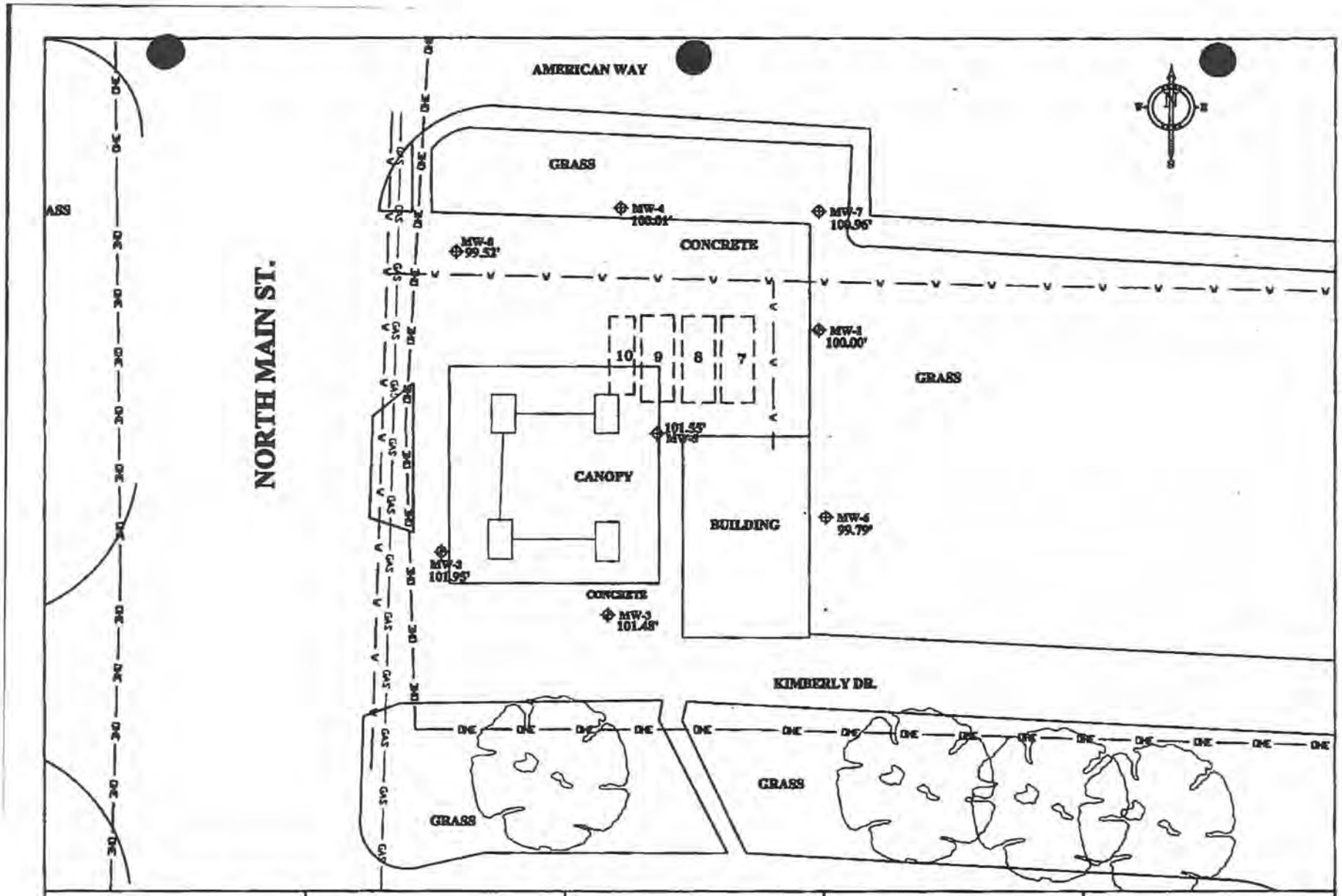
CW²M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	SITE MAP	DATE: 2/20/14 REVISED DATE: 3/28/14 SCALE 1"=30' DRAWING: 0002	DRAWN BY: MDR REVISED BY: BMW REVIEWED BY: CLR SITE.DWG

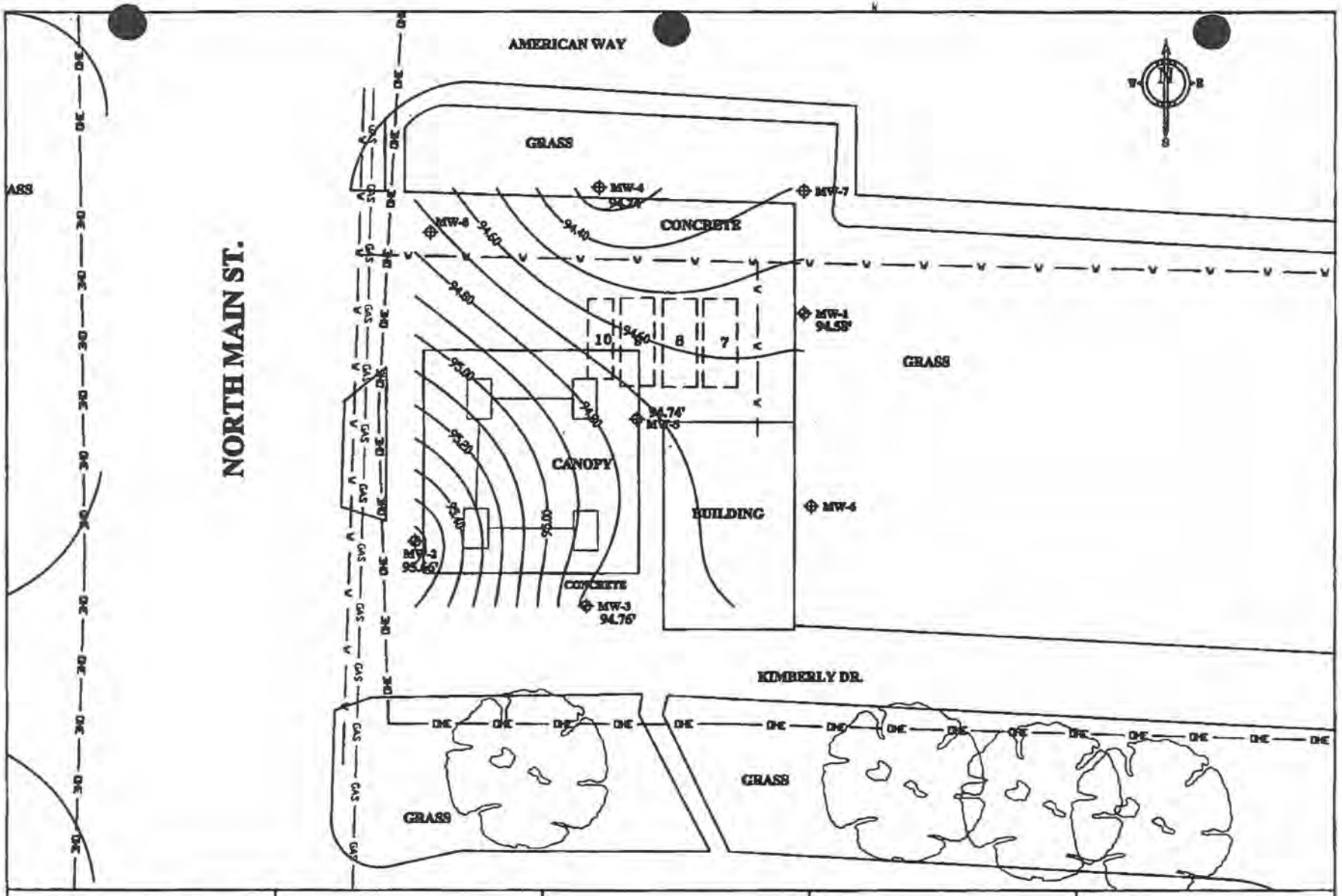


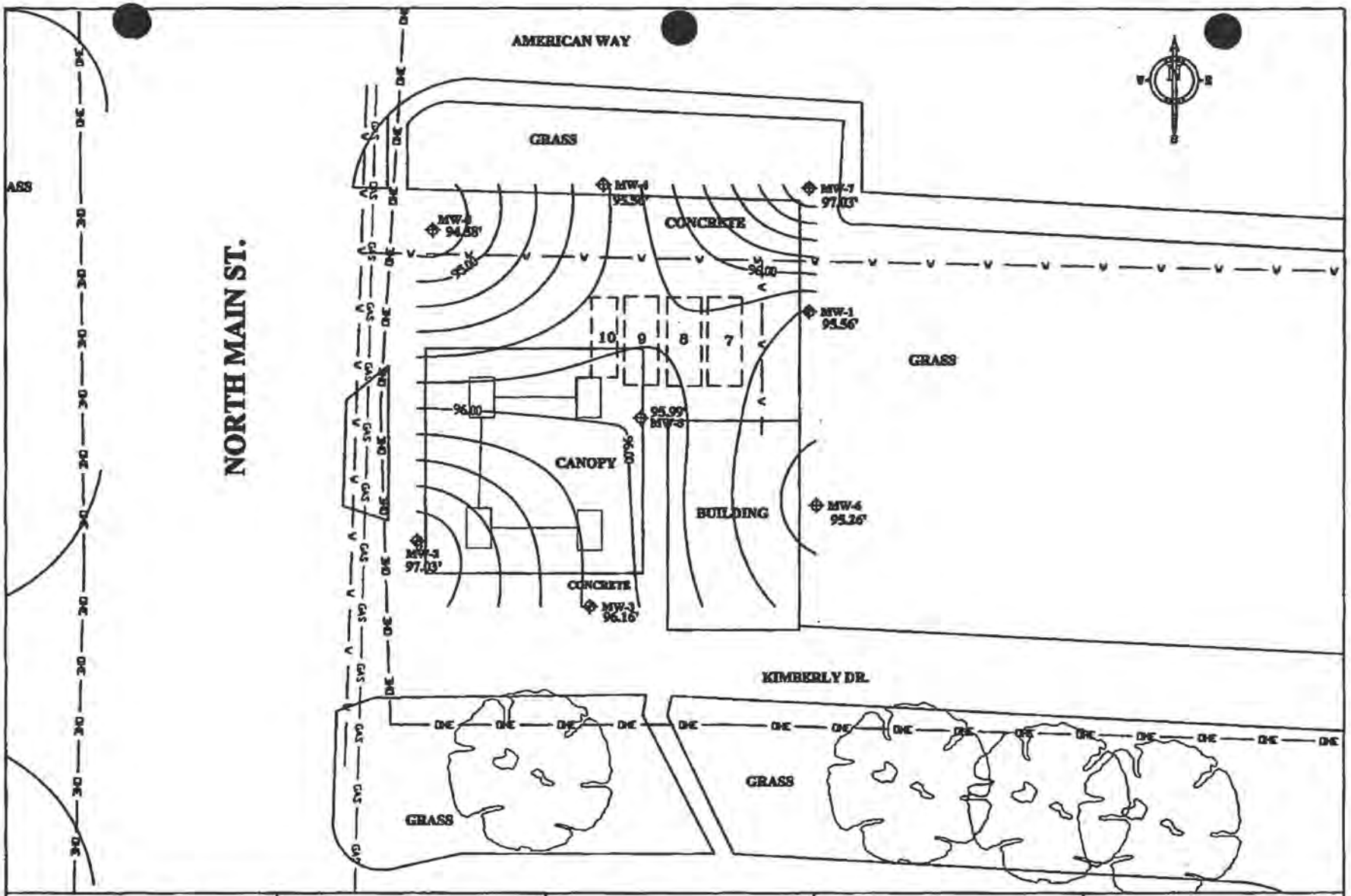
CW²M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	SOIL BORING LOCATION MAP	DATE: 6/17/2014 REVISED DATE: 3/27/15 SCALE 1"=30' DRAWING: 0003	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR SBLOC.DWG

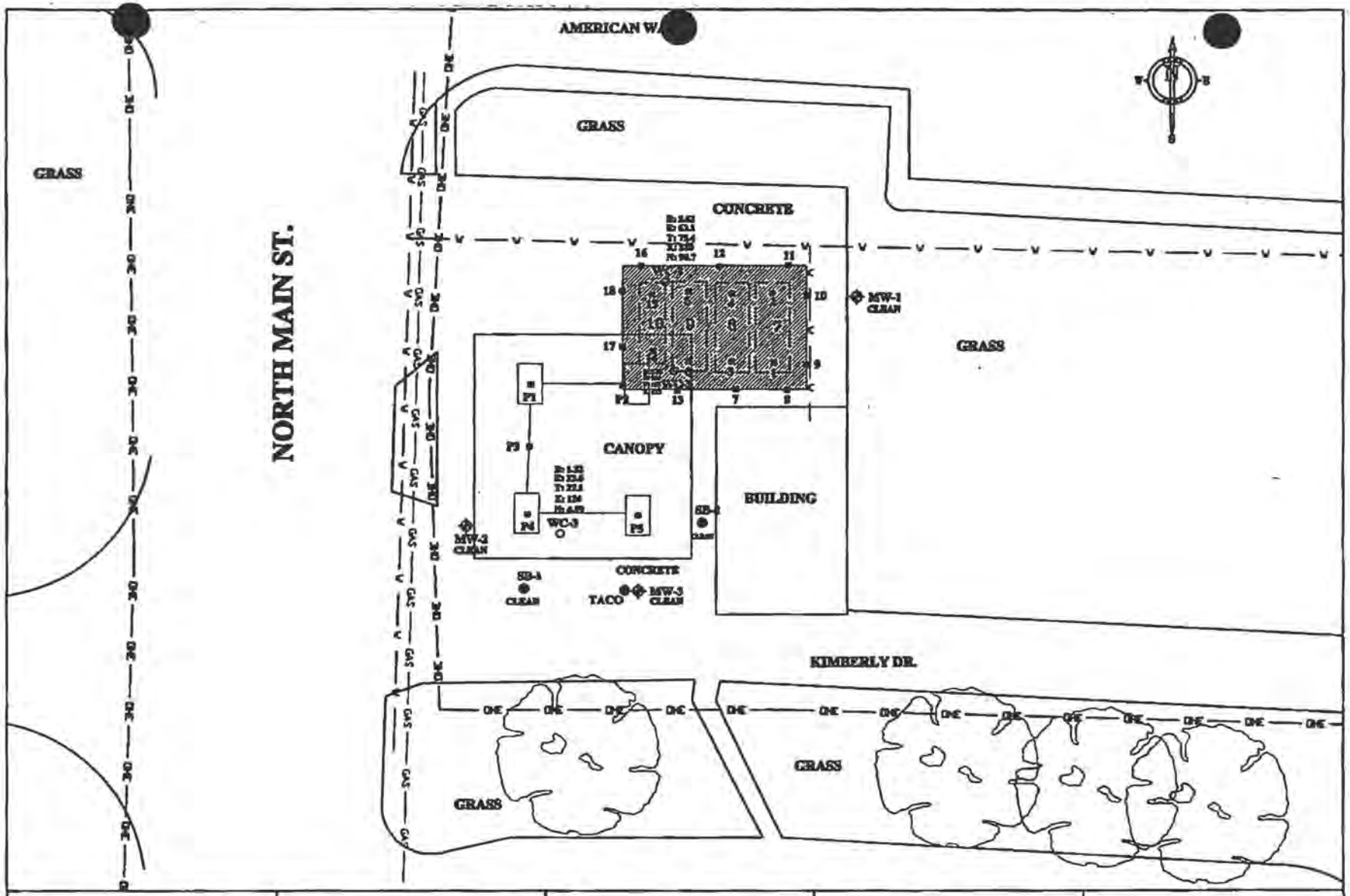


CW[©]M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	MONITORING WELL LOCATION MAP	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0004	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR MWLOC.DWG

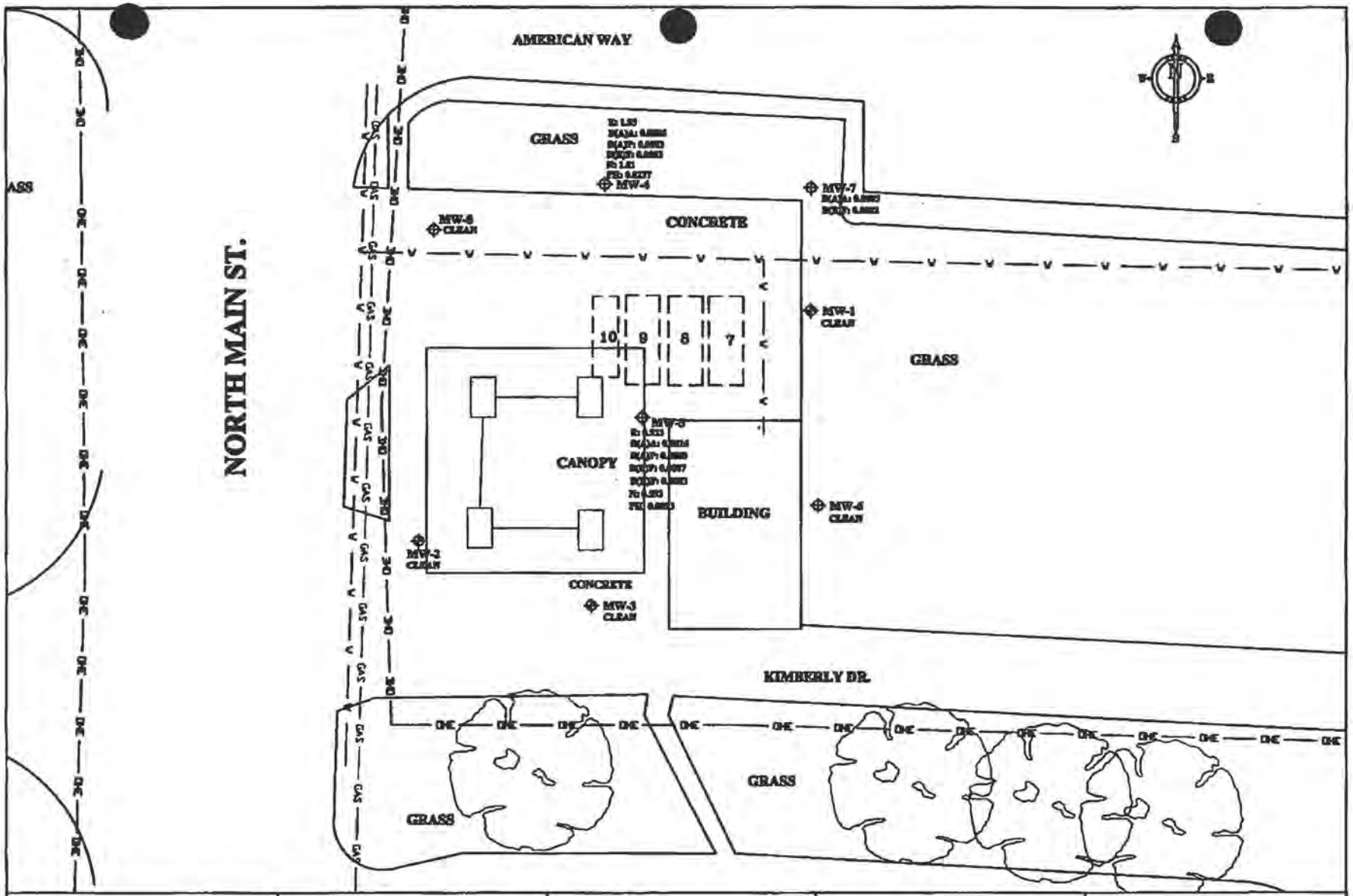

AMERICAN WAY
GRASS
MW-4
100.01'
MW-7
100.96'
MW-8
99.52'
CONCRETE
NORTH MAIN ST.
MW-1
100.00'
10
9
8
7
GRASS
101.55'
MW-5
CANOPY
BUILDING
MW-6
99.79'
MW-2
101.95'
CONCRETE
MW-3
101.45'
KIMBERLY DR.
GRASS
GRASS
CW²M COMPANY, INC.
701 W. SOUTH GRAND
SPRINGFIELD, IL. 62704
(217) 522-8001
CITY OF MONMOUTH
MONMOUTH, ILLINOIS
INCIDENT 2014-0510
WARREN COUNTY
MONITORING WELL
ELEVATION MAP
DATE: 6/17/2014
REVISED DATE: 3/30/15
SCALE 1"=30'
DRAWING: 0005
DRAWN BY: MJS
REVISED BY: BMW
REVIEWED BY: CLR
MWELEV.DWG


AMERICAN WAY
NORTH MAIN ST.
GRASS
CONCRETE
MW-4
MW-7
MW-8
94.60
94.80
MW-1
94.55'
10
9
8
7
GRASS
95.00
94.80
94.74'
MW-5
CANOPY
BUILDING
MW-6
95.20
95.00
MW-2
95.65'
CONCRETE
MW-3
94.76'
KIMBERLY DR.
GRASS
GRASS
CW²M COMPANY, INC.
701 W. SOUTH GRAND
SPRINGFIELD, IL. 62704
(217) 522-8001
CITY OF MONMOUTH
MONMOUTH, ILLINOIS
INCIDENT 2014-0510
WARREN COUNTY
GROUNDWATER FLOW
MAP (DECEMBER 2014)
DATE: 6/17/2014
REVISED DATE: 3/30/15
SCALE 1"=30'
DRAWING: 0006
DRAWN BY: MJS
REVISED BY: BMW
REVIEWED BY: CLR
GWFLOW.DWG

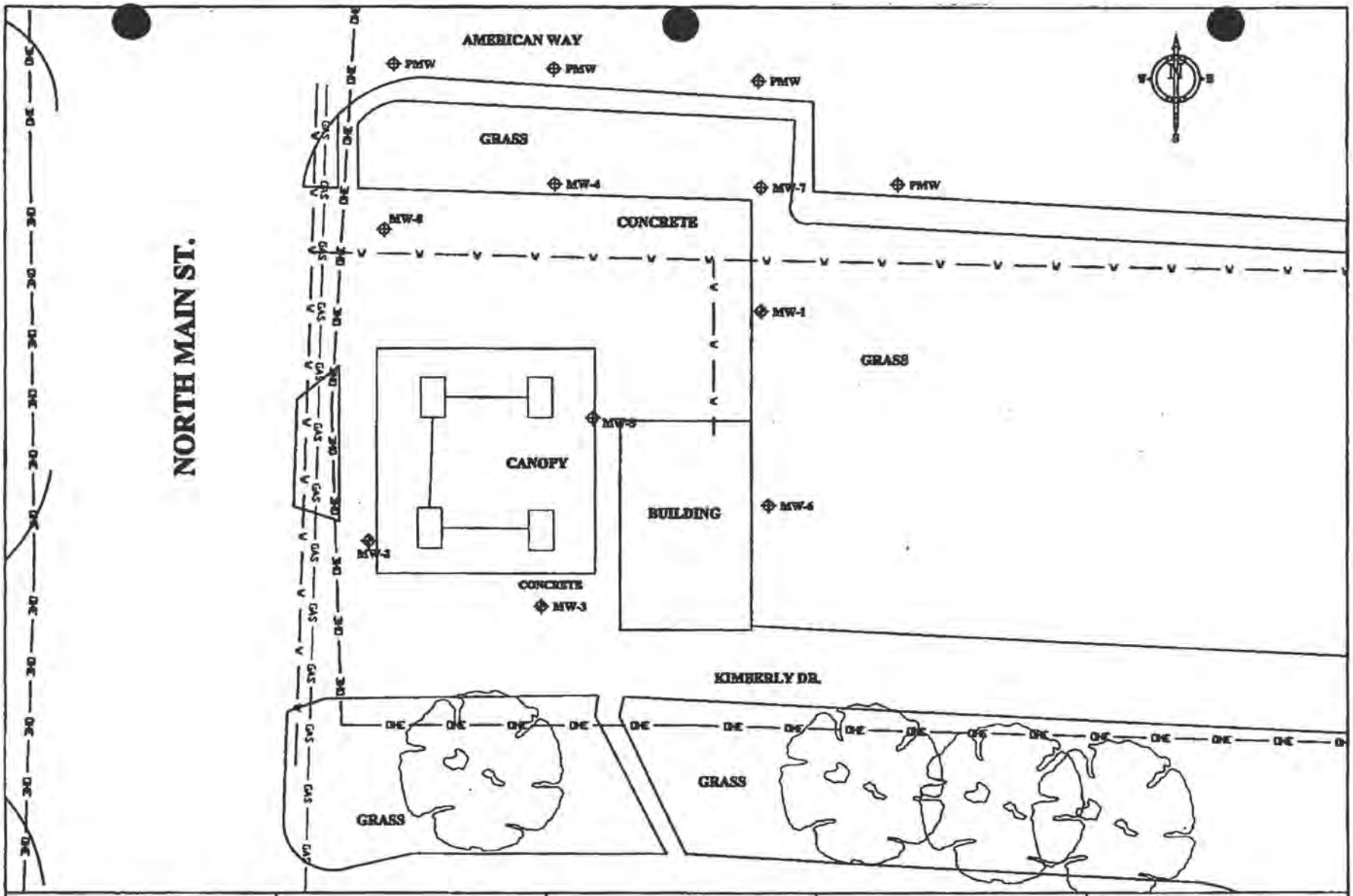

AMERICAN WAY
NORTH MAIN ST.
GRASS
CONCRETE
MW-6
95.50'
MW-7
97.03'
MW-8
94.58'
MW-1
95.56'
10
9
8
7
GRASS
96.00
95.99'
MW-5
CANOPY
96.00
BUILDING
MW-4
95.26'
MW-2
97.03'
CONCRETE
MW-3
96.16'
KIMBERLY DR.
GRASS
GRASS
CW²M COMPANY, INC.
701 W. SOUTH GRAND
SPRINGFIELD, IL. 62704
(217) 522-8001
CITY OF MONMOUTH
MONMOUTH, ILLINOIS
INCIDENT 2014-0510
WARREN COUNTY
GROUNDWATER FLOW
MAP (DECEMBER 2014)
DATE: 6/17/2014
REVISED DATE: 3/30/15
SCALE 1"=30'
DRAWING: 0006A
DRAWN BY: MJS
REVISED BY: BMW
REVIEWED BY: CLR
GWFLOW.DWG



CW[M] COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	SOIL CONTAMINATION VALUES MAP	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0007	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR SOILCON.DWG



CW²M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	GROUNDWATER CONTAMINATION VALUES MAP	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0008	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR GWCONT.DWG



CW²M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	PROPOSED MONITORING WELL LOCATION MAP	DATE: 2/20/14 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0009	DRAWN BY: MDR REVISED BY: MJS REVIEWED BY: CLR PMWLOC.DWG

APPENDIX C

ILLINOIS OFFICE OF THE STATE FIRE MARSHAL ELIGIBILITY DETERMINATION

STAGE 3 SITE INVESTIGATION PLAN AND BUDGET
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

Office of the Illinois
State Fire Marshal
"Partnering With the Fire Service to Protect Illinois"

CERTIFIED MAIL - RECEIPT REQUESTED #7012 1010 0002 9120 9890

July 25, 2014

City of Monmouth
c/o CW3M Company
P.O. Box 571
Carlinville, IL 62626

In Re: Facility No. 3-005131
IEMA Incident No. 14-0510
Former Clark Station #2330
1125 North Main Street
Monmouth, Warren Co., IL

Dear Applicant:

The Reimbursement Eligibility and Deductible Application received on June 10, 2014 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 8,000 gallon Gasoline
Tank 8 8,000 gallon Gasoline
Tank 9 8,000 gallon Gasoline
Tank 10 4,000 gallon Diesel Fuel

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 deductibility. 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 mailing 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 4,000 gallon Gasoline
Tank 2 3,000 gallon Gasoline
Tank 3 3,000 gallon Gasoline
Tank 4 3,000 gallon Gasoline
Tank 5 1,000 gallon Gasoline
Tank 6 500 gallon Gasoline

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 or (217) 785-5878.

Sincerely,

Deanne Lock
Administrative Assistant
Division of Petroleum and Chemical Safety

cc: IEPA

APPENDIX D

BORING LOGS AND WELL COMPLETION REPORTS

STAGE 3 SITE INVESTIGATION PLAN AND BUDGET
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-6
SITE NAME: City of Monmouth	**BORING LOCATION:** 20'S & 5' E of NE Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15 11:30 AM	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 6/26/15 12:15 pm	**BACKFILL:** N/A - Set Well

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Grass						
1	Topsoil						
2	Black Clayey Silt	ML					
3			95%	0.0			
4	Dark Brown Mottled Gray Silty Clay	CL					
5							
6							
7							
8			100%	0.0			
9							
10							
11							
12	Gray Silty Clay	CL					
13			100%				
14							
15	End of boring						

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

NOTES: No samples / Field screened only

Manway / Surface Elevation:

Groundwater Depth While Drilling:	~8'	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR/MJS

Illinois Environmental Protection Agency

CWM COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-7
SITE NAME: City of Monmouth	**BORING LOCATION:** 55' N of NE Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15 12:15 pm	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 6/26/15 1:00 pm	**BACKFILL:** N/A - Set Well

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Gravel						
1	Subbase						
2	Black Clayey Silt	ML					
3			100%	0.0			
4	Brown Mottled Gray Silty Clay	CL					
5							
7			100%	0.0			
8							
9							
10							
11							
12	Gray Silty Clay	CL					
13			100%				
14							
15	End of boring						

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

NOTES: No samples / Field screened only

Manway / Surface Elevation:

Groundwater Depth While Drilling:	~8'	Auger Depth:	15'	Driller:	AEDC
Groundwater Depth After Drilling:		Rotary Depth:		Geologist:	MDR/MJS

Illinois Environmental Protection Agency

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

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-8
SITE NAME: City of Monmouth	**BORING LOCATION:** 45' N and 55' W of NW Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15 1:00 pm	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 6/26/15 1:45 pm	**BACKFILL:** N/A - Set Well

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						
2	Black Clayey Silt	ML					
3	Brown Silty Clay		90%	0.0			
4		CL					
5							
6	Brown Mottled Gray Silty Clay	CL					
7							
8			100%	0.0			
9							
10							
11							
12	Gray Silty Clay	CL					
13			100%				
14							
15	End of boring						

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

NOTES: No samples / Field screened only

Manway / Surface Elevation:

Groundwater Depth While Drilling:	~8'	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR/MJS

Illinois Environmental Protection Agency

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

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** TACO-1
SITE NAME: City of Monmouth	**BORING LOCATION:** 100'S & 38' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 12/11/14 1:45	**BACKFILL:** N/A - Set Well

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 silt	CL					
3			90%	0.0			
4							
5							
6	Brown mottled grey silty clay	CL					
7							
8			100%	0.0	Grab	TACO-1	Taco Peramaters
9							
10							
11	End of boring						
12							
13							
14							
15							

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

NOTES: Sampled 2.5' and 7.5' per reg

Manway / Surface Elevation: 101.48'

Groundwater Depth While Drilling:	~ 10'	**Auger Depth:**		**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**	15'	**Geologist:**	BMW/MDR

Illinois Environmental Protection Agency

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

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** TACO-1
SITE NAME: City of Monmouth	**BORING LOCATION:** 100'S & 38' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 12/11/14 1:45	**BACKFILL:** N/A - Set Well

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 silt	CL					
3			90%	0.0			
4							
5							
6	Brown mottled grey silty clay	CL					
7							
8			100%	0.0	Grab	TACO-1	Taco Peramaters
9							
10							
11	End of boring						
12							
13							
14							
15							

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

NOTES:

Manway / Surface Elevation:

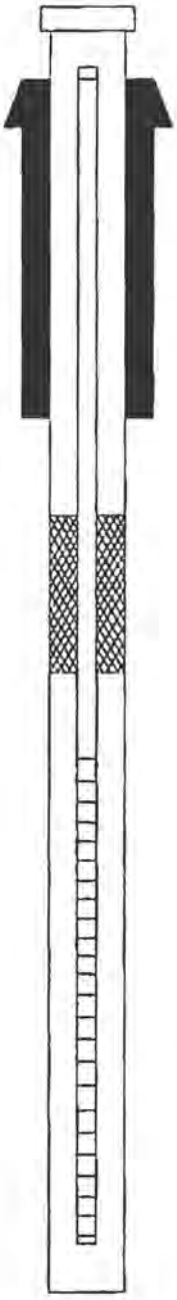
Groundwater Depth While Drilling:	~10'	**Auger Depth:**		**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**	15'	**Geologist:**	BMW/MDR

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

Incident No.	2014-0510	**Well No.**	MW-6
Site Name	City of Monmouth	**Date Drilled**	6/26/2015
Drilling Contractor	AEDC	**Date Completed**	6/26/2015
Driller	AEDC	**Geologist**	MDR
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



99.79 ft. Top of Protective Casing
99.54 ft. Top of riser pipe
99.79 ft. Ground surface
99.29 ft. Top of Annular Sealant
N/A Casing Stickup

99.29 ft. Top of Seal
3.00 ft. Total Seal interval
96.29 ft. Top of Sand
95.29 ft. Top of Screen

10.0 ft. Total Screen Interval

85.29 ft. Bottom of Screen
84.79 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	~8 ft. while drilling
Depth to Water	95.26 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

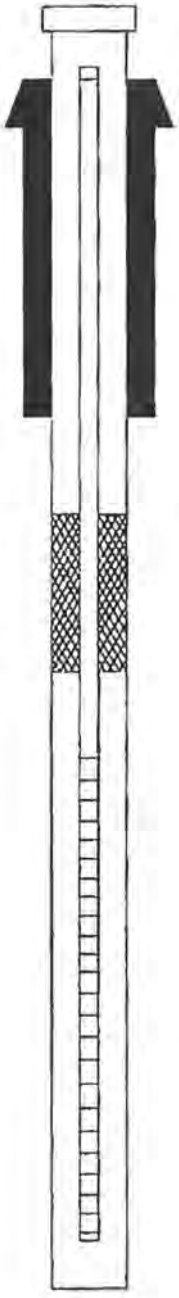
Completed by: MDR

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

Incident No.	2014-0510	**Well No.**	MW-7
Site Name	City of Monmouth	**Date Drilled**	6/26/2015
Drilling Contractor	AEDC	**Date Completed**	6/26/2015
Driller	AEDC	**Geologist**	MDR
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



100.96 ft. Top of Protective Casing
100.71 ft. Top of riser pipe
100.96 ft. Ground surface
100.46 ft. Top of Annular Sealant
N/A Casing Stickup
100.46 ft. Top of Seal
3.00 ft. Total Seal interval
97.46 ft. Top of Sand
96.46 ft. Top of Screen
10.0 ft. Total Screen interval
86.46 ft. Bottom of Screen
85.96 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	~8 ft. while drilling
Depth to Water	97.03 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MDR

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

Incident No.	2014-0510	**Well No.**	MW-8
Site Name	City of Monmouth	**Date Drilled**	6/26/2015
Drilling Contractor	AEDC	**Date Completed**	6/26/2015
Driller	AEDC	**Geologist**	MDR
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

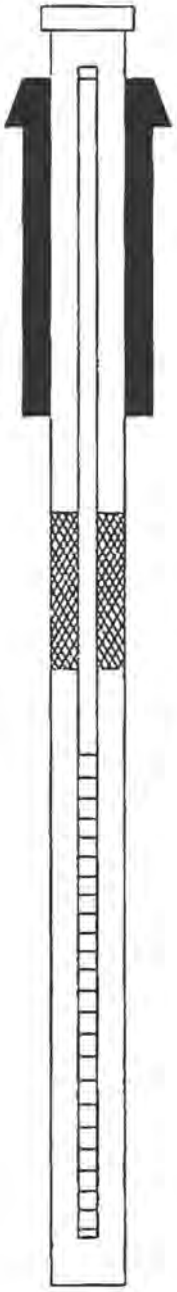
Well Construction Materials

	Stainless Steel Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint			
Riser Pipe Above w.l.		Sched.-40	
Riser Pipe Below w.l.			
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	~8 ft. while drilling
Depth to Water	94.58 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MDR



99.52 ft. Top of Protective Casing
99.27 ft. Top of riser pipe
99.52 ft. Ground surface
99.02 ft. Top of Annular Sealant
N/A Casing Stickup
99.02 ft. Top of Seal
3.00 ft. Total Seal interval
96.02 ft. Top of Sand
95.02 ft. Top of Screen
10.0 ft. Total Screen Interval
85.02 ft. Bottom of Screen
84.52 ft. Bottom of Borehole

APPENDIX E

ANALYTICAL AND SLUG TEST RESULTS

STAGE 3 SITE INVESTIGATION PLAN AND BUDGET
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

City of Monmouth
Site Assessment Data

EA excavation

	Location		1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Date		6/5/2014	6/5/2014	6/5/2014	6/5/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/9/2014	6/9/2014
	Depth		15'	15'	15'	15'	15'	15'	7'	7'	7'	7'	7'	7'	7'	15'
Parameter	Tier 1 CUO	Tier 2 CUO														
Benzene	0.03	0.03	0.021	ND	1.41	0.375	4.28	1.54	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	13.0	13.0	ND	ND	13.9	3.27	38.6	16.7	ND	ND	ND	ND	ND	ND	ND	36.2
Toluene	12.0	12.0	ND	ND	16.3	4.38	58.1	22.6	ND	ND	ND	0.12	ND	ND	ND	ND
Total Xylenes	5.6	5.6	ND	ND	75.	18.1	218.	97.2	ND	ND	ND	ND	ND	ND	ND	44.5
MTBE	0.32	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	570.0	570.0	0.087	0.058	0.089	ND	0.365	0.154	ND	ND	ND	ND	ND	ND	ND	0.147
Acenaphthylene	15.0	15.0	ND	ND	0.094	ND	0.397	0.172	ND	ND	ND	0.124	ND	ND	ND	0.059
Anthracene	12,000.0	12,000.0	0.085	0.176	0.084	ND	0.377	0.111	ND	ND	ND	0.237	ND	ND	ND	0.18
Benzo(a)anthracene	0.9	0.9	ND	ND	ND	ND	0.174	0.074	ND	ND	ND	0.937	ND	ND	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND	ND	0.058	ND	ND	ND	ND	2.08	ND	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.46	ND	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND	ND	0.088	ND	ND	ND	ND	1.17	ND	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.832	ND	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND	ND	0.123	0.059	ND	ND	ND	1.29	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.335	ND	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	0.058	ND	0.207	0.086	ND	ND	ND	0.343	ND	ND	ND	ND
Fluorene	560.0	560.0	0.209	0.272	0.101	ND	0.429	0.173	ND	ND	ND	ND	ND	ND	ND	0.414
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.06	ND	ND	ND	ND
Naphthalene	1.8	1.8	0.132	0.093	18.1	3.93	98.	31.4	ND	ND	ND	ND	ND	ND	ND	7.83
Phenanthrene	140.0	140.0	0.451	0.168	0.209	ND	0.937	0.378	ND	ND	ND	0.089	ND	ND	ND	0.321
Pyrene	2,300.0	2,300.0	ND	0.078	0.068	ND	0.253	0.106	ND	ND	ND	0.534	ND	ND	ND	0.067
Exceeds Tier 1 COUs																
Exceeds Tier 2 COUs																
values in mg/kg																

City of Monmouth
Site Assessment Data

EA excavation

	Location		15	16	P1	P2	P3	P4	P5	17	18
	Date		6/9/2014	6/9/2014	6/9/2014	6/9/2014	6/9/2014	6/9/2014	6/9/2014	6/10/2014	6/10/2014
	Depth		15'	7'	3'	3'	3'	3'	3'	7'	7'
Parameter	Tier 1 CUO	Tier 2 CUO									
Benzene	0.03	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	13.0	13.0	ND	1.3	ND	0.108	ND	117.	75.4	ND	ND
Toluene	12.0	12.0	ND	ND	ND	ND	ND	109.	72.1	ND	ND
Total Xylenes	5.6	5.6	ND	1.71	ND	0.738	ND	687.	435.	ND	ND
MTBE	0.32	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	570.0	570.0	ND	ND	ND	ND	ND	0.264	0.265	ND	ND
Acenaphthylene	15.0	15.0	ND	ND	ND	ND	ND	0.202	0.248	ND	ND
Anthracene	12,000.0	12,000.0	ND	ND	ND	ND	ND	0.136	0.169	ND	ND
Benzo(a)anthracene	0.9	0.9	ND	ND	ND	ND	ND	0.056	0.069	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND	ND	ND	0.058	0.07	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	ND	ND	ND	0.247	0.278	ND	ND
Fluorene	560.0	560.0	ND	ND	ND	ND	ND	0.491	0.538	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	1.8	1.8	ND	ND	ND	ND	ND	278.	303.	ND	ND
Phenanthrene	140.0	140.0	ND	ND	ND	ND	ND	4.41	5.58	ND	ND
Pyrene	2,300.0	2,300.0	ND	ND	ND	ND	ND	0.448	0.53	ND	ND
Exceeds Tier 1 COUs											
Exceeds Tier 2 COUs											
values in mg/kg											

City of Monmouth
Site Assessment Data

Soil Stage 1

	Location		MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	SB-1
	Date		12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
	Depth		2.5'	7.5'	2.5'	7.5'	2.5'	7.5'	2.5'
Parameter	Tier 1 CUO	Tier 2 CUO							
Benzene	0.03	0.03	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	13.0	13.0	ND	ND	ND	ND	ND	ND	ND
Toluene	12.0	12.0	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	5.6	5.6	ND	ND	ND	ND	ND	ND	ND
MTBE	0.32	0.32	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	570.0	570.0	ND	ND	ND	ND	ND	ND	ND
Acenaphtylene	15.0	15.0	ND	ND	ND	ND	ND	ND	ND
Anthracene	12,000.0	12,000.0	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND	ND	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	ND	ND	ND	ND	ND
Fluorene	560.0	560.0	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND
Naphthalene	1.8	1.8	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	140.0	140.0	ND	ND	ND	ND	ND	ND	ND
Pyrene	2,300.0	2,300.0	ND	ND	ND	ND	ND	ND	ND
Exceeds Tier 1 COUs									
Exceeds Tier 2 COUs									
values in mg/kg									

City of Monmouth
Site Assessment Data

Soil Stage 1

	Location		SB-1	SB-2	SB-2
	Date		12/11/2014	12/11/2014	12/11/2014
	Depth		7.5'	2.5'	7.5'
Parameter	Tier 1 CUO	Tier 2 CUO			
Benzene	0.03	0.03	ND	ND	ND
Ethylbenzene	13.0	13.0	ND	ND	ND
Toluene	12.0	12.0	ND	ND	ND
Total Xylenes	5.6	5.6	ND	ND	ND
MTBE	0.32	0.32	ND	ND	ND
Acenaphthene	570.0	570.0	ND	ND	ND
Acenaphtylene	15.0	15.0	ND	ND	ND
Anthracene	12,000.0	12,000.0	ND	ND	ND
Benzo(a)anthracene	0.9	0.9	ND	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	ND
Fluorene	560.0	560.0	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND
Naphthalene	1.8	1.8	ND	ND	ND
Phenanthrene	140.0	140.0	ND	ND	ND
Pyrene	2,300.0	2,300.0	ND	ND	ND
Exceeds Tier 1 COUs					
Exceeds Tier 2 COUs					
values in mg/kg					

City of Monmouth
Site Assessment Data

GW Stage 1

Parameter	Location	MW1	MW2	MW3	MW4	MW5
	Date	12/12/2014	12/12/2014	12/12/2014	12/12/2014	12/12/2014
	Class I CUO					
Benzene	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.7	0.002	0.0017	ND	1.95	0.933
Toluene	1.0	ND	ND	ND	ND	ND
Total Xylenes	10.0	0.0032	0.0026	ND	2.25	1.4
MTBE	0.07	ND	ND	ND	ND	ND
Acenaphthene	0.42	0.0001	ND	ND	0.0107	0.0041
Acenaphtylene	0.010	ND	ND	ND	0.0046	0.003
Anthracene	2.1	ND	ND	ND	0.0124	0.0049
Benzo(a)anthracene	0.00013	ND	ND	ND	0.0006	0.0016
Benzo(a)pyrene	0.0002	ND	ND	ND	0.0003	0.0008
Benzo(b)fluoranthene	0.00018	ND	ND	ND	0.0002	0.0007
Benzo(g,h,i)perylene	0.00076	ND	ND	ND	0.0002	0.0006
Benzo(k)fluoranthene	0.00017	ND	ND	ND	ND	0.0003
Chrysene	0.0015	ND	ND	ND	0.0005	0.0011
Dibenz(a,h)anthracene	0.0003	ND	ND	ND	ND	ND
Fluoranthene	0.28	ND	ND	ND	0.0022	0.0033
Fluorene	0.28	ND	ND	ND	0.0223	0.0062
Indeno(1,2,3-cd)pyrene	0.00043	ND	ND	ND	ND	0.0002
Naphthalene	0.14	0.0015	0.0004	0.0001	1.01	0.592
Phenanthrene	0.0064	ND	ND	ND	0.0237	0.0093
Pyrene	0.21	0.0001	ND	ND	0.0039	0.0037

Exceeds Tier 1 Class I COUs
values in mg/kg

City of Monmouth
Site Assessment Data

GW Stage 2

	Location	MW-6	MW-7	MW-8
	Date	4/20/2016	4/20/2016	4/20/2016
Parameter	Class I CUO			
Benzene	0.005	ND	ND	ND
Ethylbenzene	0.7	ND	0.0074	ND
Toluene	1.0	ND	ND	ND
Total Xylenes	10.0	ND	0.002	ND
MTBE	0.07	ND	0.001	ND
Acenaphthene	0.42	ND	ND	ND
Acenaphtylene	0.010	ND	0.001	ND
Anthracene	2.1	ND	0.002	ND
Benzo(a)anthracene	0.00013	ND	0.0005	ND
Benzo(a)pyrene	0.0002	ND	0.0002	ND
Benzo(b)fluoranthene	0.00018	ND	0.0002	ND
Benzo(g,h,i)perylene	0.00076	ND	0.0004	ND
Benzo(k)fluoranthene	0.00017	ND	ND	ND
Chrysene	0.0015	ND	0.0003	ND
Dibenz(a,h)anthracene	0.0003	ND	ND	ND
Fluoranthene	0.28	ND	0.0094	ND
Fluorene	0.28	ND	0.0012	ND
Indeno(1,2,3-cd)pyrene	0.00043	ND	0.0001	ND
Naphthalene	0.14	ND	0.004	ND
Phenanthrene	0.0064	ND	0.005	ND
Pyrene	0.21	ND	0.0015	ND

Exceeds Tier 1 Class I COUs
values in mg/kg

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

July 15, 2015

Workorder: 15060096

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

TEL: (217) 522-8001
FAX: (217) 522-8009
RE: City of Monmouth

Dear Carol Rowe:

Suburban Laboratories, Inc. received 1 sample(s) on 6/30/2015 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,

Kelly Culhane

Kelly Culhane
Project Manager
708-544-3260 ext 212
kelly@suburbanlabs.com

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

Case Narrative

Client: CWM Company, Inc	**Date:** July 15, 2015
Project: City of Monmouth	**PO #:**
WorkOrder: 1506O96	**QC Level:**
Temperature of samples upon receipt at SLI: 1 C	**Chain of Custody #:** 122670

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 water analyses that are required to be performed in the field (e.g., pH, residual chlorine, sulfite, temperature, etc.) but are analyzed in the lab are identified as "in lab" and are considered past holding time. Following industry practices these results do not contain an "H" flag but are qualified as being analyzed in the lab.

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

RECEIVED
JUL 15 2015
BY: CR

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: City of Monmouth

Report Date: July 15, 2015
Workorder: 1506O96

Client Sample ID: TACO-1
Lab ID: 1506O96-001

Matrix: SOIL
Date Received: 06/30/2015 9:20 AM
Collection Date: 06/26/2015 12:00 AM

Parameter	Result	Report Limit	Qual.	Units	Dilution Factor	Date Analyzed	Batch ID
DRY BULK DENSITY		Method: ASTM-D2937-Rev 2004				Analyst: crt	
Soil Bulk Density (Pb)	1.586	0	c	g/cm³	1	06/30/2015 2:30 PM	R61105
ORGANIC MATTER & ORGANIC CARBON CONTENT		Method: ASTM-D2974-Rev 2000				Analyst: crt	
FOM-Organic Matter (@ 440 C)	0.0169	0.00100		g/g	1	07/01/2015 10:46 AM	R61133
FOC-Organic Carbon (0.58 Factor)	0.00980	0.00100		g/g	1	07/01/2015 10:46 AM	R61133
PARTICLE-SIZE ANALYSIS OF SOILS		Method: ASTM-D422-Rev 1963				Analyst: drc	
Hydrometer	Complete	0	c		1	07/09/2015 12:00 PM	R61485
Particle Density	Complete	0	c		1	07/09/2015 12:00 PM	R61485
Sieve Analysis	Complete	0	c		1	07/09/2015 12:00 PM	R61485
SOIL PARTICLE DENSITY		Method: ASTM-D854-Rev 2000				Analyst: crt	
Soil Particle Density (Ps)	2.638	0	c	g/cm³	1	07/01/2015 12:08 PM	R61142
PERCENT MOISTURE		Method: ASTM-D2216-Rev 2005				Analyst: crt	
Percent Moisture	23	1.0		wt%	1	07/01/2015 10:46 AM	R61133

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JUL 15 2015
BY: CR

SUBURBAN LABORATORIES, Inc.
4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.suburbanlabs.com

SLI Work Order: 1506O96
SLI Sample ID: 1506O96-001A

Analysis Date: 7/9/2015

Standard Test Method for Particle-Size Analysis of Soil

Sieve (U.S.)	Sieve Opening (mm)	Percent Retained 1506O96-001A
1-1/2"	38.1	0.00%
1"	25.4	0.00%
0.75"	19.1	0.0%
No. 4	4.75	0.0%
No. 10	2.00	0.4%
No. 20	0.85	0.7%
No. 40	0.420	1.1%
No. 60	0.250	0.3%
No. 140	0.106	0.4%
No. 200	0.075	0.2%

RECEIVED
JUL 15 2015
BY: CL

Particle(s)	Particle Size (mm)	Percent Present 1506O96-001A
Gravel	>4.75	0.0%
Sand, Course	4.74-2.0	0.4%
Sand, Medium	1.99-0.420	1.7%
Sand, Fine	0.419-0.075	1.0%
Silt	0.074-0.005	72.0%
Clay	<0.005-0.001	5.5%
Colloids	<0.001	19.4%

Analyst: Digitally signed by Drew Cheshire DN: CN = Drew Cheshire, C = US Reason: I am the author of this document Date: 2015.07.13 11:37:28 -05'00' Date:

Reviewed: Date:

Digitally signed by Monica Zupan DN: CN = Monica Zupan, C = US, O = Suburban Laboratories, Inc. Reason: I have reviewed this document Date: 2015.07.13 11:08:48 -05'00'

Rpt Ver: kelly 7/15/2015 8:35 AM
Rpt Ver: kelly 7/15/2015 9:02 AM

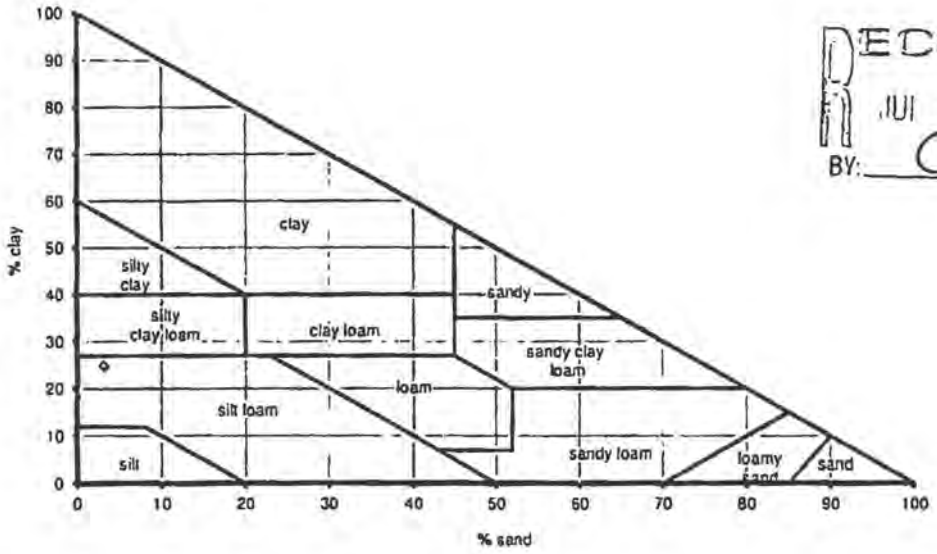
SUBURBAN LABORATORIES, Inc.
4140 Litt Drive · Hillside, Illinois 60162-1183
Tel. (708) 544-3260 · Toll Free (800) 783-LABS · Fax (708) 544-8587
www.suburbanlabs.com

SLI Work Order: 1506O96
SLI Sample ID: 1506O96-001A

Analysis Date: 7/9/2015

% SAND	% CLAY	%SILT
3.2	24.9	71.95

Soil Classification: Silt Loam



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

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

Qualifier Definitions

WO#: 1506O96
Date: 7/13/2015

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	Accredidation 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

SUBURBAN LABORATORIES, Inc.

1950 S. Batavia Ave., Ste 150, Geneva, IL 60134 Tel. 708.544.3260 Fax 708.544.8587 Toll Free: 800.783.LABS www.suburbanlabs.com

CHAIN OF CUSTODY RECORD

122670

Page 1 of 1

Company Name: CWM Company, Inc.
Company Address: 701 S. Grand Ave. W.
City: Springfield State: IL Zip: 62704
Phone: 217-522-8001 Fax: 217-522-8009 ☐ Fax Report
Email Address: CWM@CWMCOMPANY.COM Final Report will be emailed
Project ID / Location: City of Monmouth
Project Manager (Report to): Carol L. Rowe
Sample Collector(s) Name: MDR/MJS

TURNAROUND TIME REQUESTED
☒ Normal ☐ RUSH* *Additional Rush Charges Approved.
*Date & Time Needed:
Normal TAT is specified on the price quotation or fee schedule. Rush work must be pre-approved and additional charges apply.
Specify Regulatory Programs (Required) ☐ None/Info Only
☒ LUST ☐ SRP ☐ CCDD
☐ 503 Sludge ☐ NPDES ☐ LUST REIMBURSEMENT
☐ Disposal ☐ Other* *Please specify in comment section below.

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

	SAMPLE IDENTIFICATION "Use One Line Per Preservation & Container Type"	COLLECTION DATE	COLLECTION TIME	MATRIX	GRAB/ COMP.	CONTAINERS Qty	CONTAINERS SIZE & TYPE	PRESERVATIVE	FOC	Bulk Density	Moisture Content	Particle Density	Sieve Analysis
1	TACO-1	6/26/15		S	G	1/2	Tube/4oz	NONE	X	X	X	X	X
2		/ /											
3		/ /											
4		/ /											
5		/ /											
6		/ /											
7		/ /											
8		/ /											
9		/ /											
10		/ /											
11		/ /											
12		/ /											

Page 1 of 1
PO No.
Shipping Method
Reporting Level (at additional charge) 1 2 3 4

LAB USE ONLY
SU ORDER No. 150696
Samples containers supplied by customer? ☐ Yes
Temperature of Received Samples
Samples received the same day as collection? ☐ Yes

R	Condition	Sam	LAB #

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:
2014-15 Rates

RECEIVED
JUL 15 2015
BY: CK

CONDITION CODES
1. Improper/damaged container/cap
2. Improper preservation
3. Insufficient sample volume
4. Headspace/air bubbles for VOCs
5. Received past holding time
6. Received frozen
7. Label conflicts with COC

1. Relinquished By	Date	2. Relinquished By	Date	3. Relinquished By	Date	4. Relinquished By	Date
	6-29-15	Andy Thorpe	6-30-15				
Received By	Time	Received By	Time	Received By	Time	Received By	Time
Andy Thorpe ☐ Ice present	2:15 PM	K Allhare ☐ Ice present	9:20 AM	☐ Ice present		☐ Ice present	

Submission of samples subject to Terms and Conditions on back. Rev. 07/2008 White-Original. Pink-Sampler Copy

Rpt Ver: Kelly 7/15/2015 9:02 AM

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 Physical Soil Analysis

RECEIVED
AUG - 7 2015
BY: CW

A. Site Identification

IEMA Incident # (6- or 8-digit): 2014-0510 IEPA LPC# (10-digit): _____

Site Name: City of Monmouth

Site Address (Not a P.O. Box): 1125 North Main Street

City: Monmouth County: Warren ZIP Code: 61462

Leaking UST Technical File

B. Sample Collector

I certify that:

1. Samples were collected using ASTM procedures. MJS (Initial)
2. Chain-of-custody procedures were followed in the field. MJS (Initial)
3. Sample integrity was maintained by proper preservation. MJS (Initial)
4. All samples were properly labeled. MJS (Initial)

C. Laboratory Representative

I certify that:

1. Proper chain-of-custody procedures were followed as documented on the chain-of-custody forms (Initial)
2. Sample integrity was maintained by proper preservation. (Initial)
3. All samples were properly labeled. (Initial)
4. Quality assurance/quality control procedures were established and carried out. (Initial)
5. The test methods specified in the ASTM Standard D 422-63 or or D 1140-54 were used for particle size analysis. (Initial)

6. The test methods specified in ASTM Standards D 2216-90 or D 4643-87 were used for soil moisture content. * D2216-05 — (Initial) *

7. The test methods specified in ASTM Standards D 2487-90 or D 2488-90 were used for soil classification. — N/A (Initial)

8. The test methods specified in ASTM Standards D 5084-90 or D 4525-90 were used for hydraulic conductivity. — N/A (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 Matthew Saladino
Title Environmental Engineer
Company CWM Company, Inc.
Address 701 W. South Grand Ave.
City Sprinfield
State IL
Zip Code 62704
Phone (217) 522-8001
Signature [signature]
Date 6/26/15

Laboratory Representative

Name Kelly Culhane
Title Project Manager
Company Suburban Laboratories
Address 1950 S. Batavia Ave. Ste 150
City Geneva
State IL
Zip Code 60134
Phone 708-544-3260
Signature Kelly Culhane
Date 7/15/15

RECEIVED
AUG - 7 2015
BY: CR

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

April 29, 2016

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

Workorder: 1604H23

TEL: (217) 522-8001
FAX: (217) 522-8009
RE: City of Monmouth

Dear Carol Rowe:

Suburban Laboratories, Inc. received 3 sample(s) on 4/26/2016 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,

Shane Clarke
Business Development Manager
708-544-3260 ext 217
shane@SuburbanLabs.com

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

Case Narrative

Client: CWM Company, Inc	**Date:** April 29, 2016
Project: City of Monmouth	**PO #:**
WorkOrder: 1604H23	**QC Level:**
Temperature of samples upon receipt at SLI: 1 C	**Chain of Custody #:** 132707

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 water analyses that are required to be performed in the field (e.g., pH, residual chlorine, sulfite, temperature, etc.) but are analyzed in the lab are identified as "in lab" and are considered past holding time. Following industry practices these results do not contain an "H" flag but are qualified as being analyzed in the lab.

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: City of Monmouth

Report Date: April 29, 2016
Workorder: 1604H23

Client Sample ID: MW-6
Lab ID: 1604H23-001

Matrix: GROUNDWATER
Date Received: 04/26/2016 9:30 AM
Collection Date: 04/20/2016 10:00 AM

Parameter	Result	Report Limit	Qual.	Units	Dilution Factor	Date Analyzed	Batch ID
VOLATILE ORGANIC COMPOUNDS		Method: EPA-SW8260B-Rev 2, Dec-96				Analyst: mkl	
Benzene	ND	0.00100		mg/L	1	04/28/2016 4:14 PM	R71444
Ethylbenzene	ND	0.00100		mg/L	1	04/28/2016 4:14 PM	R71444
m,p-Xylene	ND	0.00200		mg/L	1	04/28/2016 4:14 PM	R71444
Methyl tert-butyl ether	ND	0.00100		mg/L	1	04/28/2016 4:14 PM	R71444
o-Xylene	ND	0.00100		mg/L	1	04/28/2016 4:14 PM	R71444
Total Xylenes	ND	0.00200		mg/L	1	04/28/2016 4:14 PM	R71444
Toluene	ND	0.00100		mg/L	1	04/28/2016 4:14 PM	R71444
Internal Quality Control Compounds							
SS: 4-Bromofluorobenzene	99.8	87.9-119		%Rec	1	04/28/2016 4:14 PM	R71444
SS: Dibromofluoromethane	104	62.3-122		%Rec	1	04/28/2016 4:14 PM	R71444
SS: Toluene-d8	103	68.2-119		%Rec	1	04/28/2016 4:14 PM	R71444
SEMIVOLATILE ORGANICS, BY GCMS SIM		Method: EPA-8270C-Rev 3, Dec-96				Analyst: njs	
Acenaphthene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Acenaphthylene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Anthracene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Benzo(a)anthracene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Benzo(a)pyrene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Benzo(b)fluoranthene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Benzo(g,h,i)perylene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Benzo(k)fluoranthene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Chrysene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Dibenzo(a,h)anthracene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Fluoranthene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Fluorene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Indeno(1,2,3-cd)pyrene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Naphthalene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Phenanthrene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Pyrene	ND	0.000100		mg/L	1	04/28/2016 8:44 PM	35827
Internal Quality Control Compounds							
SS: 2-Fluorobiphenyl	92.3	26.8-113		%Rec	1	04/28/2016 8:44 PM	35827
SS: 4-Terphenyl-d14	112	31.3-152		%Rec	1	04/28/2016 8:44 PM	35827
SS: Nitrobenzene-d5	97.0	13.8-115		%Rec	1	04/28/2016 8:44 PM	35827

Rpt Ver: shane 4/29/2016 6:22 PM

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

Laboratory Results

Client ID: CWM Company, Inc
Project Name: City of Monmouth
Report Date: April 29, 2016
Workorder: 1604H23

Client Sample ID: MW-7
Lab ID: 1604H23-002
Date Received: 04/26/2016 9:30 AM
Matrix: GROUNDWATER
Collection Date: 04/20/2016 10:15 AM

Parameter	Result	Report Limit	Qual.	Units	Dilution Factor	Date Analyzed	Batch ID
VOLATILE ORGANIC COMPOUNDS		Method EPA-SW8260B-Rev 2, Dec-96				Analyst: mkl	
Benzene	ND	0.00100		mg/L	1	04/28/2016 4:42 PM	R71444
Ethylbenzene	0.00744	0.00100		mg/L	1	04/28/2016 4:42 PM	R71444
m,p-Xylene	0.00235	0.00200		mg/L	1	04/28/2016 4:42 PM	R71444
Methyl tert-butyl ether	0.00108	0.00100		mg/L	1	04/28/2016 4:42 PM	R71444
o-Xylene	ND	0.00100		mg/L	1	04/28/2016 4:42 PM	R71444
Total Xylenes	0.00235	0.00200		mg/L	1	04/28/2016 4:42 PM	R71444
Toluene	ND	0.00100		mg/L	1	04/28/2016 4:42 PM	R71444
Internal Quality Control Compounds							
SS: 4-Bromofluorobenzene	109	67.9-119		%Rec	1	04/28/2016 4:42 PM	R71444
SS: Dibromofluoromethane	102	62.3-122		%Rec	1	04/28/2016 4:42 PM	R71444
SS: Toluene-d8	100	68.2-119		%Rec	1	04/28/2016 4:42 PM	R71444
SEMIVOLATILE ORGANICS, BY GCMS SIM		Method EPA-8270C-Rev 3, Dec-96				Analyst: nja	
Acenaphthene	ND	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Acenaphthylene	0.000964	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Anthracene	0.00255	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Benzo(a)anthracene	0.000524	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Benzo(a)pyrene	0.000270	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Benzo(b)fluoranthene	0.000241	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Benzo(g,h,i)perylene	0.000420	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Benzo(k)fluoranthene	ND	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Chrysene	0.000399	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Dibenzo(a,h)anthracene	ND	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Fluoranthene	0.000939	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Fluorene	0.00412	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Indeno(1,2,3-cd)pyrene	0.000113	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Naphthalene	0.00419	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Phenanthrene	0.00589	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Pyrene	0.00150	0.000100		mg/L	1	04/28/2016 9:21 PM	35827
Internal Quality Control Compounds							
SS: 2-Fluorobiphenyl	76.5	28.8-113		%Rec	1	04/28/2016 9:21 PM	35827
SS: 4-Terphenyl-d14	102	31.3-152		%Rec	1	04/28/2016 9:21 PM	35827
SS: Nitrobenzene-d5	166	13.8-115	S	%Rec	1	04/28/2016 9:21 PM	35827

Rpt Ver: shane 4/29/2016 6:22 PM

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

Laboratory Results

Client ID: CWM Company, Inc
Project Name: City of Monmouth

Report Date: April 29, 2016
Workorder: 1604H123

Client Sample ID: MW-8
Lab ID: 1604H23-003

Date Received: 04/26/2016 9:30 AM

Matrix: GROUNDWATER
Collection Date: 04/20/2016 10:30 AM

Parameter	Result	Report Limit	Qual.	Units	Dilution Factor	Date Analyzed	Batch ID
VOLATILE ORGANIC COMPOUNDS		Method: EPA-SW8260B-Rev 2, Dec-96				Analyst: mkl	
Benzene	ND	0.00100		mg/L	1	04/28/2016 5:09 PM	R71444
Ethylbenzene	ND	0.00100		mg/L	1	04/28/2016 5:09 PM	R71444
m,p-Xylene	ND	0.00200		mg/L	1	04/28/2016 5:09 PM	R71444
Methyl tert-butyl ether	ND	0.00100		mg/L	1	04/28/2016 5:09 PM	R71444
o-Xylene	ND	0.00100		mg/L	1	04/28/2016 5:09 PM	R71444
Total Xylenes	ND	0.00200		mg/L	1	04/28/2016 5:09 PM	R71444
Toluene	ND	0.00100		mg/L	1	04/28/2016 5:09 PM	R71444
Internal Quality Control Compounds							
SS: 4-Bromofluorobenzene	101	67.9-119		%Rec	1	04/28/2016 5:09 PM	R71444
SS: Dibromofluoromethane	101	62.3-122		%Rec	1	04/28/2016 5:09 PM	R71444
SS: Toluene-d8	101	68.2-119		%Rec	1	04/28/2016 5:09 PM	R71444
SEMIVOLATILE ORGANICS, BY GCMS SIM		Method: EPA-8270C-Rev 3, Dec-96				Analyst: njs	
Acenaphthene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Acenaphthylene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Anthracene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Benzo(a)anthracene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Benzo(a)pyrene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Benzo(b)fluoranthene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Benzo(g,h,i)perylene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Benzo(k)fluoranthene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Chrysene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Dibenzo(a,h)anthracene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Fluoranthene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Fluorene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Indeno(1,2,3-cd)pyrene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Naphthalene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Phenanthrene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Pyrene	ND	0.000100		mg/L	1	04/28/2016 9:59 PM	35827
Internal Quality Control Compounds							
SS: 2-Fluorobiphenyl	83.6	26.8-113		%Rec	1	04/28/2016 9:59 PM	35827
SS: 4-Terphenyl-d14	90.3	31.3-152		%Rec	1	04/28/2016 9:59 PM	35827
SS: Nitrobenzene-d5	84.3	13.8-115		%Rec	1	04/28/2016 9:59 PM	35827

Rpt Ver: shane 4/29/2016 6:22 PM

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

PREP DATES REPORT

Client: CWM Company, Inc
Project: City of Monmouth

Report Date: April 29, 2016
Lab Order: 1604H23

Sample ID	Collection Date	Batch ID	Prep Method	Prep Test Name	TCLP Date	Prep Date
1604H23-001B	4/20/2016 10:00:00 A	35827	3510SIM_B	AQUEOUS PREP SEP FUNNEL: BNA		4/26/2016
1604H23-002B	4/20/2016 10:15:00 A	35827	3510SIM_B	AQUEOUS PREP SEP FUNNEL: BNA		4/26/2016
1604H23-003B	4/20/2016 10:30:00 A	35827	3510SIM_B	AQUEOUS PREP SEP FUNNEL: BNA		4/26/2016

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

Qualifier Definitions

WO#: 16041123
Date: 4/29/2016

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 accredidation
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	Accredidation 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

SUBURBAN LABORATORIES, Inc.

1950 S. Batavia Ave., Ste 150, Geneva, IL 60134 Tel. 708.544.3260 Fax: 708.544.8587 Toll Free: 800.783.LABS www.suburbanlabs.com

CHAIN OF CUSTODY RECORD

132707

Company Name: CW³M Company, Inc.
Company Address: 701 West South Grand Ave
City: Springfield State: IL Zip: 62704
Phone: 217-522-8001 Fax: 522-8009 ☐ Fax Report
Email Address: CWMP.cwmcompany.com Final Report will be emailed
Project ID / Location: City of Monmouth
Project Manager (Report to): Carol Rowe
Sample Collector(s) Name: MDR

TURNAROUND TIME REQUESTED
☒ Normal ☐ RUSH* *Additional Rush Charges Approved.
*Date & Time Needed:
Normal TAT is specified on the price quotation or fee schedule. Rush work must be pre-approved and additional charges apply.
Specify Regulatory Program: (Required) ☐ None/Info Only
☒ LUST ☐ SRP ☐ SDWA
☐ 503 Sludge ☐ NPDES ☐ MWRDGC
☐ Disposal ☐ Other* *Please specify in comment section below.

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

Page 1 of 1
PO No.
Shipping Method
Reporting Level (no additional charge) 1 2 3 4
LAB USE ONLY
SLI ORDER No. 1604H23
Sample containers supplied by customer? ☐ Yes
Temperature of Received Samples °C
Samples received the same day as collection? ☐ Yes

	SAMPLE IDENTIFICATION "Use One Line Per Preservation & Container Type"	COLLECTION DATE	COLLECTION TIME	MATRIX	GRAB/ COMP.	CONTAINERS Qty	CONTAINERS SIZE & TYPE	PRESERVATIVE	BETX	MTBE	PNA	R	Condition	Sole	LAB #
1	MW-6	4/28/16	10⁰⁰	GW	G	1/1	40mL/4oz	HCl/Ice	X	X	X				AB
2	MW-7	"	10¹⁵	"	"	"	"	"	X	X	X				"
3	MW-8	"	10³⁰	"	"	"	"	"	X	X	X				13AB
4															
5															
6															
7															
8															
9															
10															
11															
12															

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 (NaBS), NaThio

COMMENTS & SPECIAL INSTRUCTIONS:

RECEIVED MAY 11 2016 BY: CR

CONDITION CODES
1. Improper/damaged container/cap
2. Improper preservation
3. Insufficient sample volume
4. Headspace/air bubbles for VOCs
5. Received past holding time
6. Received frozen
7. Label conflicts with COC

1. Relinquished By	Date	2. Relinquished By	Date	3. Relinquished By	Date	4. Relinquished By	Date
	4-25-16		4-26-16				
Received By	Time	Received By	Time	Received By	Time	Received By	Time
☐ Ice present	1:15P	☐ Ice present	9:30A	☐ Ice present		☐ Ice present	

Submission of samples subject to Terms and Conditions on back. Rev. 07/20/08 White-Original, Pink-Sampler Copy

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.

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BY: CL

Leaking Underground Storage Tank Program
Laboratory Certification for Chemical Analysis

A. Site Identification

IEMA Incident # (6- or 8-digit): 2014-0510 IEPA LPC# (10-digit): 1870155032

Site Name: City of Monmouth

Site Address (Not a P.O. Box): 1125 North Main St.

City: Monmouth County: Warren ZIP Code: 61462

Leaking UST Technical File

B. Sample Collector

I certify that:

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

C. Laboratory Representative

I certify that:

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

6. SW-846 Analytical Laboratory Procedure (USEPA) methods were used for the analyses. KSS (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). KSS (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 Matthew Rives
Title Engineer
Company CWM Company, Inc.
Address 701 South Grand Ave. West
City Springfield
State IL
Zip Code 62704
Phone 217-522-8001
Signature [signature]
Date 4/25/16

Laboratory Representative

Name Keith Sinon
Title Assistant Project Manager
Company Suburban Laboratories, Inc.
Address 1950 S. Batavia Ave., Suite 150
City Geneva
State IL
Zip Code 60134
Phone 708-544-3260
Signature [signature]
Date 5/2/16

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MAY - 4 2016
BY: CR

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

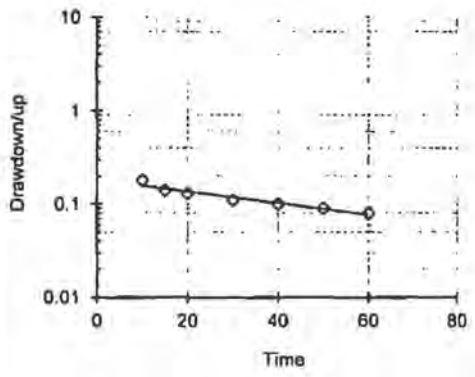
Automatic Calculation

Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: City of Monmouth
Client Name: City of Monmouth
Analysis By: MDR/MJS
Run Date: 4/19/2016

Project No.: 2014-0510
Identification: MW-2

Riser Pipe Diameter:	0.1667	feet
Intake Diameter:	0.604	feet
Intake Length:	10	feet
Saturated Column Length:	9.58	feet
Water Table Depth:	5.4	feet
Aquifer Thickness:	10	feet
Line Fit Starting No.:	1	Min 1 to
Line Fit Ending No.:	7	Max 7
Specify Output Units:	7	1 to 9
Hyd. Cond., K(h):	3.85E-04	cm./sec.
Error of Fit:	0.030	



Meas. #	Time seconds	Field Meas. feet	Drawdown/up feet		Line Fit To LN(Yt)	Regression On LN(Yt)
1)	10.00	5.22	0.18		-1.715	-1.846
2)	15.00	5.26	0.14		-1.966	-1.918
3)	20.00	5.27	0.13		-2.040	-1.991
4)	30.00	5.29	0.11		-2.207	-2.135
5)	40.00	5.30	0.10		-2.303	-2.280
6)	50.00	5.31	0.09		-2.408	-2.425
7)	60.00	5.32	0.08		-2.526	-2.569

APPENDIX F

SITE INVESTIGATION BUDGETS AND CERTIFICATIONS

STAGE 3 SITE INVESTIGATION PLAN AND BUDGET
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

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 #: 1870155032 County: Warren

City: Monmouth Site Name: City of Monmouth

Site Address: 1125 North Main

IEMA Incident No.: 2014-0510

IEMA Notification Date: May 5, 2014

Date this form was prepared: Mar 30, 2015

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

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JUL 29 2016
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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 Actual Proposed

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

IL 532 -2825
LPC 630 Rev. 1/ 2007

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: City of Monmouth

Send in care of: CW3M 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: 2

Incident Numbers assigned to the site due to releases from USTs: 2014-0510 92-0055

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 ☐	92-0055	Unknown
Gasoline	3,000	Yes ☒ No ☐	92-0055	Unknown
Gasoline	3,000	Yes ☒ No ☐	92-0055	Unknown
Gasoline	3,000	Yes ☒ No ☐	92-0055	Unknown
Gasoline	1,000	Yes ☒ No ☐	92-0055	Unknown
Gasoline	500	Yes ☒ No ☐	92-0055	Unknown
Gasoline	8,000	Yes ☒ No ☐	2014-0510	Overfills
Gasoline	8,000	Yes ☒ No ☐	2014-0510	Overfills
Gasoline	8,000	Yes ☒ No ☐	2014-0510	Overfills

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
Diesel Fuel	4,000	Yes ☒ No ☐	2014-0510	Overfill
		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 2014-0510. 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.

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JUL 29 2016
IEPA/BOL

Owner/Operator: City of Monmouth

Authorized Representative: Lowell Crow Title: City Administrator

Signature: Date: 6/12/2016

Subscribed and sworn to before me the 12th day of June 2016

(Notary Public)

Seal: OFFICIAL SEAL
CAROL L. ROWE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 3-18-2017

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:

L.P.E./L.P.G. Signature: Date: 7/25/16

Subscribed and sworn to before me the 25th day of July 2016

(Notary Public)

OFFICIAL SEAL
CAROL L. ROWE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 3-18-2017

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.

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
			Actual	Proposed	
Drilling and Monitoring Well Costs Form	$	$	$ 2,778.96	$ 3,956.00	$
Analytical Costs Form	$	$	$ 1,359.00	$ 1,229.02	$
Remediation and Disposal Costs Form	$	$	$ 619.58	$ 938.64	$
UST Removal and Abandonment Costs Form	$	$	$	$	$
Paving, Demolition, and Well Abandonment Costs Form	$	$	$	$	$
Consulting Personnel Costs Form	$	$	$ 20,259.53	$ 34,646.24	$
Consultant's Materials Costs Form	$	$	$ 1,187.50	$ 1,238.50	$
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	$	$	$ 26,204.57	$ 42,008.40	$

STAGE 2 ACTUAL COSTS

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
3	HSA	15.00	45.00	Groundwater Plume
1	PUSH	10.00	10.00	TACO Parameters

☒ Subpart H minimum payment amount applies.

	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:	45.00	28.50	1,282.50
Total Feet via PUSH:	10.00	22.30	223.00
Total Feet for Injection via PUSH:		18.59	
		Total Drilling Costs:	1,858.71 *

* 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 ($)
3	HSA	2.00	15.00	45.00

Well Installation	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:	45.00	20.45	920.25
Total Feet via PUSH:		15.49	
Total Feet of 4" or 6" Recovery:		30.98	
Total Feet of 8" or Greater Recovery:		50.80	
		Total Well Costs:	920.25

Total Drilling and Monitoring Well Costs:	$2,778.96

Analytical Costs Form

Laboratory Analysis	Number of Samples		Cost ($) per Analysis		Total per Parameter
Chemical Analysis					
BETX Soil with MTBE EPA 8260		X		=	
BETX Water with MTBE EPA 8260	3	X	100.37	=	$301.11
COD (Chemical Oxygen Demand)		X		=	
Corrosivity		X		=	
Flash Point or Ignitability Analysis EPA 1010		X		=	
Fraction Organic Carbon Content (f_{oc}) ASTM-D 2974-00	1	X	47.08	=	$47.08
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)		X		=	
PCB / Pesticides (combination)		X		=	
PCBs		X		=	
Pesticides		X		=	
pH		X		=	
Phenol		X		=	
Polynuclear Aromatics PNA, or PAH SOIL EPA 8270		X		=	
Polynuclear Aromatics PNA, or PAH WATER EPA 8270	3	X	188.36	=	$565.08
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		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
Geo-Technical Analysis					
Soil Bulk Density (p_b) ASTM D2937-94	1	X	27.26	=	$27.26
Ex-situ Hydraulic Conductivity / Permeability		X		=	
Moisture Content (w) ASTM D2216-92 / D4643-93	1	X	14.87	=	$14.87
Porosity		X		=	
Rock Hydraulic Conductivity Ex-situ		X		=	
Sieve / Particle Size Analysis ASTM D422-63 / D1140-54	1	X	179.68	=	$179.68
Soil Classification ASTM D2488-90 / D2487-90		X		=	
Soil Particle Density (p_s) ASTM D854-92	1	X	100.00	=	$100.00
		X		=	
		X		=	
		X		=	

Analytical Costs Form

Metals Analysis					
Soil preparation fee for Metals TCLP Soil (one fee per soil sample)		X		=	
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		X		=	
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		X		=	
Sample Shipping per sampling event[1]	2	X	61.96	=	$123.92

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

Total Analytical Costs: $ 1,359.00

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

Backfilling the Excavation:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost

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 ($)	Total Cost ($)
2	309.79	619.58
Number of Drums of Liquid Waste	**Cost per Drum ($)**	**Total Cost ($)**
Total Drum Disposal Costs		619.58

Total Remediation and Disposal Costs:	$619.58

Consulting Personnel Costs Form

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Project Manager	6.00	123.91	$743.46
Stage 2-Field	Office Prep / Drill Plans / Scheduling / Technical Compliance / Project Oversight			
	Engineer III	20.00	123.91	$2,478.20
Stage 2-Field	Drilling Prep / Field Prep / Sampling Prep / Drill Plans / Scheduling / On-site Drilling / Surveying/ Slug			
	Engineer I	10.00	92.93	$929.30
	Borelogs and WCRs / Analytical Data Entry / Tabulation			
	Geologist III	2.00	109.04	$218.08
Stage 2-Field	Groundwater flow and evaluation calculations			
	Senior Draftperson/CAD	2.00	74.34	$148.68
Stage 2-Field	Drafting / Locations / Elevations / Contamination Levels			
	Senior Project Manager	6.00	123.91	$743.46
Stage 2-Field	Borelogs Review / WCRs Review / Analytical Review			
	Engineer I	12.00	92.93	$1,115.16
Stage 2-Field	On-site Drilling / Surveying/ Slug Test			
	Engineer III	4.00	123.91	$495.64
Stage 2-Field	Site investigation documentation/ Field report/ Drilling documentations			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Engineer I	40.00	92.93	$3,717.20
Stage 2-Plan	Stage 2 Plan Preparation and Design			
	Draftperson/CAD III	3.00	61.96	$185.88
Stage 2-Plan	Drafting/Editing of Maps for Report			
	Senior Admin. Assistant	2.00	55.76	$111.52
Stage 2-Plan	Stage 2 Plan Compilation, Assembly, and Distribution			
	Engineer III	4.00	123.91	$495.64
Stage 2-Plan	Stage 2 Plan Development / Drill Plan			
	Senior Project Manager	8.00	123.91	$991.28
Stage 2-Plan	Site Investigation Plan Development Oversight/Review			
	Senior Prof. Engineer	2.00	161.09	$322.18
Stage 2-Plan	Stage 2 Plan Certification			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	Task			
	Engineer I	18.00	92.93	$1,672.74
Stage 2-Budget	Stage 2 Budget Calculations and Inputs			
	Senior Admin. Assistant	2.00	55.76	$111.52
Stage 2-Budget	Stage 2 Budget Compilation, Assembly, and Distribution			
	Engineer III	2.00	123.61	$247.22
Stage 2-Budget	Stage 2 Budget Development			
	Senior Project Manager	8.00	123.91	$991.28
Stage 2-Budget	Stage 2 Budget Technical Compliance and Oversight			
	Senior Prof. Engineer	3.00	161.09	$483.27
Stage 2-Budget	Stage 2 Budget Certification			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	Task			
	Senior Admin. Assistant	4.00	55.76	$223.04
Stage 2-Pay	Stage 2 Reimbursement Compilation, Assembly, and Distribution			
	Senior Acct. Technician	25.00	68.14	$1,703.50
Stage 2-Pay	Stage 2 Reimbursement Preparation			
	Senior Prof. Engineer	4.00	161.09	$644.36
Stage 2-Pay	Stage 2 Reimbursement Certification			
	Senior Project Manager	12.00	123.91	$1,486.92
Stage 2-Pay	Stage 2 Reimbursement Coordination / Oversight and Technical Compliance			

*Refer to the applicable Maximum Payment Amounts document.

Total of Consulting Personnel Costs	$20,259.53

Consultant's Materials Costs Form

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
PID Rental	1.00	148.00	/day	$148.00
Stage 2-Field	To detect VOC levels in soil samples			
Survey Equipment Rental	1.00	86.00	/day	$86.00
Stage 2-Field	Survey monitoring well elevations for groundwater flow calculations			
Water Level Indicator	2.00	28.00	/day	$56.00
Stage 2-Field	Test for groundwater during drilling activities/Measure static groundwater elevations/ Slug			
Measuring Wheel	1.00	21.00	/day	$21.00
Stage 2-Field	Mapping sampling locations			
Mileage	600.00	.65	/mile	$390.00
Stage 2-Field	2 round trips from Springfield office (1 - Drilling, 1 - Sample/Survey)			
Disposable Gloves	2.00	16.00	/box	$32.00
Stage 2-Field	Disposable latex gloves for soil and groundwater sampling			
Bailing Twine	1.00	6.00	/roll	$6.00
Stage 2-Field	String for Bailers			
Bailers	3.00	16.00	/each	$48.00
Stage 2-Field	Disposable bailers for monitoring well development and sampling			
Slug	1.00	36.00	/day	$36.00
Stage 2-Field	Hydraulic conductivity			

Materials, Equipment, or Field Purchase		Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**				
Copies		300.00	.15	/copy	$45.00
Stage 2-Field	IEPA correspondence, analytical reports, field reports, maps and boring logs for field use				
Copies		500.00	.15	/copy	$75.00
Stage 2-Pay	Copies Stage 2 Reimbursement Claim/Drafts/Forms/Submittals				
Postage		2.00	6.00	/each	$12.00
Stage 2-Pay	Mailing Stage 2 reimbursement forms / completed package				
Copies		500.00	.15	/copy	$75.00
Stage 2-Pay	Copies of Stage 2 Budget Summary and Reimbursement plan/ claim / Drafts / Forms				
Postage		2.00	6.00	/each	$12.00
Stage 2-Pay	Stage 2 Budget Forms/Drafts/Distribution				
Copies		150.00	.15	/copy	$22.50
Stage 2-Budget	Copies of Stage 2 Budget				
Postage		4.00	6.00	/each	$24.00
Stage 2-Budget	Postage for Stage 2 Budget forms/ Distribution				
Copies		500.00	.15	/copy	$75.00
Stage 2-Plan	Copies of Stage 2 Plan				
Postage		4.00	6.00	/each	$24.00
Stage 2-Plan	Postage for Stage 2 Budget forms/ Distribution				

Total of Consultant Materials Costs	**$1,187.50**

STAGE 3 PROPOSED COSTS

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
4	HSA	20.00	80.00	Groundwater Plume Delineation

☐ Subpart H minimum payment amount applies.

	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:	80.00	28.79	2,303.20
Total Feet via PUSH:		22.53	
Total Feet for Injection via PUSH:		18.77	
		Total Drilling Costs:	2,303.20

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 ($)
4	HSA	2.00	20.00	80.00

Well Installation	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:	80.00	20.66	1,652.80
Total Feet via PUSH:		15.64	
Total Feet of 4" or 6" Recovery:		31.29	
Total Feet of 8" or Greater Recovery:		51.31	
		Total Well Costs:	1,652.80

Total Drilling and Monitoring Well Costs:	$3,956.00

Analytical Costs Form

Laboratory Analysis	Number of Samples		Cost ($) per Analysis		Total per Parameter
Chemical Analysis					
BETX Soil with MTBE EPA 8260		X		=	
BETX Water with MTBE EPA 8260	4	X	101.37	=	$405.48
COD (Chemical Oxygen Demand)		X		=	
Corrosivity		X		=	
Flash Point or Ignitability Analysis EPA 1010		X		=	
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)		X		=	
PCB / Pesticides (combination)		X		=	
PCBs		X		=	
Pesticides		X		=	
pH		X		=	
Phenol		X		=	
Polynuclear Aromatics PNA, or PAH SOIL EPA 8270		X		=	
Polynuclear Aromatics PNA, or PAH WATER EPA 8270	4	X	190.24	=	$760.96
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		X		=	
		X		=	
		X		=	
		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)		X		=	
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		X		=	
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		X		=	
Sample Shipping per sampling event[1]	1	X	62.58	=	$62.58

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

Total Analytical Costs: $ 1,229.02

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

Backfilling the Excavation:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost

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 ($)	Total Cost ($)
3	312.88	938.64
Number of Drums of Liquid Waste	**Cost per Drum ($)**	**Total Cost ($)**
Total Drum Disposal Costs		938.64

Total Remediation and Disposal Costs:	$938.64

Consulting Personnel Costs Form

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Project Manager	8.00	125.15	$1,001.20
Stage 3-Field	Field Preparation, Scheduling, Arrangements/Coordination for Investigation Activities			
	Engineer I	10.00	93.86	$938.60
Stage 3-Field	Off-site Drilling			
	Engineer III	14.00	125.15	$1,752.10
Stage 3-Field	Off-site Drilling / Soil Sampling/ Drill Plans/ Scheduling/ Field prep/ Mobilization			
	Senior Project Manager	6.00	125.15	$750.90
Stage 3-Field	Site Investigation Oversight and Documentation			
	Senior Admin. Assistant	4.00	56.32	$225.28
Stage 3-Field	Arrangements for Investigation, Utilities/JULIE, and Scheduling			
	Senior Project Manager	6.00	125.15	$750.90
Stage 3-Field	Evaluate Analytical Results, Borelogs, and Well Completion Reports			
	Engineer I	6.00	93.86	$563.16
Stage 3-Field	Record Borelogs, Record Well Completion Reports, and Tabulation of Analytical Results			
	Engineer III	8.00	125.15	$1,001.20
Stage 3-Field	Groundwater Sampling/Surveying			
	Engineer I	8.00	93.86	$750.88
Stage 3-Field	Groundwater Sampling/Surveying			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Geologist III	3.00	110.13	$330.39
Stage 3-Field	Groundwater Flow Direction Calculations / Mapping			
	Senior Project Manager	6.00	125.15	$750.90
Stage 3-Field	Site Investigation Documentation / Field Reports			
	Engineer I	32.00	93.86	$3,003.52
Stage 3-Plan	Stage 3 Plan Preparation and Design			
	Senior Draftperson/CAD	6.00	75.08	$450.48
Stage 3-Plan	Drafting/Editing of Maps for Report			
	Senior Admin. Assistant	3.00	56.32	$168.96
Stage 3-Plan	Stage 3 Plan Compilation, Assembly, and Distribution			
	Engineer III	10.00	125.15	$1,251.50
Stage 3-Plan	Stage 3 Plan Development / Drill Plan			
	Senior Project Manager	6.00	125.15	$750.90
Stage 3-Plan	Site Investigation Plan Development Oversight/Review			
	Senior Prof. Engineer	3.00	162.70	$488.10
Stage 3-Plan	Stage 3 Plan Certification			
	Senior Prof. Engineer	3.00	162.70	$488.10
Stage 3-Budget	Stage 3 Budget Certification			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Engineer I	18.00	93.86	$1,689.48
Stage 3-Budget	Stage 3 Budget Calculations and Inputs			
	Senior Admin. Assistant	2.00	56.32	$112.64
Stage 3-Budget	Stage 3 Budget Compilation, Assembly, and Distribution			
	Engineer III	8.00	125.15	$1,001.20
Stage 3-Budget	Stage 3 Budget Development			
	Senior Project Manager	8.00	125.15	$1,001.20
Stage 3-Budget	Stage 3 Budget Technical Compliance and Oversight			
	Senior Project Manager	12.00	125.15	$1,501.80
Stage 3-Pay	Stage 3 Reimbursement Coordination / Oversight and Technical Compliance			
	Senior Prof. Engineer	4.00	162.70	$650.80
Stage 3-Pay	Stage 3 Reimbursement Certification			
	Senior Acct. Technician	25.00	68.83	$1,720.75
Stage 3-Pay	Stage 3 Reimbursement Preparation			
	Senior Admin. Assistant	4.00	56.32	$225.28
Stage 3-Pay	Stage 3 Reimbursement Compilation, Assembly, and Distribution			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Project Manager	8.00	125.15	$1,001.20
Stage 3-Field	Off-site access requests, agreements, correspondence/Property Owner Negotiations			
	Engineer III	16.00	125.15	$2,002.40
Stage 3-Field	Off-site results, SI Reports, Property Owner Correspondence			
	Senior Admin. Assistant	12.00	56.32	$675.84
Stage 3-Field	Off-site access requests assembly, distribution			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Project Manager	6.00	125.15	$750.90
SICR	SICR Technical Compliance/Oversight			
	Senior Prof. Engineer	4.00	162.70	$650.80
SICR	SICR Certification			
	Engineer III	40.00	125.15	$5,006.00
SICR	SICR Development			
	Senior Admin. Assistant	6.00	56.32	$337.92
SICR	SICR Compilation, Assembly, and Distribution			
	Senior Draftperson/CAD	12.00	75.08	$900.96
SICR	Drafting/Editing Maps for the SICR			

*Refer to the applicable Maximum Payment Amounts document.

Total of Consulting Personnel Costs	$34,646.24

Consultant's Materials Costs Form

Materials, Equipment, or Field Purchase		Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**				
PID Rental		1.00	148.00	/day	$148.00
Stage 3-Field	Detect VOC Levels in Samples				
Measuring Wheel		1.00	21.00	/day	$21.00
Stage 3-Field	Mapping Sampling Locations				
Disposable Gloves		1.00	16.00	/box	$16.00
Stage 3-Field	Disposable Latex Gloves for Groundwater Sampling				
Mileage		600.00	.65	/mile	$390.00
Stage 3-Field	2 Round Trips from Springfield Office to Site (Drilling, GW Sampling)				
Water Level Indicator		2.00	28.00	/day	$56.00
Stage 3-Field	Determining Depth to Groundwater While Drilling / Measure Static GW Elevations				
Copies		600.00	.15	/copy	$90.00
Stage 3-Plan	Copies/Drafts of Stage 3 Plan / IEPA Correspondences				
Postage		2.00	6.00	/each	$12.00
Stage 3-Plan	Stage 3 Report/Forms Distribution				
Copies		250.00	.15	/copy	$37.50
Stage 3-Budget	Copies of Stage 3 Budget/Draft/ Forms				

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Postage	2.00	6.00	/each	$12.00
Stage 3-Budget	Stage 3 Budget/Forms Distribution			
Copies	600.00	.15	/copy	$90.00
Stage 3-Pay	Copies of Stage 3 Reimbursement Request/Supporting Documentation			
Postage	2.00	6.00	/each	$12.00
Stage 3-Pay	Stage 3 Forms and Reimbursement Distribution			
Copies	150.00	.15	/copy	$22.50
Stage 3-Field	Field Preparation/Maps/Borelogs/Analytical Reports/Field Reports			
Survey Equipment Rental	1.00	86.00	/day	$86.00
Stage 3-Field	Survey monitoring well elevations for groundwater flow calculations			
Bailers	4.00	16.00	/each	$64.00
Stage 3-Field	Disposable Bailers for monitoring well development and sampling			
Bailing Twine	1.00	6.00	/roll	$6.00
Stage 3-Field	String for Bailers			
Copies	600.00	.15	/each	$90.00
SICR	Copies of SICR Draft and Attachments			
Postage	2.00	6.00	/day	$12.00
SICR	SICR Distribution			

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Copies	250.00	.15	/each	$37.50
Stage 3-Field	Copies of Off-site Access Correspondence/ Agreements			
Postage	6.00	6.00	/each	$36.00
Stage 3-Field	Off-site Access Distribution			

Total of Consultant Materials Costs	$1,238.50

LEAKING UST TECHNICAL REVIEW NOTES

Reviewed by: Dave Myers
Date Reviewed: 8/8/16

Re: LPC #1870155032 -- ~~Monmouth~~ Warren/ Monmouth, City of
1125 North Main St.
Leaking UST Incident No. 20140510
Leaking UST Technical File

Document(s) Reviewed:
Stage 3 Plan/Budget, Stage 2 Actual Costs dated 7/26/16 and received 7/29/16

General Site Information:

Site subject to: 734

IEMA date(s): 5/5/14	Payment from the Fund? (Y/N/unknown): Y, 5000 ded
UST system removed? (Y/N): Y, 6/2/14	OSFM Fac. ID #: 3-005131
Encountered groundwater? (Y/N/unknown): Y	SWAP mapping and evaluation completion date: 8-8-16
Free product? (Y/N/unknown): N	Site placement correct in SWAP? (Y/N): N
Current/past land use: vacant/station	MTBE > 40 ppb in groundwater? (Y/N/unknown): N
Size & product of USTs: 3-8000 gas, 1-4000 diesel	
Is site located in EJ area? N	Is investigation of indoor inhalation exposure route required? N

BOL File Information:(optional) (Arranged chronologically):

File contains info on previous incident #920055 which received nfr letter 8/12/10.

45-Day Review Notes:

IEMA was reported following an assessment by CWM Co. on 5/5/14 which involved 3 borings with BTEX/PNA sample analysis. Results were compared to those found during the investigation and ca of previous incident #920055 and found to be substantially higher, justifying the new occurrence. Tanks and 685 cy of contaminated soils were removed in June 2014.

Site Investigation Plan/Budget Review Notes:
The subject of this review, plan proposes additional off site Stage 3 investigation and reports the results and actual costs of Stage 2. Site is a former Clark station now owned by the City. Site is surrounded by commercial properties and future use is unknown.

Stage 2 activities were initiated by CWM 6/26/16 when TACO-1 boring was advanced for the purpose of geotech sampling. Also, 3 wells (MW-6 thru MW-8) were installed to 15 ft on the property lines to define the gw.

CWM returned to site 4/19/16 to sample/survey the newly installed wells and perform a slug test on MW-2. Gw results indicated that GROs were exceeded at MW-4 and MW-7 showing gw contamination off site to the north.

4/20/16 survey shows the gw flow direction to the north and east under a gradient of 0.014947. Slug test result from MW-2 was 3.85 cm/sec.

This plan proposes to advance 4 2" monitoring wells off site to the north and ne. Wells will be advanced by HSA to 20 ft, 5 ft deeper since the offsite area is about 5 ft higher in elevation. Gw samples will be collected and analyzed for BTEX/MTBE and PNAs. SICR will be prepared following Stage 3.

Soil extent was defined on site following Stage 1 and Stage 2. Gw was not defined to the north.

Supporting documentation included SI plan form, maps, osfm letter, boring logs, well completion forms, lab reports, chains of custody, lab certs, slug test data, budget certs, and budget forms.

Well logs indicate gw was encounter near 8 ft bgl while drilling.

Geotech results from TACO-1:

Dry bulk density=1.686
Foc=0.00980
Particle density=2.638
Moisture=23%

Soil test was classified as silt loam with 72% silt.

SWAP survey found 3 CWS wells and 8 ISGS wells within 2500 ft of the site. Nearest well is 1214 ft away with a 200 ft setback.

Stage 2 Actual Costs:

$2778.96	Drilling and Monitoring Well Costs
$1359.00	Analytical Costs
$619.58	Remediation and Disposal Costs
$0.00	UST Removal and Abandonment Costs
$0.00	Paving, Demolition, and Well Abandonment Costs
$20,259.53	Consulting Personnel Costs
$1187.50	Consultant's Materials Costs
$26,204.57	**Total**

Actual costs were budgeted at 15-16 rates instead of those in effect when approved.

Rates approved in the 5/20/15 decision letter:

Drilling Mobilization minimum=$1822.27
Monitoring Well Installation=20.05/ft.
Soil BTEX analysis=$98.41/sample
Foc analysis=$46.16/sample
PNA groundwater analysis=$184.66/sample
Soil Bulk Density analysis=$26.72/sample
Moisture Content analysis=$14.58/sample
Particle Size analysis=$176.15/sample
Sample Shipping=$60.74/event
Solid Waste Drum Disposal=$303.79/drum
Sr. Project Manager=$121.49/hour
Engineer III=$121.49/hour
Engineer I=$91.11/hour
Geologist III=$106.91/hour
Sr. Draftsperson=$72.88/hour
Draftsperson/CAD III=$60.74/hour
Sr. Administrative Assistant=$54.67/hour
Sr. Professional Engineer=$157.94/hour
Sr. Account Technician=$66.81/hour
PID Rental=$129.00/hour
Survey Equipment Rental=$75.00/day
Water Level Indicator Rental=$24.00/day
Measuring Wheel Rental=$14.00/day
Disposable Gloves=$13.00/box
Bailing Twine=$5.50/roll
Bailers=$13.00/each

Following the above rate reductions, these amounts are approved:

$2724.52		Drilling and Monitoring Well Costs
$1334.30		Analytical Costs
$607.46		Remediation and Disposal Costs
$0.00		UST Removal and Abandonment Costs
$0.00		Paving, Demolition, and Well Abandonment Costs
$19,863.97		Consulting Personnel Costs
$1127.00		Consultant's Materials Costs
$25,657.25	**Total**	

Stage 3 Proposed Budget:

$3956.00	Drilling and Monitoring Well Costs
$1229.02	Analytical Costs
$938.64	Remediation and Disposal Costs

$0.00		UST Removal and Abandonment Costs
$0.00		Paving, Demolition, and Well Abandonment Costs
$34,646.24		Consulting Personnel Costs
$1238.50		Consultant's Materials Costs
$42,008.40	**Total**	

Under Consulting Personnel, cost associated with scheduling by the Sr. Administrative Assistant exceeds min requirements for a deduction of **-112.64**. Cost associated with mapping by the Geologist III exceeds min requirements for a deduction of **-110.13**.

Under Consultant's Materials, cost associated with PID rental is unreasonable for a deduction of **-63.00.** Cost associated with measuring wheel is indirect for a deduction of **-21.00.** Cost associated with disposable gloves is unreasonable for a deduction of **-8.00.** Cost associated with mileage is unreasonable for a deduction of **-66.00.** Cost associated with water level indicator is unreasonable for a deduction of **-8.00.** Cost associated with disposable bailers is unreasonable for a deduction of **-24.00.**

L.P.E./L.P.G. Certification:
Vince E. Smith, PE
062-046118
Expires 11/30/17

Illinois EPA Recommendation/Comments:

Stage 3 proposal is appropriate to define off site gw extent.

GW does not meet Table H to address VI however there is 5 ft clean soil in the gw contamination area. GW is below Tier I GROs at MW-2 and 3 where there is shallow soil contamination near the former islands.

Due to the gw ordinance, R26 modeling may be performed to define gw extent if this Stage 3 physical investigation does not define.

Approve plan, modify Budgets per above.

Response Due:

SICR 30 days following Stage 3 investigation.

dm\notes8-8-16.doc

VI Incomplete Pathway Checklist

Reviewed by: Dave Myers
Date Reviewed: 8/15/16

File Heading: LPC #1870155032 -- Warren County
Monmouth/ Monmouth, City of
1125 North Main St.
Leaking UST Incident No. 20140510
Leaking UST Technical File

SECTION 1

☐ Yes X No ☐ N/A — Is there free product exceeding one-eighth of an inch in depth as measured in a groundwater monitoring well?

☐ Yes X No ☐ N/A — Do laboratory analytical results indicate concentrations of indicator contaminants as a result of the release from the UST that exceed the soil saturation (C_{sat}) limit as determined at 35 Ill. Adm. Code 742.220?

X Yes ☐ No ☐ N/A — Is there contaminated groundwater (i.e., based upon laboratory analytical results [actual measured concentrations], levels of indicator contaminants as a result of the release from the UST that exceed Tier 1, Class I groundwater remediation objectives for the groundwater component of the groundwater ingestion route at 35 Ill. Adm. Code 742.Appendix B.Table E)?

If "No" or "N/A" is checked for all three of the above questions, continue with the final question (in Section 4) of this checklist.

If "Yes" is checked for any one or more of the three questions above, continue with the questions in Section 2 to assess the potential for PVI.

SECTION 2

X Yes ☐ No ☐ N/A — Is there an interval of at least five feet of uncontaminated soil between contaminated groundwater and the lowest point of an overlying receptor (building basement, foundation, slab, or crawl space) or ground surface if there is no overlying receptor?

☐ Yes ☐ No X N/A — Is there an interval of at least 15 feet of uncontaminated soil between C_{sat} soil or free product in a groundwater monitoring well and the lowest point of an overlying receptor (building basement, foundation, slab, or crawl space) or ground surface if there is no overlying receptor?

If "No" is checked for either or both of the above two questions, investigation of PVI (via the indoor inhalation exposure route in accordance with Part 742) is required. Continue with

Sections 3 and 4 for informational purposes only, then go to the Conclusion section and **check the box indicating that investigation of PVI is required.**

If "Yes" is checked for either or both of the above two questions, continue with the question(s) in Section 3 to assess the potential for PVI.

SECTION 3

☐ Yes X No Are there natural or man-made pathways that may allow migration of vapors to indoor receptors?

If "No" is checked, continue with the question in Section 4 to assess the potential for PVI.

If "Yes" is checked, continue with the following question.

☐ Yes ☐ No Has the UST owner or operator provided a 20-Day Certification?

Continue with the question in Section 4 to assess the potential for PVI.

SECTION 4

☐ Yes X No Are there petroleum vapors in buildings as a result of the release from the UST?

If "No" is checked, soil gas sampling is not required. Investigation of PVI (via the indoor inhalation exposure route in accordance with Part 742) is not required.

If "Yes" is checked, investigation of PVI (via the indoor inhalation exposure route in accordance with Part 742) is required.

CONCLUSION

Based upon the results of the current review and the Illinois EPA site-specific Tier 3 evaluation:

☐ Investigation of PVI (via the indoor inhalation exposure route in accordance with Part 742) is required.

X Investigation of PVI is not required.
Area of the site that shows no 5 ft clean soil interval also shows no gw contamination.

dm

LPC 1870155032 - Warren County
Monmouth/ Monmouth, City of
1125 North Main Street
Leaking UST Incident No. 20140510
Leaking UST Technical File

Right-to-Know Evaluation

The Bureau of Land site identified above has been reviewed. A check mark next to any one of the following criteria indicates further evaluation of the site is necessary.

CRITERIA:

☐ Groundwater contamination is measured or modeled to exceed, within the setback zone or regulated recharge area of a potable Community Water Supply (CWS) well, or setback zone of a private well or non-CWS well, either TACO Tier 1 groundwater remediation objectives under Part 742, Appendix B, Table E or Class I groundwater standards under Part 620; or ☐ Five or fewer properties ☐ More than five properties

☐ Measured off-site groundwater contamination from volatile chemicals from the site where a release occurred poses a threat of indoor inhalation exposure above appropriate Tier 1 remediation objectives for the current use of the site; or
☐ Five or fewer properties ☐ More than five properties

☐ Soil contamination exceeding applicable remediation objectives for the soil component of the groundwater ingestion route is modeled to exceed, within the setback zone or regulated recharge area of a potable Community Water Supply (CWS) well, or setback zone of a private well or non-CWS well, either TACO Tier 1 groundwater remediation objectives under Part 742, Appendix B, Table E or Class I groundwater standards under Part 620; or
☐ Five or fewer properties ☐ More than five properties

☐ Contaminated soil is measured off-site to exceed the appropriate Tier 1 remediation objectives based on the current use of the off-site property; or ☐ Five or fewer properties ☐ More than five properties

☐ Measured off-site soil gas contamination from the site where the release occurred poses a threat of exposure above the appropriate Tier 1 remediation objectives for the current use of the site: or
☐ Five or fewer properties ☐ More than five properties

☐ BOL refers a matter to the Division of Legal Counsel for enforcement under Section 43(a) of the Act; or

☐ BOL refers a site to the Division of Legal Counsel for issuance of a seal order under Section 34(a) of the Act.

Comments:

☐ At least one of the above criteria is met and the above-identified site must be further evaluated.

☐ Insufficient information submitted to make an adequate RTK decision.

☑ None of the above criteria are met and the above-identified site does not warrant any further evaluation.

Project Manager Signature:_____ Date:_____

LPC#1870155032 - Warren
Monmouth, City of
LUST TECH

Myers, Dave

From: Carol Rowe <carol_rowe@sbcglobal.net>
Sent: Friday, August 12, 2016 9:02 AM
To: Myers, Dave
Subject: City of Monmouth
Attachments: epuip list city monmouth.pdf

Hi Dave

Hope you're doing well this summer.

From the previous requests for material info, it's been predominately the PID and it's been requested in a multitude of ways: provide a rate of a comparable model, demonstrate the rate is reasonable, provide documentation the rate is reasonable of our meter compared to other rental rates, if we used a rented one, what what's cost of that, how much did our unit cost or a replacement unit valued?

I think the questions have been answered in a multitude of ways only to find out now that a new rate has been established, which is less than ours in some cases. But, I'll provide the info as best as I can for the materials. With stock low, we're evaluating purchasing/rentals as the project goes along and receipts can be available.

The ppbRAE 3000 is equivalent to the one we use, an Orion model from MSA. The rental charge, plus the calibration gas. This unit is preferred by us for a couple of reasons. The detection level, the response time, durability, and function in inclement weather. We have found difficulty w/ other units functioning in highly humid, or rainy conditions, extreme cold or heat; the response time drags out for extended periods of time. Drilling and sampling comes to a halt waiting to finish a boring or a well and move on to the next. Even a really good meter can sluggish on occasion with extremely high humidity or extreme cold; but the less reliable meters are much slower in response time, if they even work at all. The sensitivity is an extremely important tool as well, especially in field screening samples. Whether its shipping, taxes, pick-up time or the personnel time to clean, calibrate, make repairs, or send off for repairs in the rental rates, there's more costs involves that the unit itself. In our research for this unit, we have been unable to find a vendor who can provide a comparable PID at a price which does not exceed the rate we have requested. Several have been found with the nearly the same rate, including the corresponding calibration equipment.

For the survey equipment, we use a comparable laser level, w/ tripod, case, etc. We requested $86, Sunbelt's rate is $75 for the laser alone, taxes and other fees may apply. For the water level, we are asking $24 and they rent for $28, taxes and other fees may be applicable as well.

From the correspondence I've seen, the water level and laser level are close to even below the rates being used by the Agency. Bailers, we have various types and manufacturers, depending on site need. We're working with suppliers to see if we can get shipments on purchase orders as needed, per job. We'll have receipts then. I think the total stay w/in the proposed amount; if not, we'll adjust later. This appears to be the best course of action while the Agency sets rates.

Thanks as always for contacting Vince, or one of the guys with questions or additional information while reviewing a submittal. Appreciate your efforts to work through issues so that plans can be initiated.

Thanks
Carol

PID/FID Rentals

PID/FID Rentals

...onmental Equipment & Supply proudly ... a number of flame ionization and photo ...ation detectors by manufacturers such as ... Systems, Thermo Fisher and more. All ...pment comes fully serviced and ready to be ...e in the most demanding field ...tions. Units are exclusively newer models ... the MiniRAE PID that incorporate ...g-edge VOC and inorganic sensor ...nology. All our rental units feature low ...s. A wide range of regulators, calibration ... ...ions and other accessories is available as well.

Accessories and Calibration Kits

To complement our selection of PID and FID volatile organic compound detectors, we also rent all necessary calibration kits, gas regulators, Tedlar bags for sample collection and more. The best way to put together a complete rental package is to talk to one of our team members. We can help you assess the needs of your project and decide which rental equipment is most suited to your purposes and your budget. Call us today at 717.208.8072 or contact us online for more information and have all of your questions answered.

PID/FID

	Daily	Weekly	Monthly	
ppbRAE 3000 PID	$ 125	$ 350	$ 1050	Rent »
GX-6000	$ 85	$ 300	$ 850	Rent »
MultiRAE PID- MOST POPULAR	$ 85	$ 300	$ 850	Rent »
MultiRAE Plus (PID & Multigas Detector)	$ 85	$ 300	$ 850	Rent »
Flame Ionization Detector – Photovac	$ 85	$ 300	$ 850	Rent »
MiniRAE 3000 - MOST POPULAR	$ 75	$ 225	$ 700	Rent »
Thermo TVA 1000 PID/FID - VOC Monitor	$ 125	$ 350	$ 1,200	Rent »
Thermo TVA 1000 FID	$ 100	$ 350	$ 1,000	Rent »
TVA 1000 Spare Hydrogen Cylinder	$ 20	$ 60	$ 120	Rent »
Thermo 580B (11.8 ev)	$ 98	$ 275	$ 800	Rent »

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*ALL Rentals of PID or FID include a CAL Gas Regulator

PID / FID Calibration Standards

	Part Number	Price	
Methane, 100 PPM, 17 Liter	46314	$ 60.00 Each	Order »
Hexane, 100 PPM, 17 Liter	33065	$ 65.00 Each	Order »
Isobutylene 100 ppm 17 liter	33063	$ 40.00 Each	Order »
Isobutylene 100 ppm 34 liter	33066	$ 84.00 Each	Order »

PID/ FID Rental Units | RAE System, Thermo Fisher & More

Zero Standard, 17H	11062	$ 46.00 Each	Order »
Cal Gas Regulator, female thread, 650 PSI	38784	$ 135.00 Each	Order »
Cal Gas Regulator, male thread, 1500 PSI	38785	$ 120.00 Each	Order »
Tedlar Bags	18628	$ 16.50 Each	Order »

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Environmental Equipment & Supply proudly rents a number of flame ionization and photo ionization detectors by manufacturers such as RAE Systems, Thermo Fisher and more. All equipment comes fully serviced and ready to be put to use in the most demanding field conditions. Units are exclusively newer models such as the MiniRAE PID that incorporate cutting-edge VOC and inorganic sensor technology. All our rental units feature low hours. A wide range of regulators, calibration solutions and other accessories is available as well.

Selected Units

- **MiniRAE PID:** One of our most popular rental units, the MiniRAE PID by RAE Systems is a powerful handheld tool for monitoring VOC levels in confined spaces, making it ideal for landfill monitoring, soil remediation and environmental cleanup. The MiniRAE PID features data logging, wireless connectivity and sampling from up to 100 feet away. Environmental Equipment & Supply has both the MiniRAE 2000 – one of the most popular handheld VOC detectors of all time – and its successor, the MiniRAE 3000, PID devices available for rent.
- **Thermo TVA 1000 PID/FID:** Use the Thermo TVA 1000 VOC monitor to get accurate VOC measurements without having to deal with false background readings. Featuring the functionality of both a photo ionization and flame ionization detector in one portable package, the TVA 1000 can be counted on to deliver highly precise readings in emergency response and industrial hygiene applications, as well as in hazardous waste site evaluations, underground storage tank investigations and more.
- **ppbRAE 3000:** An excellent alternative to the MiniRAE PID, the ppbRAE 3000 uses industry-leading technology to deliver advanced linearity and organic vapor detection at concentrations ranging from 1 ppb to 10,000 ppm. The ppbRAE 3000 is a powerful performer that is relied on by HazMat, homeland security and environmental remediation teams in some of the harshest field conditions.
- **Photovac MicroFID:** The Photovac MicroFID is one of the smallest and lightest flame ionization detectors on the market today. Despite its size, the unit manages to pack in a number of advanced features, such as data logging and VOC detection with a three second response time at concentrations ranging from 0.1 to 50,000ppm. Use the Photovac MicroFID in for any application where you would use a MiniRAE PID or similar device, such as landfill monitoring, leak detection, OHSA compliance and hazardous waste site delineation.

Accessories and Calibration Kits

To complement our selection of PID and FID volatile organic compound detectors, we also rent all necessary calibration kits, gas regulators, Tedlar bags for sample collection and more. The best way to put together a complete rental package is to talk to one of our team members. We can help you assess the needs of your project and decide which rental equipment is most suited to your purposes and your budget. Call us today at 717.206.8072 or contact us online for more information and have all of your questions answered.

Home | New Products | Rental Equipment | Contact Us
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Repair | Sitemap | About Us

Request A Quote

RAE Systems ppbRAE Plus PID Rental « click for details

The ppbRAE Plus PID is a photoionization detector that is capable of detecting Volatile Organic Compounds (VOCs) at the parts-per-billion (ppb) range. It is capable of true parts per billion (ppb) detection of extremely low level, low vapor pressure and highly toxic VOCs such as nerve agent, pesticide residues and low level permeation breakthrough detection.

Hide Specifications

Range	1 ppb to 200 ppm
Resolution	1 ppb (0 to 9,999 ppb) 0.1 ppm (10 to 99.9 ppm) 1 ppm (100 to 200 ppm)
Response Time	< 5 sec
Size	8.2" L x 3.0" W x 2.0" H (21.8 x 7.62 x 5.0 cm)
Sensors	Patented, planar, dual-channel, photoionization sensor with super-bright 10.6 eV lamp
Battery	Rechargeable, external, field-replaceable Nickel-Metal- Hydride (NiMH) battery pack
Operating Hours	10 hours continuous operation
Direct Readout	• VOCs as ppb or ppm by volume • High and low values • STEL and TWA (in hygiene mode) • Battery and shut down voltage
Alarms	90 dB buzzer and flashing red LED to indicate exceeded preset limits: • High: 3 beeps and flashes per second • Low: 2 beeps and flashes per second • STEL and TWA: 1 beep and flash per second • Alarms automatic reset or latching with manual override • Optional plug-in pen size vibration alarm • User adjustable alarm limits
Data Logging	267 hours (at one-minute intervals) with date/time. Header information includes monitor serial number, user ID, site ID, date and time
Calibration	Two-point field calibration of zero and standard reference gas. Calibration memory of 8 calibration gases, alarm limits, span values and calibration date
Sampling Pump	• Internal, integrated flow rate of 400 cc/min • Sample from 100' (30 m) horizontally or vertically

SUNBELT RENTALS

Welcome to Sunbelt Rentals
Sign In | Sign Up

Email Sign Up! | 1-800 No Sweat | Checkout 0 Items

Search for equipment

Equipment Catalog | Locations | Specialty Divisions | About Us | My Account

Equipment > General Construction Tools > Laser & Optical Levels

Laser Grade Level

To see availability and rates please tell us when and where you will be using the equipment

Springfield, IL | 7/7/2016 | Get Rates

Selected Branch: #038, Decatur, IL 62526

TOOLFLEX Eligible

Rental Rates

Equipment pricing may vary based on availability and market conditions.

$67	$75	$205	$610
4 Hour	Daily	Weekly	4 Week

Add to Cart

Specs

Make / Models

Varies

Specifications

Cat-Class:
011-0015

Store Availability

40.0 Miles	Sunbelt Rentals General Equipment & Tools (217) 875-2020 3953 E Mueller Ave Decatur, IL 62526	Select Branch Item Available
61.3 Miles	Sunbelt Rentals General Equipment & Tools (309) 694-6201 1601 N Main St East Peoria, IL 61611-2149	Select Branch Item Available
76.7 Miles	Sunbelt Rentals General Equipment & Tools (618) 931-4284 1081 Gail Dr Granite City, IL 62040-7172	Select Branch Item Available
75.9 Miles	Sunbelt Rentals General Equipment & Tools (217) 355-1266 1401 N Mattis Ave Champaign, IL 61821-1816	Select Branch Item Available
87.2 Miles	Sunbelt Rentals General Equipment & Tools (314) 878-0979 2900 Chouteau Avenue St Louis, MO 63103	Select Branch Item Available

Quoted delivery and pick up fees are estimates. Other fees and taxes may apply. Actual delivery charges will be quoted when the order is confirmed based on the rental location.

Your Cart

No items in your cart

Rental Protection Plan

Ensure your peace of mind with the additional coverage provided by Sunbelt Rentals' Rental Protection Plan

Review Our Plans

Credit Cards Accepted

A member of our team will contact you within 2 business hours with confirmation of your reservation.

1-800 No Sweat (800-667-9328)
Site intended for U.S. Customers Only

GSA Contract Holder

The Sunbelt Rentals Government Support Team can be reached at 800-667-9328 or www.sunbeltrentals.com/gsa. GSA Contract #GS-21F-0022T Section 833 Qualified FSC Group 51 V - Hardware Superstore SIN's: 105-051 & 810-002 CCR Registered: Duns #: 101779493 CCR Registered: Cage Code: 6LCW3

4.8.5

Water Measurement Environment Sampling Equipment

Water Measurement Environment Sampling Equipment

	Daily	Weekly	Monthly	
0' Interface Probe – Solinst, Heron	$ 50	$ 150	$ 425	Rent »
0' Interface Probe – Solinst, Heron	$ 75	$ 200	$ 475	Rent »
0' Interface Probe - Solinst, Heron	$ 90	$ 270	$ 625	Rent »
rtable Water Velocity Meter - Hach FH950 (Replaces Marsh McBirney)	$ 90	$ 280	$ 700	Rent »
rasonic Liquid Flow Meter, GE Sensing	$150	$ 450	$ 1,100	Rent »
Water Level Indicator (100'or 200')	$ 25	$ 75	$ 210	Rent »
Water Level Indicator (300')	$ 40	$ 80	$ 240	Rent »
Water Level Indicator (500')	$ 100	$ 300	$ 500	Rent »
Water Level Indicator (1000')	$ 150	$ 350	$ 1000	Rent »
Well Casing Depth Indicator (100')	$ 75	$ 225	$ 600	Rent »
Sonic Water Level Meter	$ 50	$ 140	$ 425	Rent »

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, ACTING DIRECTOR

217/524-3300

CERTIFIED MAIL

AUG 17 2016

7014 2120 0002 3289 3431

City of Monmouth
Mr. Lowell Crow
100 E. Broadway
Monmouth, IL 61462

Re: LPC #1870155032 -- Warren County
Monmouth/ Monmouth, City of
1125 North Main Street
Leaking UST Incident No. 20140510
Leaking UST Technical File

IEPA-DIVISION OF RECORDS MANAGEMENT RELEASABLE
SEP 16 2016
REVIEWER: JKS

Dear Mr. Crow:

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed the Stage 3 Site Investigation Plan (plan) submitted for the above-referenced incident. This plan, dated July 26, 2016, was received by the Illinois EPA on July 29, 2016. 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 Illinois EPA has determined that the activities proposed in this plan are appropriate to demonstrate compliance with Title XVI of the Act and 35 Ill. Adm. Code 734 (Sections 57.7(a)(1) and 57.7(c) of the Act and 35 Ill. Adm. Code 734.505(b) and 734.510(a)). Therefore, the plan is approved. Please note, in the event the proposed groundwater samples exceed Tier I groundwater remediation objectives, the Illinois EPA will accept R26 modeling to define the remaining groundwater plume and no further investigation is required.

The actual costs for Stage 2 are modified pursuant to Sections 57.7(a)(2) 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 are approved. Be aware that

the amount of payment from the Fund may be limited by Sections 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.

In addition, the proposed budget for Stage(s) 3 is modified pursuant to Sections 57.7(a)(2) and 57.7(c) of the Act and 35 Ill. Adm. Code 734.505(b) and 734.510(b). The modifications are listed in Section 2 of Attachment A. Costs must be incurred in accordance with the approved plan. The maximum amounts that can be paid from the Fund must be determined in accordance with Subpart H, Appendix D, and Appendix E of 35 Ill. Adm. Code 734 (35 Ill. Adm. Code 734.310(b)). Please be advised that costs associated with materials, activities, and services must be reasonable, must be consistent with the associated technical plan, must be incurred in the performance of corrective action activities, must not be used for corrective action activities in excess of those necessary to meet the minimum requirements of the Act and regulations, and must not exceed the maximum payment amounts set forth in Subpart H, Appendix D, and Appendix E of Part 734 (Section 57.7(c) of the Act and 35 Ill. Adm. Code 734.510(b)).

NOTE: The plan proposes activities that are technically acceptable. However, for the purpose of payment from the Underground Storage Tank Fund, some of the activities are in excess of those necessary to meet the minimum requirements of the Act and regulations. Owners and operators are advised that they may not be entitled to full payment for this reason. The Illinois EPA will review your complete request for partial or final payment from the Fund after it is submitted to the Illinois EPA. In addition, please note that amended plans and/or budgets must be submitted and approved prior to the issuance of a No Further Remediation (NFR) Letter. Costs associated with a plan or budget that have not been approved prior to the issuance of an NFR Letter will not be paid.

The activities in excess of those necessary to meet the minimum requirements of the Act and regulations are referenced in Attachment A. While it is technically acceptable that these activities be performed, payment from the Fund is not approved.

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. This notification of field activities may be done by telephone, facsimile, or electronic mail—and must be provided at least two weeks prior to the scheduled field activities.

Pursuant to Sections 57.7(a)(5) and 57.12(c) and (d) of the Act and 35 Ill. Adm. Code 734.100 and 734.125, the Illinois EPA requires submittal of a Site Investigation Completion Report within 30 days after completing the site investigation 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 Dave Myers at 217/785-7491.

Sincerely,

Stephen A. Colantino
Acting Unit Manager
Leaking Underground Storage Tank Section
Division of Remediation Management
Bureau of Land

SAC: dm:\SI3appBUDmod.dot

Attachments: A, Appeal Rights

c: CWM Company
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 of time 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:

John Therriault, Assistant Clerk
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

Attachment A

Re: LPC #1870155032 – Warren County
Monmouth/ Monmouth, City of
1125 North Main Street
Leaking UST Incident No. 20140510
Leaking UST Technical File

SECTION 1

STAGE 2 Actual Costs

As a result of the Illinois EPA's modifications in Section 2 of this Attachment A, the following amounts are approved:

$2724.52	Drilling and Monitoring Well Costs
$1334.30	Analytical Costs
$607.46	Remediation and Disposal Costs
$0.00	UST Removal and Abandonment Costs
$0.00	Paving, Demolition, and Well Abandonment Costs
$19,863.97	Consulting Personnel Costs
$1127.00	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 (Act) and 35 Illinois Administrative Code (35 Ill. Adm. Code) 734.635.

STAGE 3 Proposed Budget

Costs must be incurred in accordance with the approved plan and must be determined in accordance with 35 Ill. Adm. Code 734.Subpart H, Appendix D, and Appendix E.

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 (Act) and 35 Illinois Administrative Code (35 Ill. Adm. Code) 734.635.

SECTION 2

STAGE 2 Modifications

1. The rates have been reduced to those approved in the May 20, 2015 decision letter. The costs exceed the maximum payment amounts set forth in Subpart H, Appendix D, and/or Appendix E of 35 Ill. Adm. Code 734. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(zz). In addition, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they are not reasonable.

   The appropriate rates previously approved are:

   Drilling Mobilization minimum=$1822.27
   Monitoring Well Installation=20.05/ft.
   Soil BTEX analysis=$98.41/sample
   Foc analysis=$46.16/sample
   PNA groundwater analysis=$184.66/sample
   Soil Bulk Density analysis=$26.72/sample
   Moisture Content analysis=$14.58/sample
   Particle Size analysis=$176.15/sample
   Sample Shipping=$60.74/event
   Solid Waste Drum Disposal=$303.79/drum
   Sr. Project Manager=$121.49/hour
   Engineer III=$121.49/hour
   Engineer I=$91.11/hour
   Geologist III=$106.91/hour
   Sr. Draftsperson=$72.88/hour
   Draftsperson/CAD III=$60.74/hour
   Sr. Administrative Assistant=$54.67/hour
   Sr. Professional Engineer=$157.94/hour
   Sr. Account Technician=$66.81/hour
   PID Rental=$129.00/hour
   Survey Equipment Rental=$75.00/day
   Water Level Indicator Rental=$24.00/day
   Measuring Wheel Rental=$14.00/day
   Disposable Gloves=$13.00/box
   Bailing Twine=$5.50/roll
   Bailers=$13.00/each

STAGE 3 Modifications

1. $112.64 for costs for Consulting Personnel associated with scheduling by the Senior Administrative Assistant, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to

comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

Field activity scheduling is budgeted with both the Sr. Project Manager and the Engineer III.

2. $110.13 for costs for Consulting Personnel associated with mapping by the Geologist III, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o).

   Sufficient time is budgeted for this activity under the Sr. Draftsperson/CAD.

3. $63.00 for site investigation or corrective action costs for PID rental 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).

   This cost also lacks supporting documentation pursuant to 35 Ill. Adm. Code 734.630(cc).

4. $21.00 for indirect corrective action costs for personnel, materials, service, or equipment charged as direct costs. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(v). In addition, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they are not reasonable

   Measuring wheel costs are indirect.

5. $8.00 for site investigation or corrective action costs for disposable gloves 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).

   This cost also lacks supporting documentation pursuant to 35 Ill. Adm. Code 734.630(cc).

6. $66.00 for site investigation or corrective action costs for mileage 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 current federal rate of $0.54/mile is allowed.

7. $8.00 for site investigation or corrective action costs for water level indicator rental 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).

This cost also lacks supporting documentation pursuant to 35 Ill. Adm. Code 734.630(cc).

8. $24.00 for site investigation or corrective action costs for bailers 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).

This cost also lacks supporting documentation pursuant to 35 Ill. Adm. Code 734.630(cc).

dm: \SI3appBUDmodA.dot

CW³M Company
Environmental Consulting Services

701 W. South Grand Avenue
Springfield, IL 62704

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

LPC#1870155032 Warren County
Monmouth, City of
Incident#20140510
LUST TECH

November 7, 2016

Mr. Dave Myers, Manager
LUST Section, Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

RE: LPC # 1870155032— Warren County
1125 North Main Street
Monmouth, Illinois
Incident Number: 2014-0510
LUST Technical Reports—Site Investigation Completion Report

Dear Mr. Myers:

On behalf of the City of Monmouth, owner of the USTs at the above-referenced site, we are submitting the attached Site Investigation Completion Report (SICR). This includes the results of the Stage 3 investigation as well as a summary of the costs.

CW³M Company works in a similar structure as the Agency. Numerous personnel are involved with various components, i.e. phase review and approval of plans, budgets, reimbursements, and correspondence. In our opinion, this is a highly efficient work plan that limits mistakes, keeps costs down, and ensures quality work. Please note multiple personnel are listed for the completion of certain tasks. Some reviewers have mistakenly interpreted this as an error or duplication; it is not. The method for calculating personnel time in the proposed budget has been approved by the Agency in other incidents, such as, incident numbers 2013-0876, 2014-1417, 2014-0944, 2014-0673, 2014-1190, 2013-0198, 2015-0158, 2014-0510, 2014-1190, 2012-0515, 2013-0906, 2014-0556 and 2015-0257. These hours have been found reasonable and justified as an estimate for the work proposal. These hours should be deemed reasonable as more than one person is required to develop plans and budgets and to check for accuracy of the plan, budget, bore logs, reimbursement claims, and analytical, which is needed to finalize the plan and budget. This is no different than the Agency's review process, which includes project managers, unit managers, Section Managers, fiscal reviewers, etc. Multiple personnel touch each letter or plan with different individual tasks on assignments. Many plans and budgets are even taken to committees.

In addition, we have had prior discussions with managers and project managers about personnel in the budgets and reimbursements. Some Agency reviewers have been

cutting budget and reimbursement line items for technical personnel. Similar to the Agency, technical personnel are required to prepare and review reimbursement claims. Some plans span several years, include multiple drilling events, and have multiple personnel involved. With such complexity, technical personnel familiar with the project are required to work with the accounting technicians to develop reimbursement claims. As the Agency's technical personnel or project should well know, there are many technical components to the reimbursement side of the equation. It is not all just accounting. Currently, the Agency has technical staff conduct the review of any claim that is not simplistic or requires decision making and judgment versus just checking for accounting errors, line items, and that totals not in an excess of their budgeted approval totals. The project managers also assist with reviews to prevent a backlog, while conducting work reviewing claims. These project managers do not change their titles or billing codes (i.e. - their take home pay is not decreased). Their expertise of the program is valued and their pay is left therefore intact. The merit of their technical input is valuable as is the technical input into the development of the claims by consultants as well, if not more so. Consultants are actually putting together all the pieces and preparing the claim as opposed to reviewing it.

Cutting the rate of a title in the budget is the same as cutting personnel pay and is beyond the purpose of the personnel descriptions. As a solid group of personnel gain experience and seniority and no new positions need filling, those present take on all roles and do whatever is needed to get the job done. An Environmental Protection Specialist (EPS) IV who may have performed the work of an EPS I or an Account Technician I-IV does not suddenly get a pay cut. However, once the Agency starts assigning titles because they do not like the rate, they try to force fit a new job title that may or may not fit that person, real title and work (perhaps one title in a budget) in their company. Forcing rates forces pay cuts. If the rates of titles assigned by companies are not obtained, that person cannot be paid at their full rate of compensation.

Finally, please note that the number of copies budgeted for reports and claims is not just the number of pages submitted to the Agency. The number of copies also includes drafts, client copies, and our own copies of reports, budgets, and claims. We trust that you'll give serious weight to our requests and consider the necessity of a reimbursement budget that mirrors the way we work in actuality as does the Agency.

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

Sincerely,

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

xc: Mr. Lowell Crow, City Administrator, *City of Monmouth*
Mr. William T. Sinnott, *CW³M Company, Inc.*

SITE INVESTIGATION COMPLETION REPORT

CITY OF MONMOUTH

Monmouth, Illinois
LPC # 1870155032 — Warren County
Incident Number 2014-0510

Submitted to:

Illinois Environmental Protection Agency
Leaking Underground Storage Tank Section, Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois

Prepared By:

CW³M COMPANY, INC.

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

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

NOVEMBER 2016

CONTENTS

APPENDICES

TABLES

ACRONYMS AND ABBREVIATIONS

BETX	Benzene, Ethylbenzene, Toluene and Total Xylenes
CACR	Corrective Action Completion Report
CAP	Corrective Action Plan
CUOs	Clean Up Objectives
CW³M	CW³M Company, Inc
CWS	Community Water Supply
Ill. Adm. Code	Illinois Administrative Code
IEMA	Illinois Emergency Management Agency
IEPA	Illinois Environmental Protection Agency
ISGS	Illinois State Geological Survey
ISWS	Illinois State Water Survey
L	Liter
LUST	Leaking Underground Storage Tank
mg/kg	Milligrams per kilogram (parts per million)
mg/L	Milligrams per liter
mL	Milliliters
MTBE	Methyl Tert-Butyl Ether
MW	Monitoring Well
OSFM	Office of the State Fire Marshal
PID	Photoionization detector
PNA	Polynuclear Aromatic Hydrocarbons
PVC	Polyvinyl Chloride
SIP	Site Investigation Plan
SICR	Site Investigation Completion Report
SWAP	Source Water Assessment Program
TACO	Tiered Approach to Corrective Action Objectives
USTs	Underground Storage Tanks
WCRs	Well Completion Reports

1. SITE HISTORY/EXECUTIVE SUMMARY

1.1 GENERAL

Mr. John Cratty, City Administrator for the City of Monmouth, the owner of the underground storage tanks (USTs) at the City of Monmouth site in Monmouth, Illinois reported a release to the Illinois Emergency Management Agency (IEMA). Incident Number 2014-0510 was assigned to the notification on May 5, 2014. Mr. Cratty then requested CW³M Company, Inc. (CW³M) to proceed with the reporting and early action requirements in accordance with 35 Illinois Administrative Code (Ill. Adm. Code) § 734. This Site Investigation Completion Report (SICR) and Budget is being prepared in response to Incident Number 2014-0510.

The 20-Day Certification was submitted to the Illinois Environmental Protection Agency (IEPA) on May 13, 2014 (CW³M, 2014a). The 45-Day Report was submitted to the Agency on July 3, 2014 (CW³M, 2014b) and was approved by the Agency on July 29, 2014 (IEPA, 2014). The Stage 2 Site Investigation Plan (SIP) was submitted to the Agency on May 12, 2015 (CW³M, 2015) and was approved with modifications by the Agency on May 20, 2015 (IEPA, 2015). The Stage 3 SIP and Budget was submitted to the Agency on July 29, 2016 (CW³M, 2016) and was approved on August 17, 2016 (IEPA, 2016).

This SICR has been prepared in accordance with the requirements of 35 Ill. Adm. Code 734. The IEPA-prescribed SICR form is included herein as Appendix A. The Stage 3 actual budget and certification are included herein as Appendix F.

1.2 SITE LOCATION

The site, now known as City of Monmouth, formerly Clark Fueling Station and Convenience Store, is located at 1125 North Main Street, Monmouth, Warren County, Illinois 61462. The site is located in the NW ¼ of the NE ¼ of the SE ¼ of Section 33, Township 8 South of the Centralia Baseline and Range 2 West of the Third Principal Meridian.

1.3 TANK REMOVAL ACTIVITIES

A permit for the removal of four USTs was approved by the Office of the State Fire Marshal (OSFM) on May 9, 2014 (OSFM, 2014). Tank removal activities were conducted by CW³M personnel, in conjunction with the City of Monmouth and OSFM Tank Specialist Jeff Hindman, on June 1, 2014 and June 2, 2014. Following tank removal activities, the City of Monmouth requested that CW³M proceed with reporting requirements and early action activities necessary for compliance with 35 Ill. Adm. Code § 734.

CW³M personnel returned to the site on June 4, 2014 to conduct early action excavation of the contaminated soil from the former tank pit area and properly complete early action requirements. The early action excavation was completed June 6, 2014. As the OSFM Field Specialists have been instructed not to make the official determination of the release, 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. The details were provided in the 45-Day Report (CW³M, 2014b).

Table 1-1. Underground Storage Tank Summary

Tank Number	Tank Volume (gallons)	Tank Contents	Incident Number	Release Information	Current Status
1	4,000	Gasoline	92-0055	Unknown	Removed 1/1/1992
2	3,000	Gasoline	92-0055	Unknown	Removed 1/1/1992
3	3,000	Gasoline	92-0055	Unknown	Removed 4/16/1992
4	3,000	Gasoline	92-0055	Unknown	Removed 1/1/1992
5	1,000	Gasoline	92-0055	Unknown	Removed 1/1/1992
6	500	Gasoline	92-0055	Unknown	Removed 1/1/1992
7	8,000	Gasoline	2014-0510	Overfills	Removed 6/3/2014
8	8,000	Gasoline	2014-0510	Overfills	Removed 6/3/2014
9	8,000	Gasoline	2014-0510	Overfills	Removed 6/3/2014

10	4,000	Diesel	2014-0510	Overfills	Removed 6/3/2014

1.4 EARLY ACTION SUMMARY

Approximately 1027.54 tons (685.03 cubic yards) of contaminated backfill was removed from the former tank pit and taken to Upper Rock Island Landfill in East Moline, Illinois. Soil samples were collected for every 20 feet of the excavation walls. Floor samples were obtained beneath each tank at a depth of around 14 to 15 feet. Samples were also collected at each of the four product pump islands at a depth of around 5 feet. All four tanks, as well as product piping, were removed. During excavation of contaminated soils, groundwater recharged into the tank excavation and an oily water mixture totaling 12,000 gallons was pumped out and properly collected and managed by Future Environmental, Inc. Manifests for the groundwater pumping were provided in the 45-Day Report (CW³M, 2014b). Despite the large amount of groundwater entering the excavation, soil samples from the floor of the excavation pit were obtainable and were collected and analyzed for benzene, ethylbenzene, toluene, and total xylenes (BETX), methyl tert-butyl ether (MTBE), and polynuclear aromatic hydrocarbons (PNAs). The release confirmation and early action analytical results indicate that the most stringent Tier 1 Clean-up Objectives (CUOs) have been exceeded for BETX, MTBE, and PNAs at various locations in the tank pit area and pump islands. Analytical results and a map of the contaminants can be found in Appendix E and Appendix B, respectively.

2. SITE CHARACTERIZATION

2.1 NATURE AND QUANTITY OF RELEASE

Mr. John Cratty, City Administrator for the City of Monmouth, owner of the USTs at the Monmouth, Illinois site reported a release to the IEMA following an environmental assessment. Incident Number 2014-0510 was assigned on May 5, 2014. Tank removal occurred on June 1, 2014 and June 2, 2014. The nature of the release was attributed to overfilling of the tanks.

2.2 CURRENT AND PROJECTED POST-REMEDIATION USES

The site lies on the north side of Monmouth on North Main Street and is surrounded by commercial properties. The City of Monmouth site is currently awaiting assessment of the site and the future use of the site is unknown but remains a vacant commercial property at this time.

2.3 WATER QUALITY

According to the Illinois Pollution Control Board, three Class III Groundwater contributing areas exist; however, they are located in McHenry, Monroe, and St. Clair Counties in northern and western Illinois. Therefore, CW³M will consider the groundwater at this site to be Class I unless demonstrated otherwise pursuant to 35 Ill. Adm. Code § 620.210.

2.4 WELL DATA

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 is in progress. 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 May 22, 2014 (EPA.STATE.IL.US, 2014). The response indicated that eight ISGS wells and three CWS wells are located within 2,500 feet of the site.

Table 2-1. Water Supply Well Information

Well ID	Type	Distance From USTs (*feet*)	Setback Zone (*feet*)
00117	ISGS	1,214	200
21765	ISGS	1,478	200
21787	ISGS	2,376	200
21788	ISGS	2,376	200
21789	ISGS	2,376	200
21790	ISGS	2,376	200
21791	ISGS	2,376	200
21872	ISGS	1,637	200
50421	CWS	2,112	200
01647	CWS	2,006	200
50242	CWS	1,214	200

2.5 PHYSICAL SETTING

The physical setting, including environmental, geologic, hydrogeologic, hydrologic, geographic, and topographic conditions was described in the 45-Day Report (CW³M, 2014b). Additionally, this information is supplemented by the boring logs, which are included in Appendix D of this report.

3. SITE INVESTIGATION

3.1 DRILLING METHOD

Five-foot continuous samplers have been used to advance and characterize each boring. This method was selected to minimize the likelihood of gaps in the sample column. Augers were decontaminated with a pressure steam wash between borings to prevent cross-contamination. Soil boring logs have been and will be prepared for all soil borings.

3.2 SOIL SAMPLING PROTOCOL

All samples were collected utilizing proper sampling protocol. Samplers wore new, disposable, latex gloves for each sampling event. Samples were collected at the center of each 5-foot sample core, unless conditions within the soil units warranted otherwise by odor or visual contamination. Each of the samples from the continuous sampler was screened using a photoionization detector (PID) and was placed in the appropriate laboratory-provided sampling container for laboratory analysis of BETX, MTBE and PNAs. Proper sampling, decontamination and chain-of-custody procedures were employed. The sample containers were filled, labeled, and kept cool (to 6° C or below) until shipment to the laboratory. Sample descriptions were recorded on the boring log prepared for each boring. Appendix E includes a summary of all analytical results during the course of the site investigation.

All soil samples were analyzed by an accredited laboratory using test methods identified under 35 Ill. Adm. Code 186.180. As required by the leaking underground storage tank (LUST) Section, a Laboratory Certification for Chemical and Physical accompanies each of the sample results that have been reported.

3.3 MONITORING WELL INSTALLATION PROTOCOL

Two-inch diameter wells consist of a 10-foot polyvinyl chloride (PVC) screen and PVC riser above the well screen. Annular space around the wells is filled with coarse-grained, 20/20 sand. Each well was completed at the surface with a flush-mount manway and a locking protective cover. The manways were slightly elevated and the concrete sloped away from each well to prevent surface water run-in. The elevations of the manways were surveyed to the nearest 0.01 foot. Well screens were set to the center depth of groundwater encountered during drilling to accommodate seasonal fluctuation of the water table.

Monitoring wells (MWs) were cleared of foreign sediment by standard well-development procedures in order to restore the natural hydraulic conductivity of the formation and to reduce the turbidity of the groundwater samples. All wells were developed by surging the bailer back and forth for several minutes and then withdrawing groundwater. The development process continued until clear water flowed into each well. The purpose of the surging was to remove the undersize sediment from the well and filter pack. All wells were developed the day of installation.

3.4 GROUNDWATER SAMPLING PROTOCOL

All samples are collected utilizing proper sampling protocol. Samplers wore clean, disposable latex gloves, which were changed between each sample. The water level in each newly installed well was measured prior to sampling to determine the direction of the flow of groundwater. Prior to sampling, the water above the well screen was extracted from each well utilizing clean, disposable bailers to purge the well of its contents and collect a fresh sample of groundwater as it flows into the well.

Groundwater samples are gently poured into 40 milliliter (mL) glass vials for BETX and MTBE and 1 Liter (L) amber jars for PNAs. The samples are placed in coolers with ice for delivery to the laboratory. Proper chain-of-custody procedures are followed. Each sample is labeled immediately upon collection and logged onto the chain-of-custody form. The chain-of-custody form is transported with the samples and then relinquished to the laboratory. The data collected is used to determine the groundwater flow directions and whether the applicable groundwater quality standards are exceeded.

3.5 DESCRIPTION OF ACTIVITIES COMPLETED

3.5.1 First Round of Sampling

On December 11, 2014, CW³M personnel were on site to conduct Stage 1 investigation activities. Two soil borings (SB-1 and SB-2), and five monitoring wells (MW-1 through MW-5) were advanced as part of the plume delineation activities. Following IEPA regulations, soil samples were also collected from monitoring wells MW-1 through MW-3. Soil samples were analyzed for BETX, MTBE, and PNA contamination. The soil analytical results are summarized in a table included in Appendix E. Soil analytical results from Stage 1 investigations indicate that the most stringent Tier 1 CUOs for the site have been exceeded.

3.5.2 Second Round of Sampling

CW³M personnel returned to the site on December 12, 2014 to sample and survey the newly installed monitoring wells. Groundwater samples were analyzed for BETX, MTBE, and PNA contamination. Soil boring logs and well completion reports (WCRs) are included in Appendix D. The groundwater analytical results are summarized in a table included in Appendix E. Groundwater analytical results indicate that the Class I Groundwater CUOs have been exceeded on site at MW-4, along the northern property line, and at MW-5, on the south side of the former tank pit.

3.5.3 Third Round of Sampling

On June 26, 2015, CW³M personnel were on site to conduct Stage 2 investigation activities. One soil boring (TACO-1) was advanced for analyses of site specific parameters for development of the Tier 2 CUOs for the site, and three monitoring wells (MW-6 through MW-8) were advanced as part of the groundwater plume delineation activities. The three monitoring wells installed were not sampled for soil analytical results since results from Stage 1 investigations indicate that the most stringent Tier 1 CUOs for the site have been exceeded, but the soil contamination plume has been defined on site.

3.5.4 Fourth Round of Sampling

CW³M personnel returned to the site on April 19, 2016 to conduct a slug test on MW-2 and April 20, 2016 to sample and survey the newly installed monitoring wells. Groundwater samples were analyzed for BETX, MTBE, and PNA contamination. Soil boring logs and WCRs are included in Appendix D. The groundwater analytical results and a table summarizing the results are included in Appendix E. Groundwater analytical results indicate that the Class I Groundwater CUOs have been exceeded on site at MW-4 and MW-7, along the northern property line.

3.5.5 Off-site Access Activities

On September 12, 2016, a certified letter was sent to Petersen Companies, LLC, 830 W. Trailcreek Drive, Peoria, Illinois 61614, requesting access to the owner's property for off-site remediation. The letter was delivered on September 15, 2016, but no response was ever made from Petersen Companies, LLC.

Therefore, an additional letter including language required by 35 Ill. Adm. Code 724.350b) was sent to Petersen Companies, LLC, on September 27, 2016, again requesting access to their property for off-site remediation. The letter was delivered on

October 4, 2016, but again no response was ever made from Petersen Companies, LLC. It was therefore determined that access to their property was considered denied.

In accordance with 35 Ill. Adm. Code 734.350, an affidavit will be prepared and included in the Corrective Action Completion Report (CACR), documenting the attempts to obtain access from the property. Copies of the correspondence sent to the off-site property and proof of delivery are included in Appendix H.

4. DEVELOPMENT OF REMEDIATION OBJECTIVES

4.1 GROUNDWATER REMEDIATION OBJECTIVES

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 located in McHenry, Monroe and St. Clair Counties in northern and western Illinois. Groundwater investigation sample results would be compared to the TACO Residential Tier 1 Clean-up Objectives in milligrams per liter (mg/L).

Table 4-1. Groundwater Remediation Objectives

Parameter	TACO Residential 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

4.2 SOIL REMEDIATION OBJECTIVES

Soil analytical results were compared to the TACO Residential Tier 1 Clean-up Objectives in milligrams per kilogram (parts per million) (mg/kg).

Table 4-2. Soil Remediation Objectives

Parameter	TACO Residential Tier 1 Clean-up Objective (mg/kg)
Benzene	0.03
Ethylbenzene	13.0
Toluene	12.0
Total Xylenes	5.6
MTBE	0.32
Acenaphthene	570.0
Acenaphtylene	15.0
Anthracene	12,000.0
Benzo(a)anthracene	0.9
Benzo(a)pyrene	0.09
Benzo(b)fluoranthene	0.9
Benzo(g,h,i)perylene	2,300.0
Benzo(k)fluoranthene	9.0
Chrysene	88.0
Dibenz(a,h)anthracene	0.09
Fluoranthene	4,300.0
Fluorene	560.0
Indeno(1,2,3-cd)pyrene	0.9
Naphthalene	1.8
Phenanthrene	140.0
Pyrene	2,300.0

4.3 Hydraulic Conductivity Testing

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

Hydraulic Conductivity (K), $= 3.85 \times 10^{-4}$ cm/sec
Soil bulk density (ρ_b), $= 1.686$ g/cm^3
Soil particle density (ρ_s), $= 2.638$ g/cm^3
Moisture content (w), $= 23\%$
Organic carbon content (f_{oc}) $= .0098$ g/g
Soil Classification = Silt Loam

In order to determine the hydraulic conductivity, a slug test was performed during Stage 2 Site Investigation activities. The test was performed by lowering a "slug" constructed of PVC into a MW-2. 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 will be plotted on a semi-logarithmic graph and the curve will be 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 was calculated using the hydraulic conductivity results determined at the site, as well as the hydraulic gradient. The hydraulic gradient of 0.014947 was found by calculating the change in gradient between the most up-gradient well (MW-2, 95.66 feet) and the down-gradient well in the direction of flow (MW-2, 94.24 feet), then dividing this answer by the distance in feet between the two wells (95 feet). Formula R24, ($U_{gw} = K \bullet i$) of 35 Ill. Adm. Code § 742 Appendix C, Table C.

5. ANALYTICAL OBJECTIVES AND RESULTS

5.1 SOIL ANALYTICAL RESULTS

Tables comparing the site investigation analytical results to the most stringent Tier 1 Remediation Objectives are included with the analytical results in Appendix E. The soil plume is defined on site.

5.2 GROUNDWATER ANALYTICAL RESULTS

Tables comparing the site investigation analytical results to the most stringent Tier 1 Remediation Objectives are included with the analytical results in Appendix E. The groundwater plume is defined on site except to the north due to denial of access for property immediately north of the site. Due to the levels of groundwater contamination at locations on the northern property line of the site, coupled with the groundwater flow to the north, the groundwater contamination plume is estimated to extend onto AmericInn Way, as shown in Drawing 0010 in Appendix B, but not likely to extend across the Petersen Companies, LLC property. The distance is illustrated on Drawing 0001C in Appendix B.

5.3 GROUNDWATER FLOW DIRECTION

Based on the groundwater survey conducted on April 20, 2016 the groundwater appears to flow to the north and east across the site. Refer to Drawings 0006A and 0006B in Appendix B for the groundwater flow maps. The groundwater flow direction will continue to be evaluated during corrective action activities.

6. SITE MAPS

Site maps identifying the UST systems, sample locations, product and dispenser lines, pumps and pump islands, underground utilities, nearby structures, property boundaries, and any surrounding areas that might have been adversely affected by the release of petroleum from the UST systems are included in Appendix B. All maps are to scale, oriented north and are prepared in accordance with 35 Ill. Adm. Code 734.440.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

Soil analytical results indicate that the Clean-up Objectives for the site were exceeded during the early action stage but further investigations have since confined the contamination to the property.

Groundwater analytical results indicate that the Clean-up Objectives for the site have been exceeded and are contained within the property boundaries except to the north. The contamination extends north beneath AmericInn Way, but due to denial of off-site access during the Stage 3 Site Investigation, the span of the plume is unknown beneath the road. Based on all site investigations to date and simultaneous off-site denial, the groundwater plume has been conditionally defined.

7.2 RECOMMENDATIONS

The results of the site investigation confirm that the extent of contamination has been defined. On behalf of the City of Monmouth, the owner of the USTs at the site in Monmouth, Illinois, CW³M will develop a Corrective Action Plan (CAP) and Budget for submittal to the IEPA based upon the contamination plumes that have been defined in this report.

The CAP will address recently adopted rules on Vapor Intrusion; screening parameters will be evaluated for the potential presence and impact of vapor. If necessary, a Vapor Intrusion Investigation will be proposed.

8. REFERENCES

CW³M, 2014a. CW³M Company, Inc. *20-Day Certification*. City of Monmouth, Monmouth, Illinois, May 13, 2014.

CW³M, 2014b. CW³M Company, Inc. *45-Day Report*. City of Monmouth, Monmouth, Illinois, July 3, 2014.

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EPA.STATE.IL.US, 2014. Source Water Assessment Program, *Water Well Survey Map* *www.maps.epa.state.il.us*, accessed May 22, 2014.

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IEPA, 2015. Illinois Environmental Protection Agency, *Site Investigation Stage 2 Plan and Budget*, City of Monmouth, Monmouth, Illinois, May 20, 2015.

IEPA, 2016. Illinois Environmental Protection Agency, *Stage 3 Site Investigation Plan Correspondence*, City of Monmouth, Monmouth, Illinois, August 17, 2016.

OSFM, 2014. Illinois Office of the State Fire Marshal, *Permit for Removal of Underground Storage Tanks(s)*, City of Monmouth, Monmouth, Illinois, May 9, 2014.

APPENDIX A

SITE INVESTIGATION COMPLETION REPORT FORM

SITE INVESTIGATION COMPLETION REPORT
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

Illinois Environmental Protection Agency

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

Leaking Underground Storage Tank Program
Site Investigation Completion Report

A. Site Identification

IEMA Incident # (6- or 8-digit): 2014-0510 IEPA LPC # (10-digit): 1870155032

Site Name: City of Monmouth

Site Address (not a P.O. Box): 1125 North Main Street

City: Monmouth County: Warren Zip Code: 61462

B. Site Information

1. Will the owner or operator seek payment from the Underground Storage? ☒ Yes ☐ No
2. Has a Site Investigation Plan been approved? ☒ Yes ☐ No

Date(s) of approval letter(s): May 12, 2015 Aug 17, 2016

C. Site Investigation Results

Provide the following:

1. Site history with respect to the release;
2. Site description:
   a. Area surrounding the site;
   b. Local geology, hydrogeology, and hydrology;
   c. Local geography and topography;
   d. Existing and potential migration pathways and exposure routes; and
   e. Current and projected post-remediation land use;
3. Site investigation results:
   a. Map(s) showing locations of all borings and groundwater monitoring wells completed as part of site investigation and the groundwater flow direction;
   b. Map(s) showing the horizontal extent of soil and groundwater contamination exceeding the most stringent Tier 1 remediation objectives (ROs);
   c. Map cross-section(s) showing the horizontal and vertical extents of soil and groundwater contamination exceeding the most stringent Tier 1 ROs;
   d. Soil boring logs and monitoring well construction diagrams for all borings drilled and groundwater monitoring wells installed as part of site investigation;
   e. Analytical results, chain of custody forms, and laboratory certifications;
   f. Table comparing analytical results to the most stringent Tier 1 ROs (include sample depth, date collected, and detection limits); and
   g. Potable water supply well survey;

4. Conclusion that includes an assessment of the sufficiency of the data;

5. Site map(s) meeting the requirements of 35 Ill. Adm. Code 734.440; and

6. Budget forms of actual costs (documenting actual work performed during the previous stage).

D. 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: City of Monmouth
Contact: Lowell Crow
Address: 100 E. Broadway
City: Monmouth
State: Illinois
Zip Code: 61462
Phone: (309) 734-2141
Signature:
Date: 2/4/2016

Consultant

Company: CW3M Company, Inc.
Contact: Carol L. Rowe, P.G.
Address: 701 South Grand Avenue West
City: Springfield
State: Illinois
Zip Code: 62704
Phone: (217) 522-8001
E-mail: cwm@cwmcompany.com
Signature:
Date: 11/7/2016

I certify under penalty of law that all activities that are the subject of this 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 report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in this report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 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: CW3M Company, Inc.
Address: 701 South Grand Avenue West
City: Springfield
State: Illinois
Zip Code: 62704
Phone: (217) 522-8001

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

Ill. Registration No.: 062-046118
License Expiration Date: 11/30/17
Signature:
Date: 11/7/16

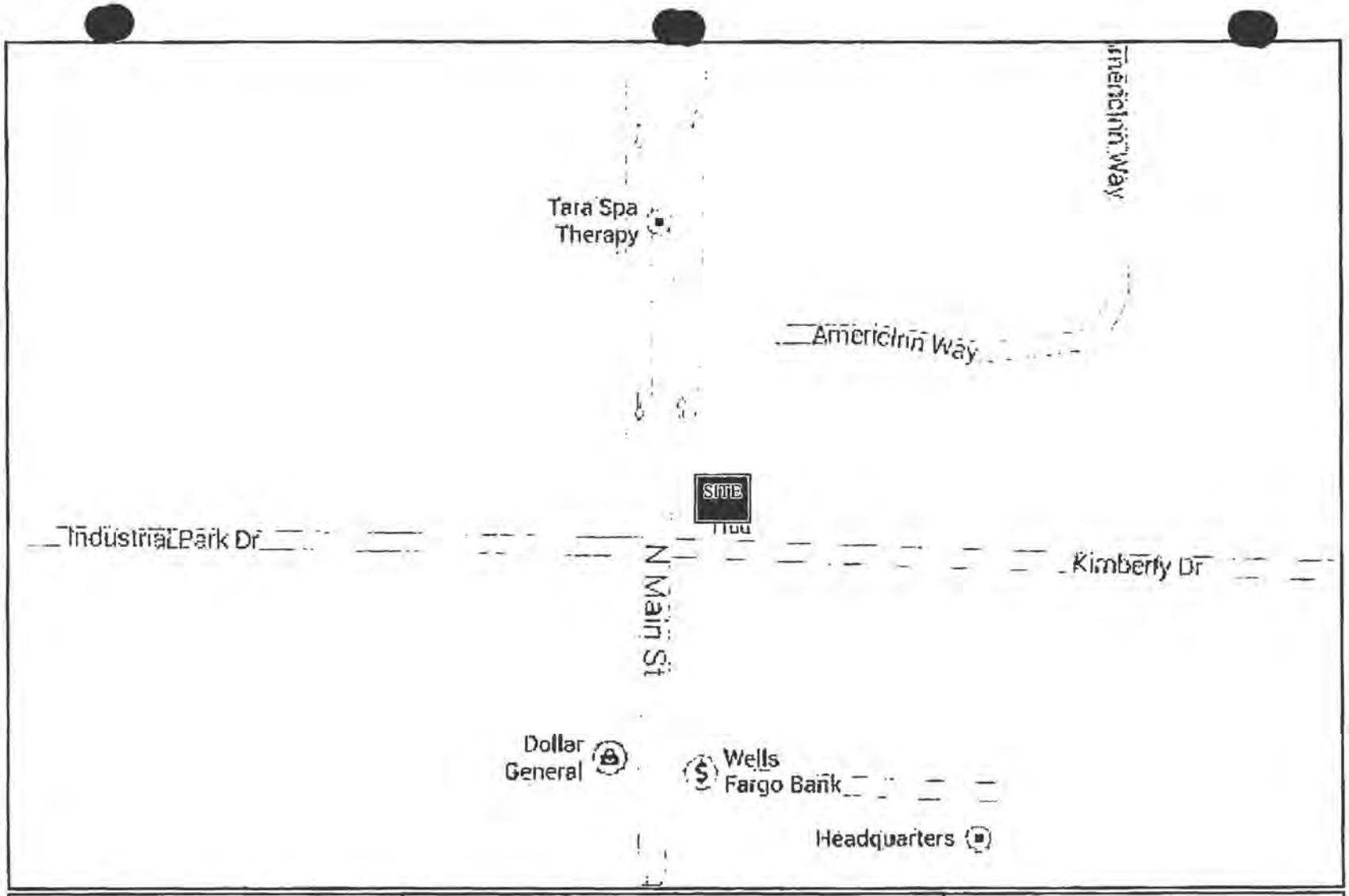
APPENDIX B

SITE MAPS AND ILLUSTRATIONS

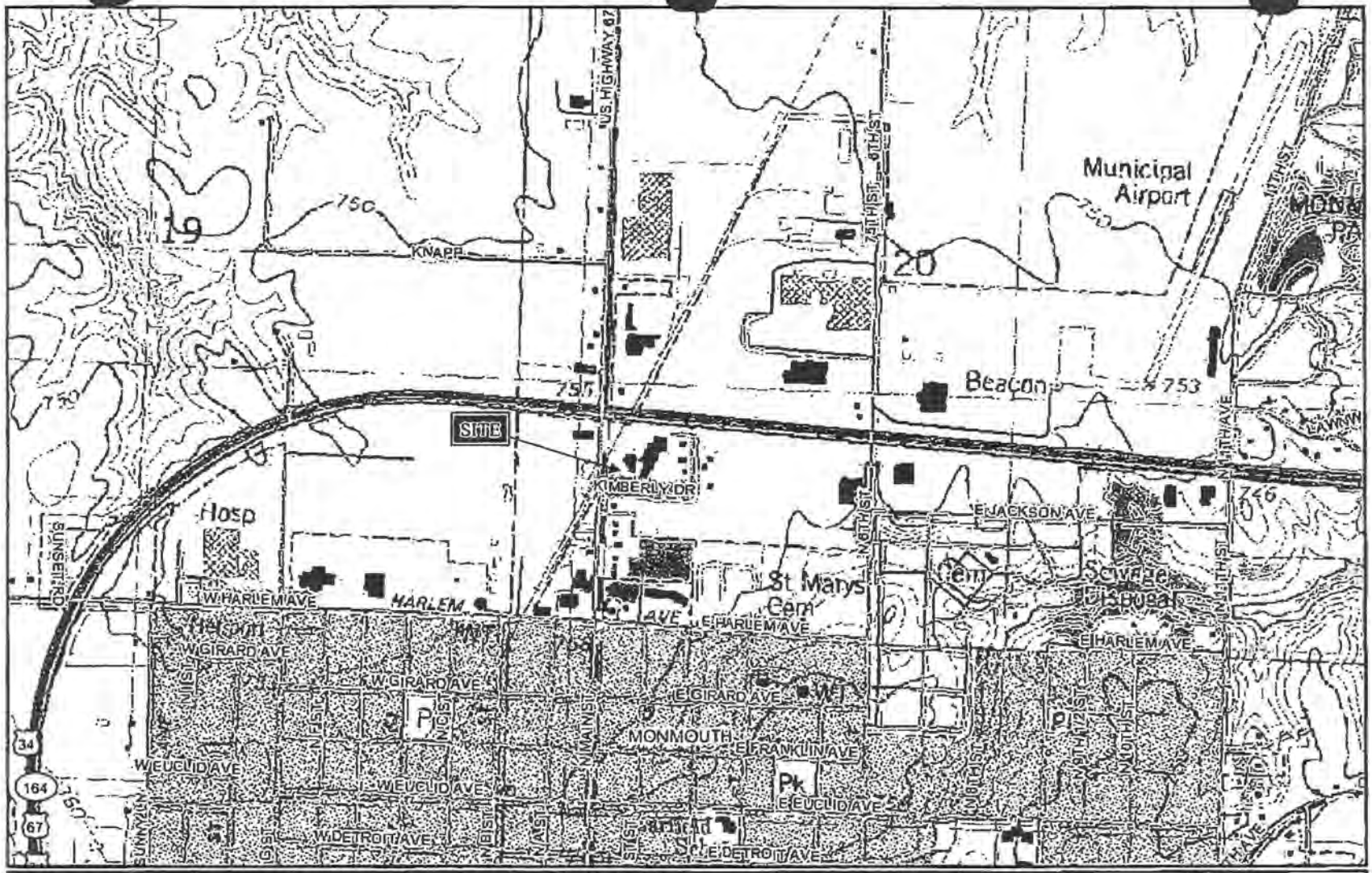
SITE INVESTIGATION
COMPLETION REPORT
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

INDEX OF DRAWINGS

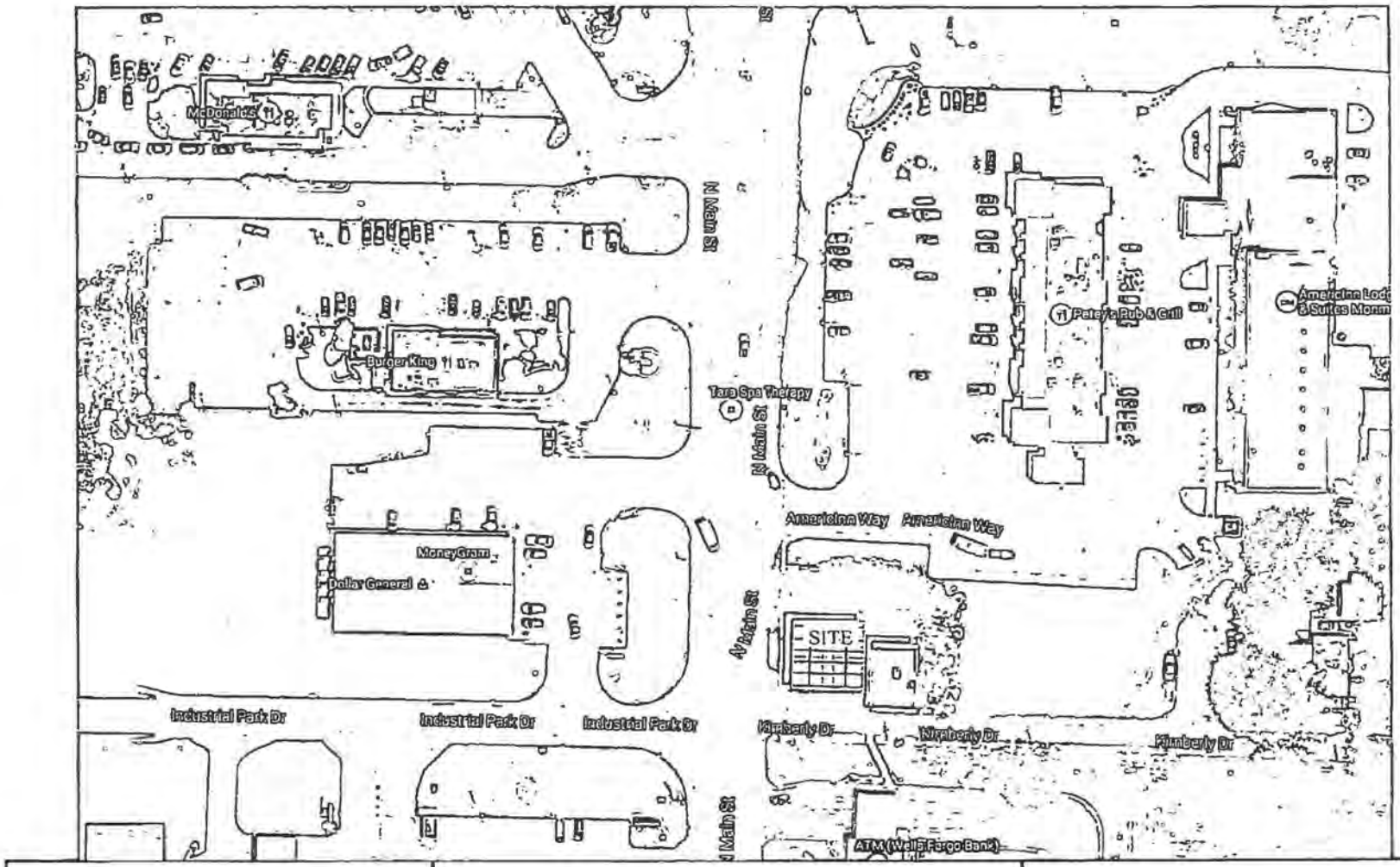
Drawing Number	Description	File Name
0001A	Site Location Map	SiteMap.doc
0001B	Topographic Map	TopoMap.doc
0001C	Surrounding Populations Map	SP.doc
0002	Site Map	Site.dwg
0003	Soil Boring Location Map	SBLoc.dwg
0004	Monitoring Well Location Map	MWLoc.dwg
0005	Monitoring Well Elevation Map	MWElev.dwg
0006A	Groundwater Flow Map (December 2014)	GW1214.dwg
0006B	Groundwater Flow Map (April 2016)	GW0416.dwg
0007	Soil Contamination Values Map	Soilcon.dwg
0008	Groundwater Contamination Values Map	GWcon.dwg
0009	Soil Contamination Plume Map	SPlume.dwg
0010	Groundwater Contamination Plume Map	GWPlume.dwg



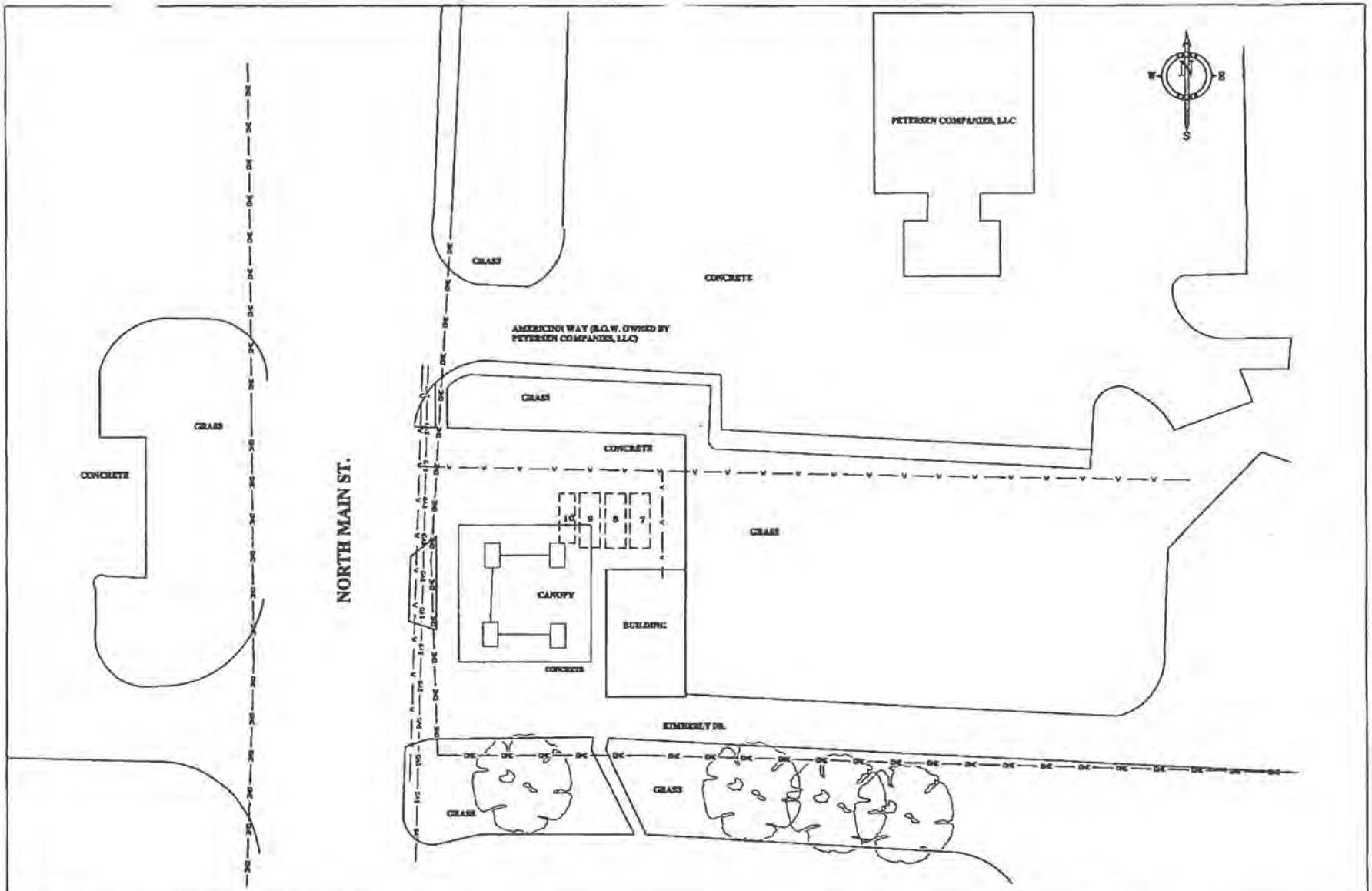
CW³M Company, Inc. 701 South Grand Avenue West Springfield, IL 62704 (217)-522-8001	**Site Location Map** 1125 North Main Street Monmouth, Illinois	Drawn By: BMW Reviewed By: CLR Drawing 0001A SiteMap.doc



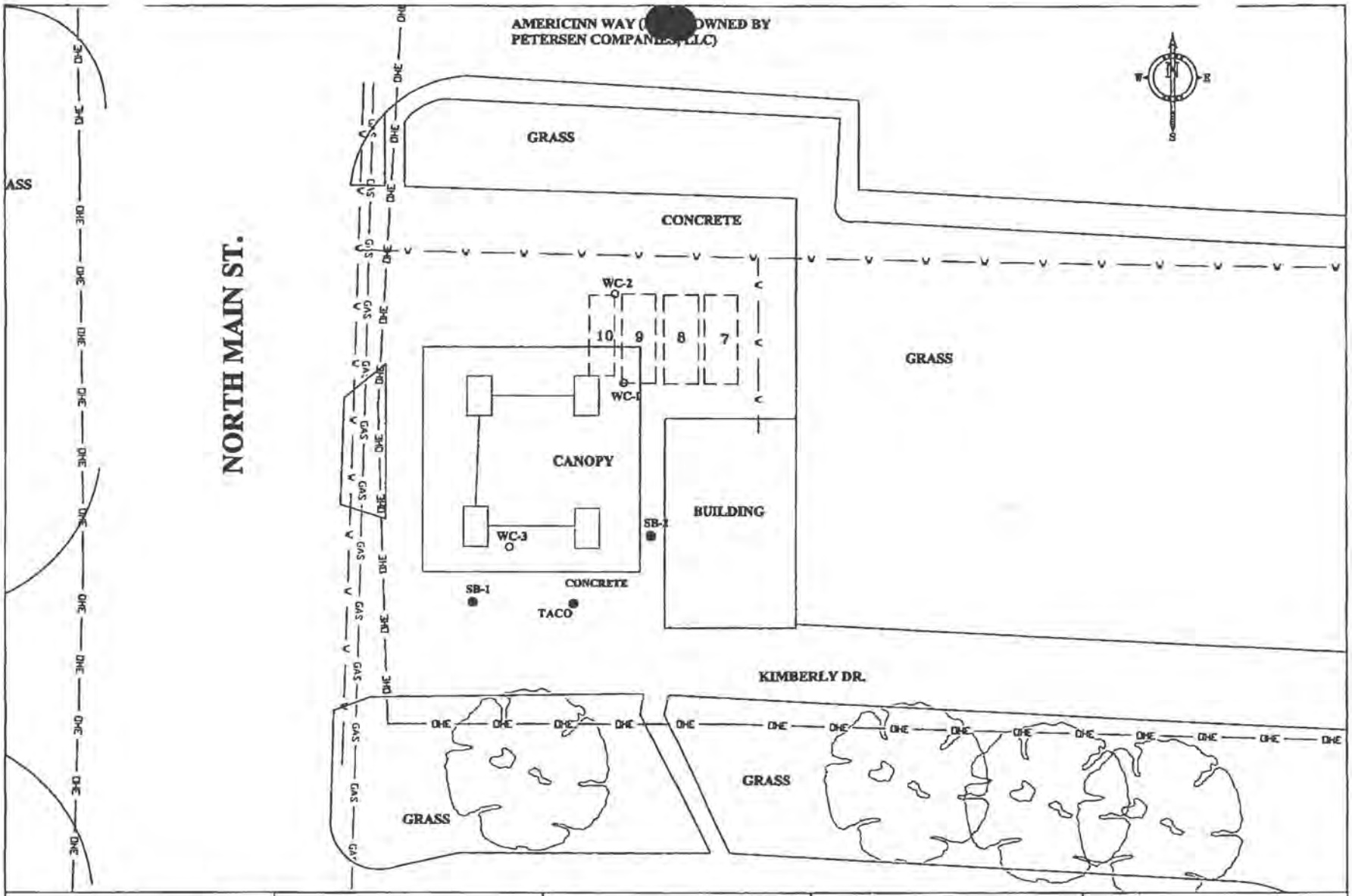
CW³M Company, Inc. 701 South Grand Avenue West Springfield, IL 62704 (217)-522-8001	**Topographic Map** 1125 North Main Street Monmouth, Illinois	Drawn By: BMW Reviewed By: CLR Drawing 0001B TopoMap.doc



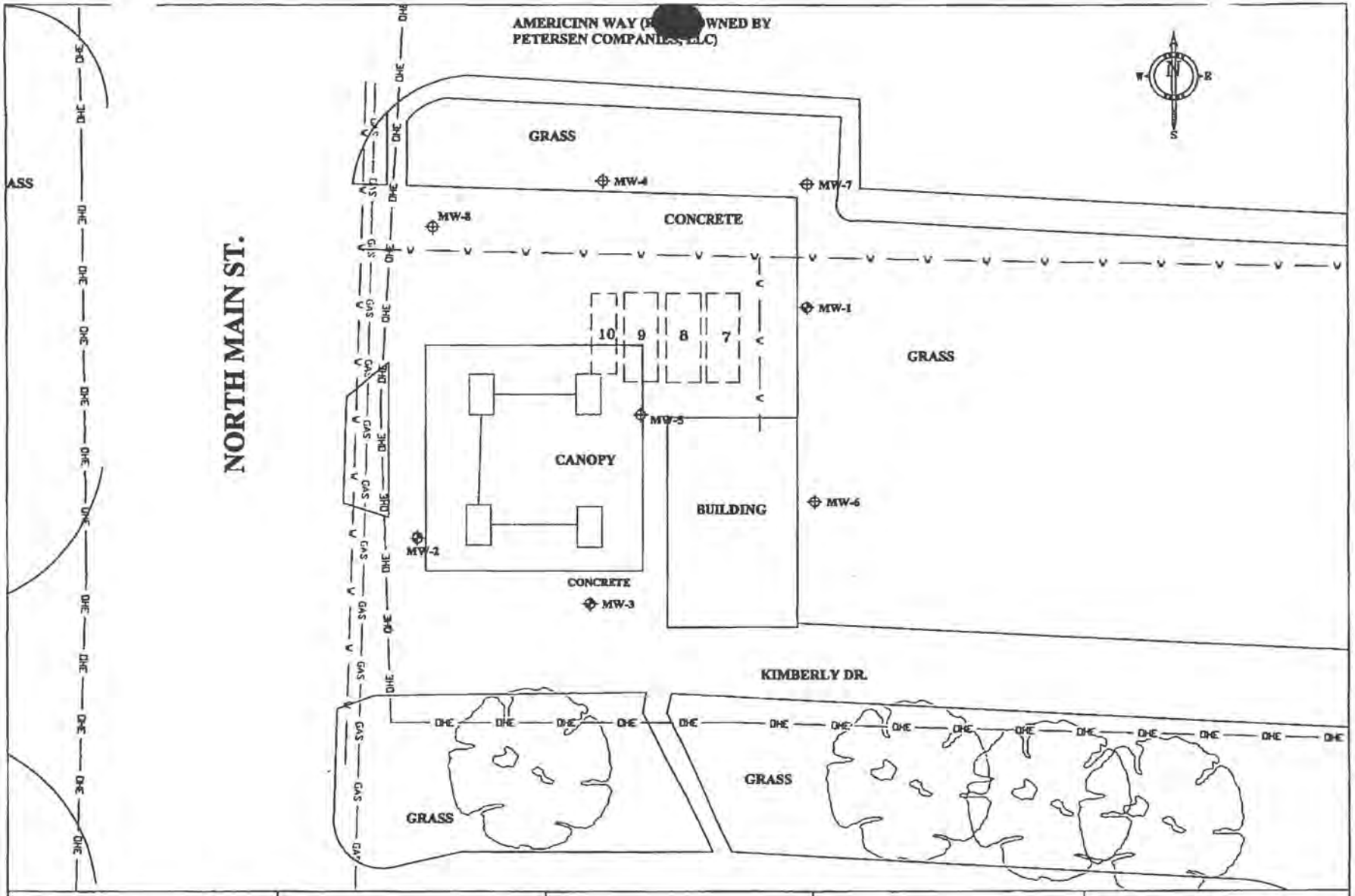
CW³M Company, Inc. 701 South Grand Avenue West Springfield, IL 62704 (217)-522-8001	**Surrounding Populations Map** 1125 North Main Street Monmouth, Illinois	Drawn By: BMW Reviewed By: CLR Drawing 0001C SP.doc



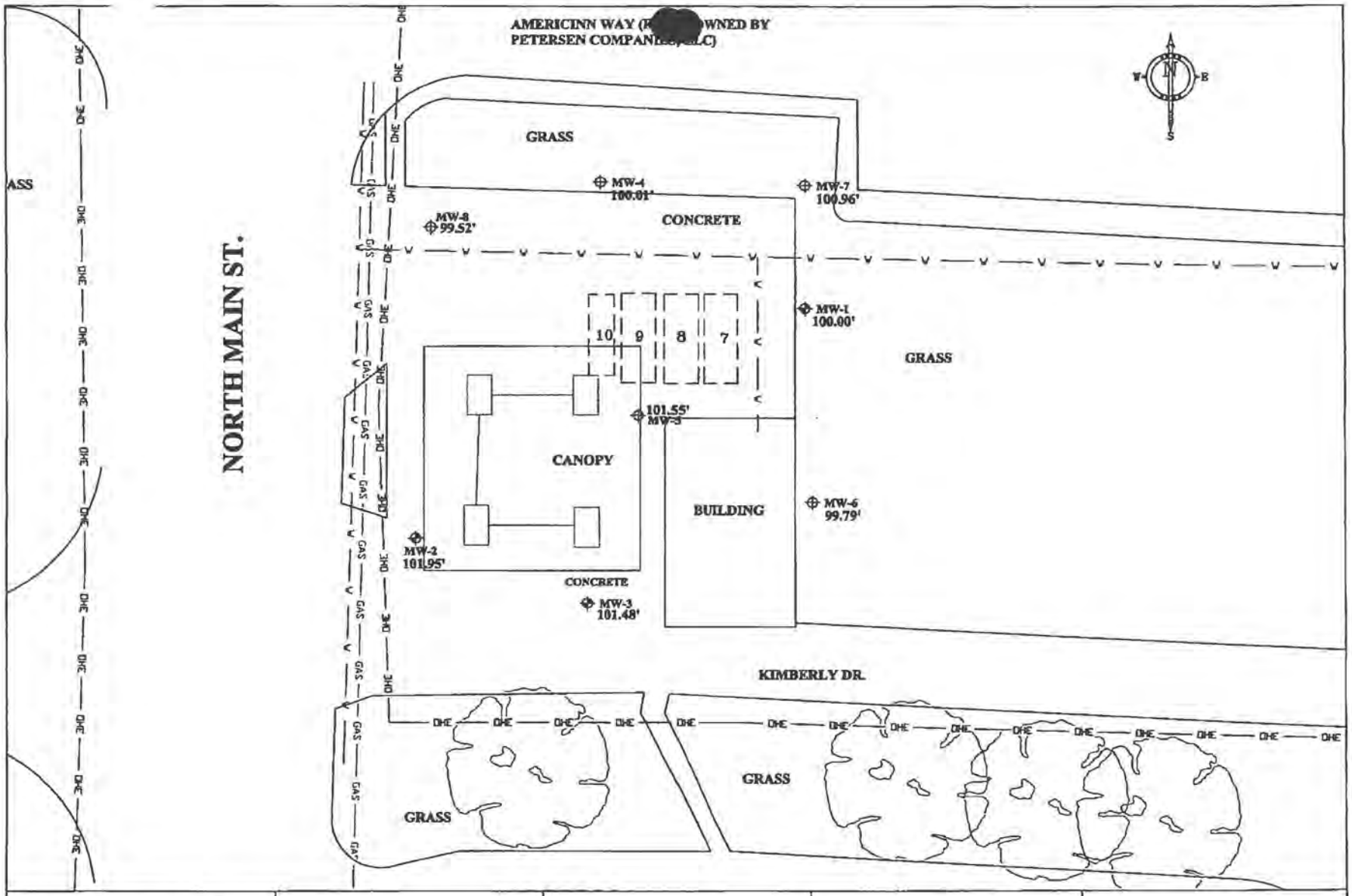
CW²M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	SITE MAP	DATE: 2/20/14 REVISED DATE: 3/28/14 SCALE 1"=50' DRAWING: 0002	DRAWN BY: MDR REVISED BY: BMW REVIEWED BY: CLR SITE.DWG



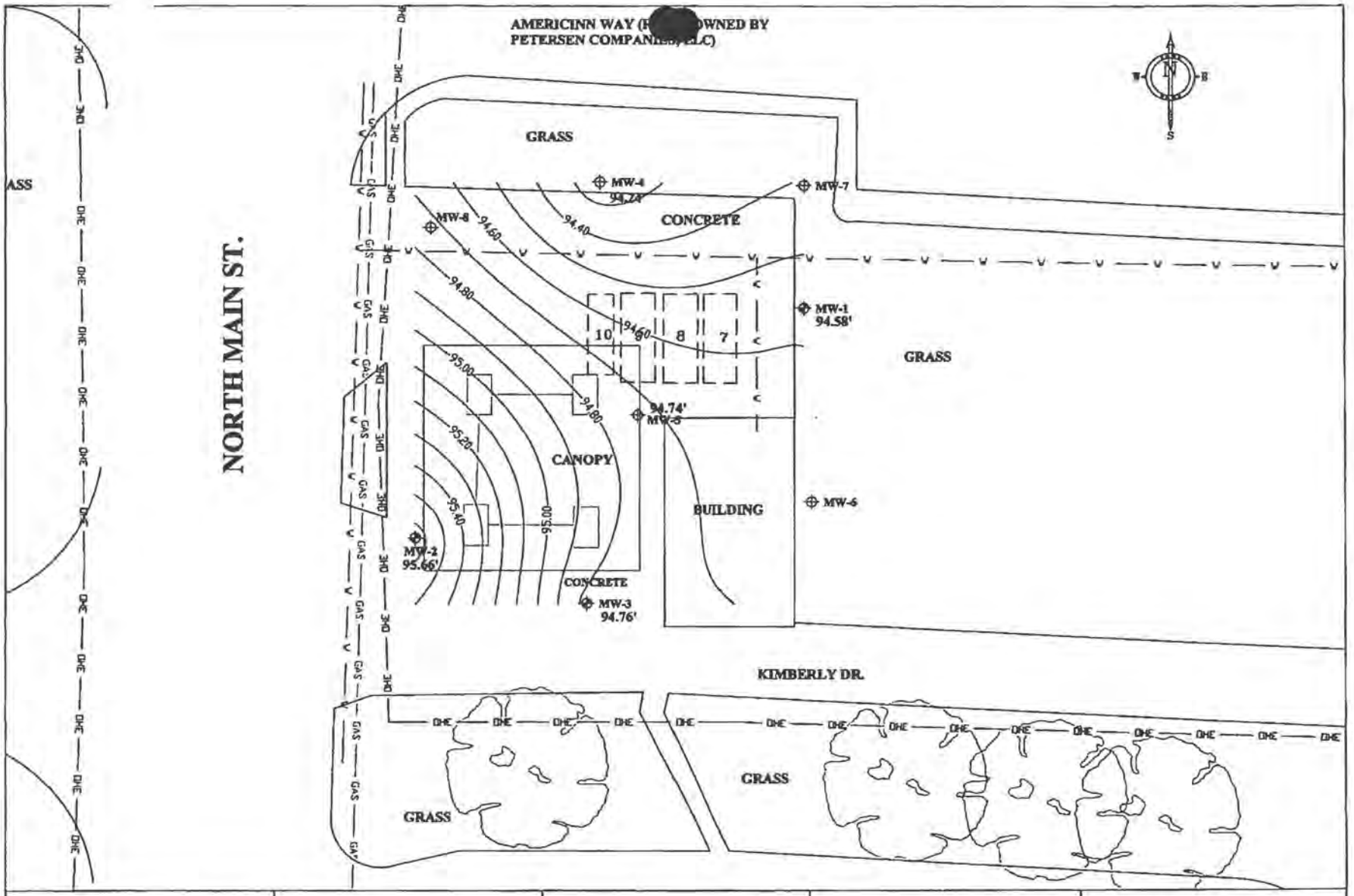
CW²M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	SOIL BORING LOCATION MAP	DATE: 6/17/2014 REVISED DATE: 3/27/15 SCALE 1"=30' DRAWING: 0003	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR SBLOC.DWG



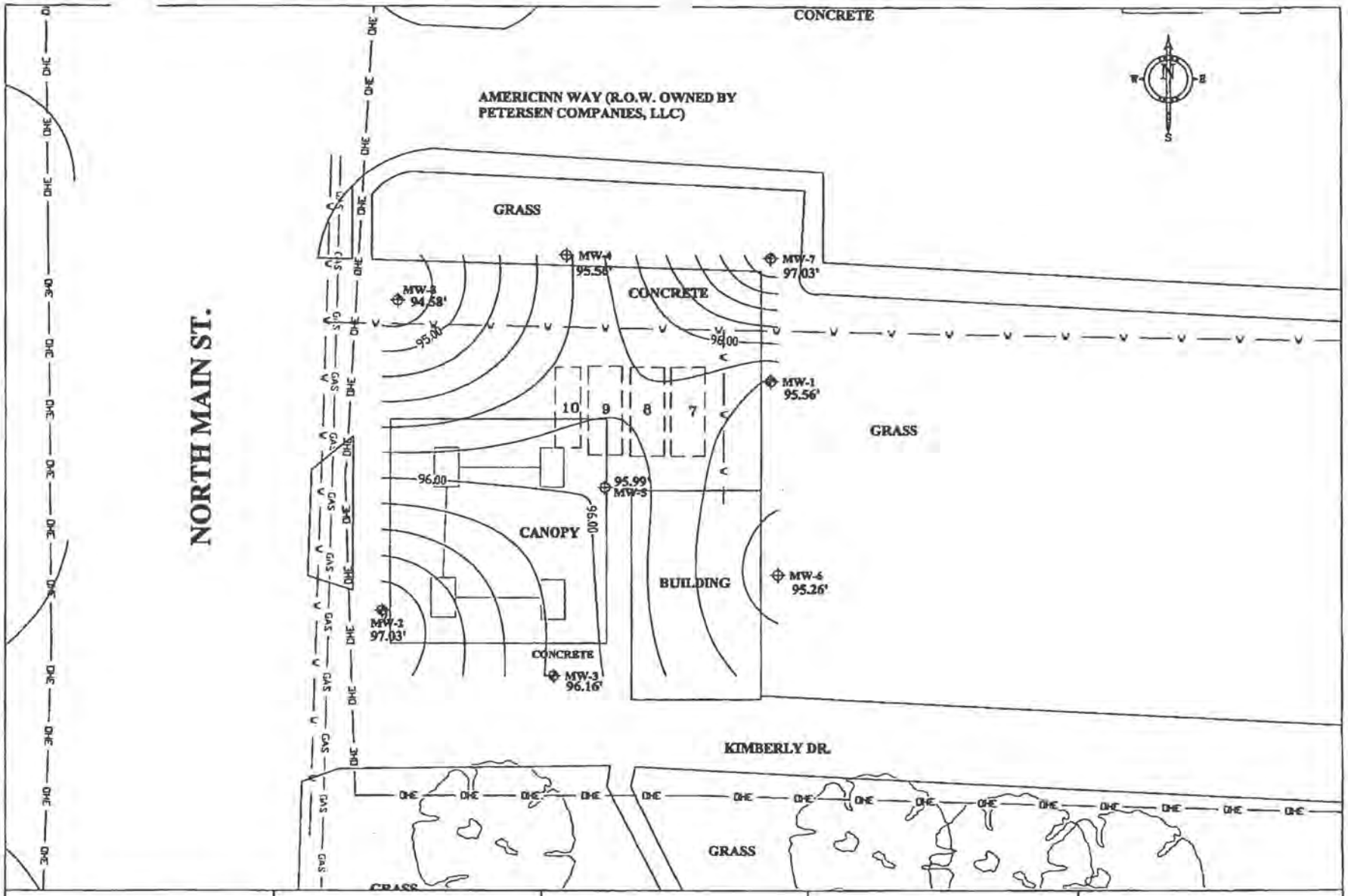
CW²M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	MONITORING WELL LOCATION MAP	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0004	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR MWLOC.DWG



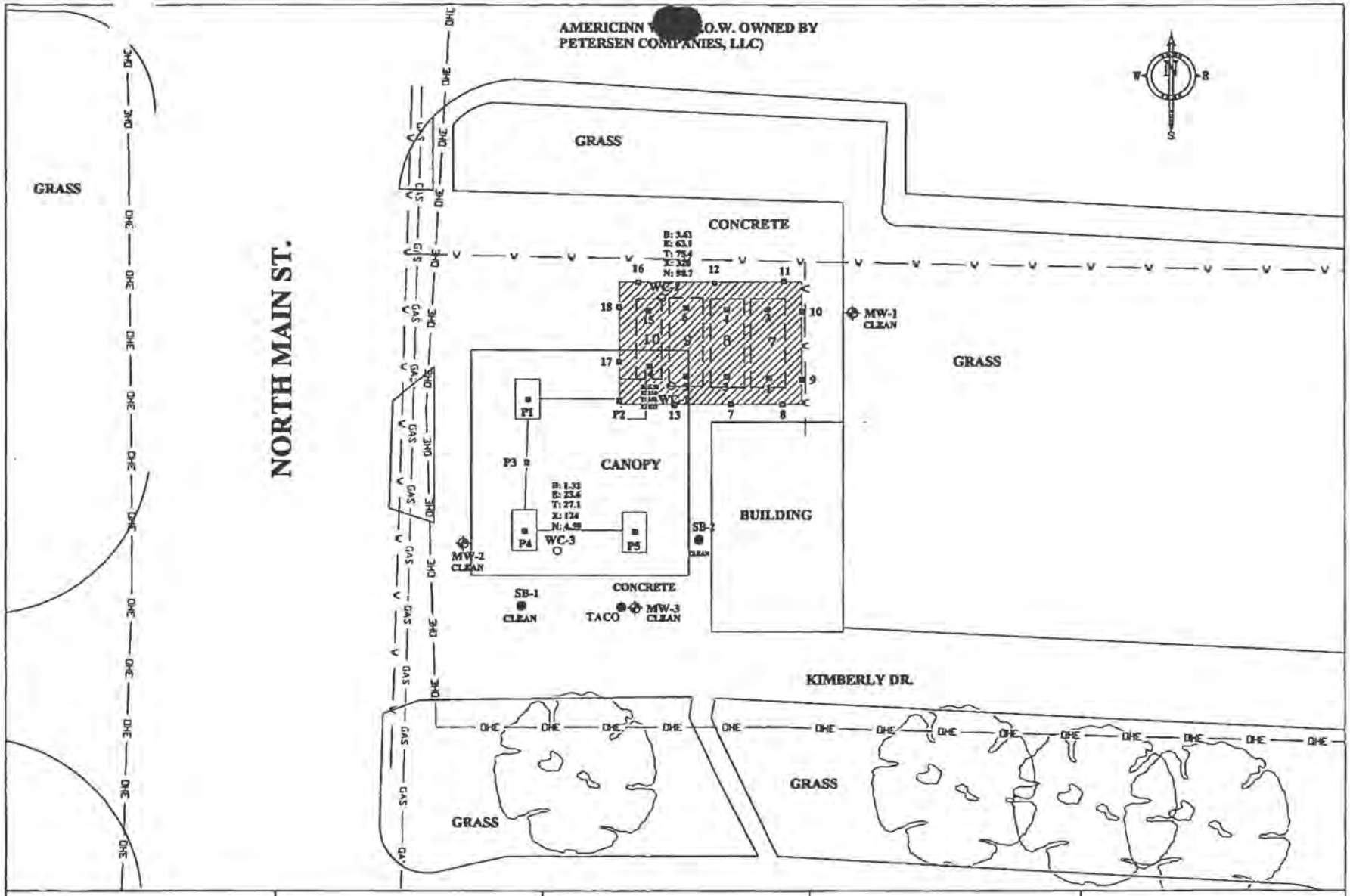
CW[redacted]M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	MONITORING WELL ELEVATION MAP	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0005	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR MWELEV.DWG



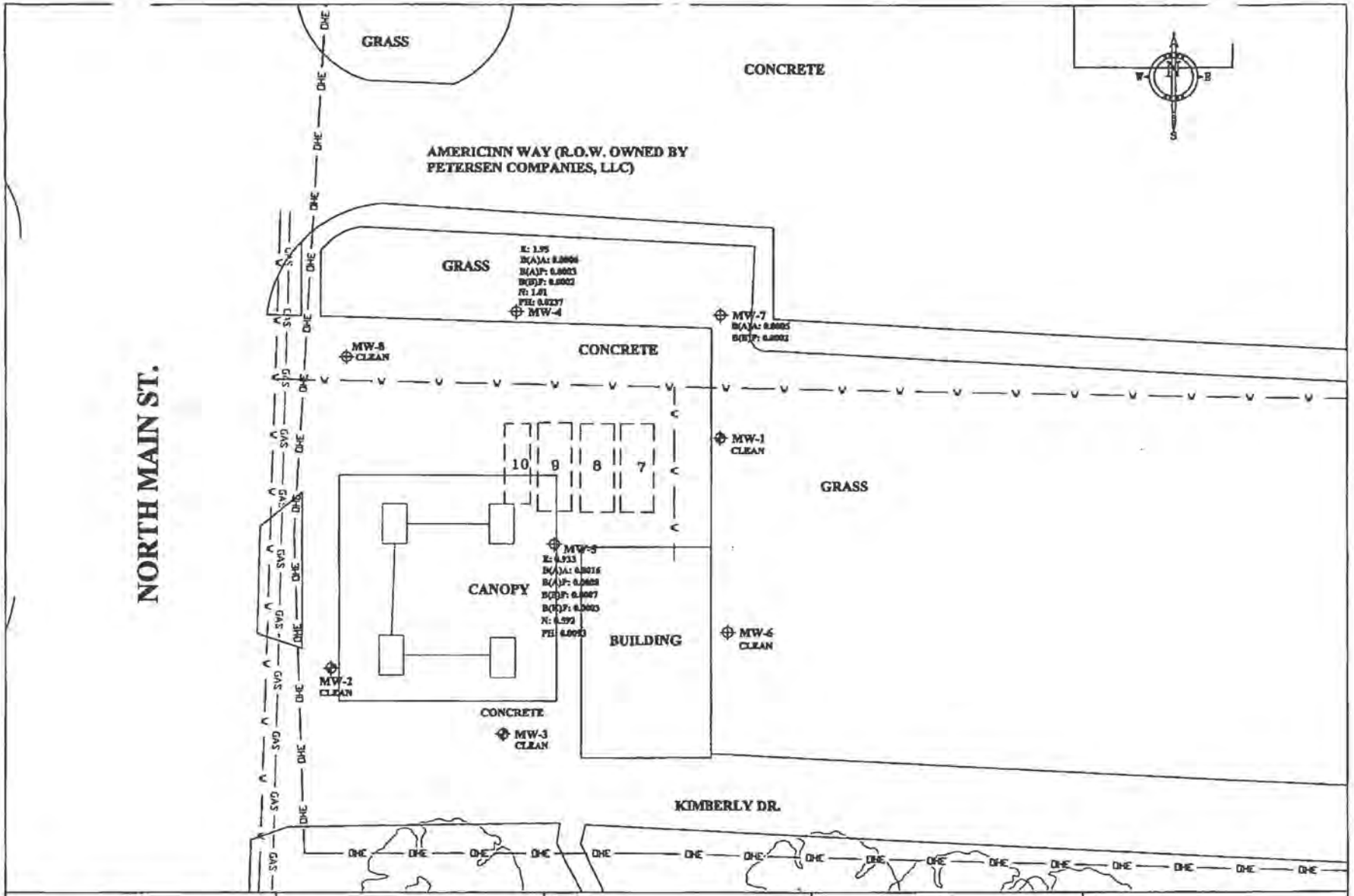
CW[redacted]M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	GROUNDWATER FLOW MAP (DECEMBER 2014)	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0006A	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR GW1214.DWG



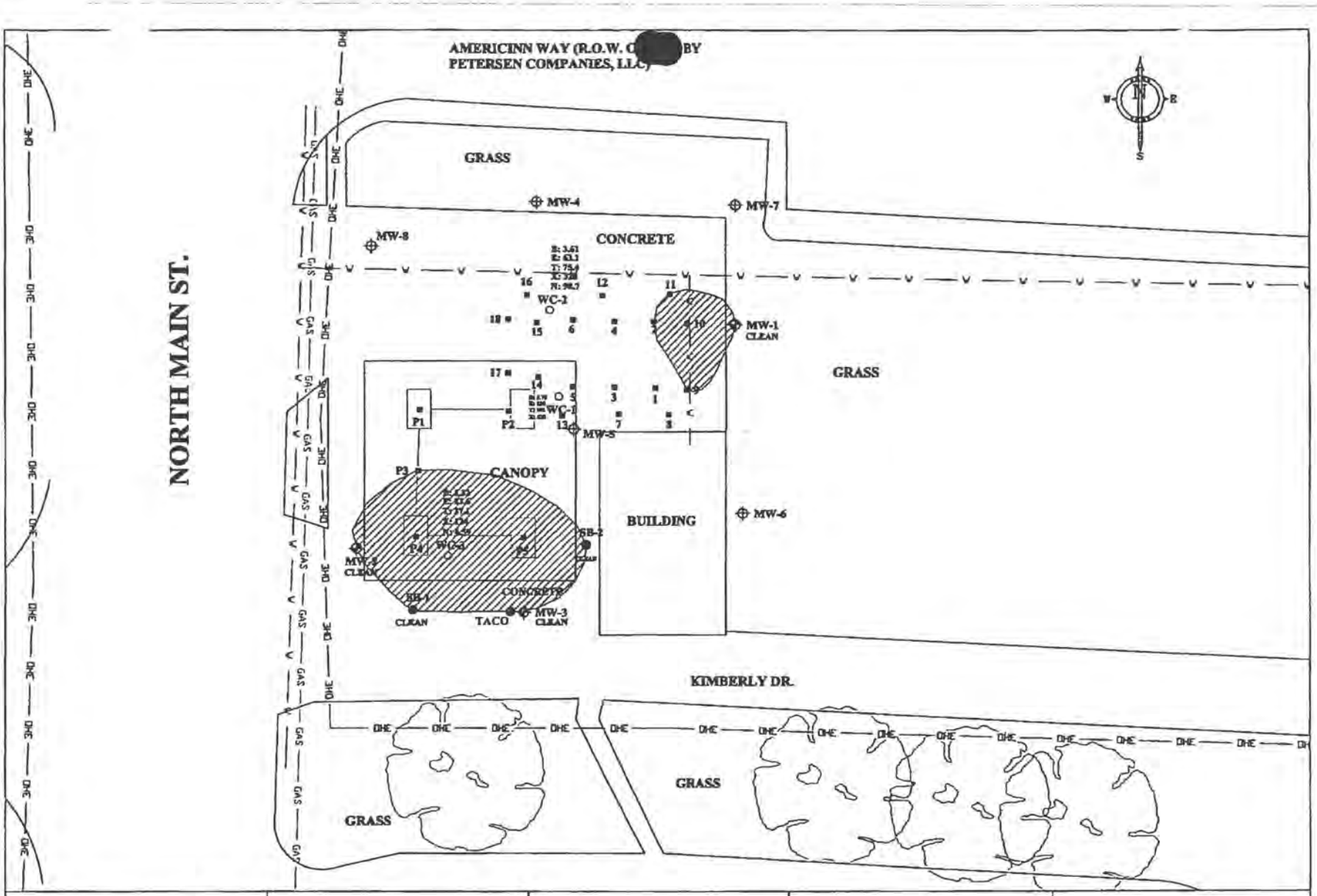
CWM COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	GROUNDWATER FLOW MAP (APRIL 2016)	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0006B	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR GW0416.DWG



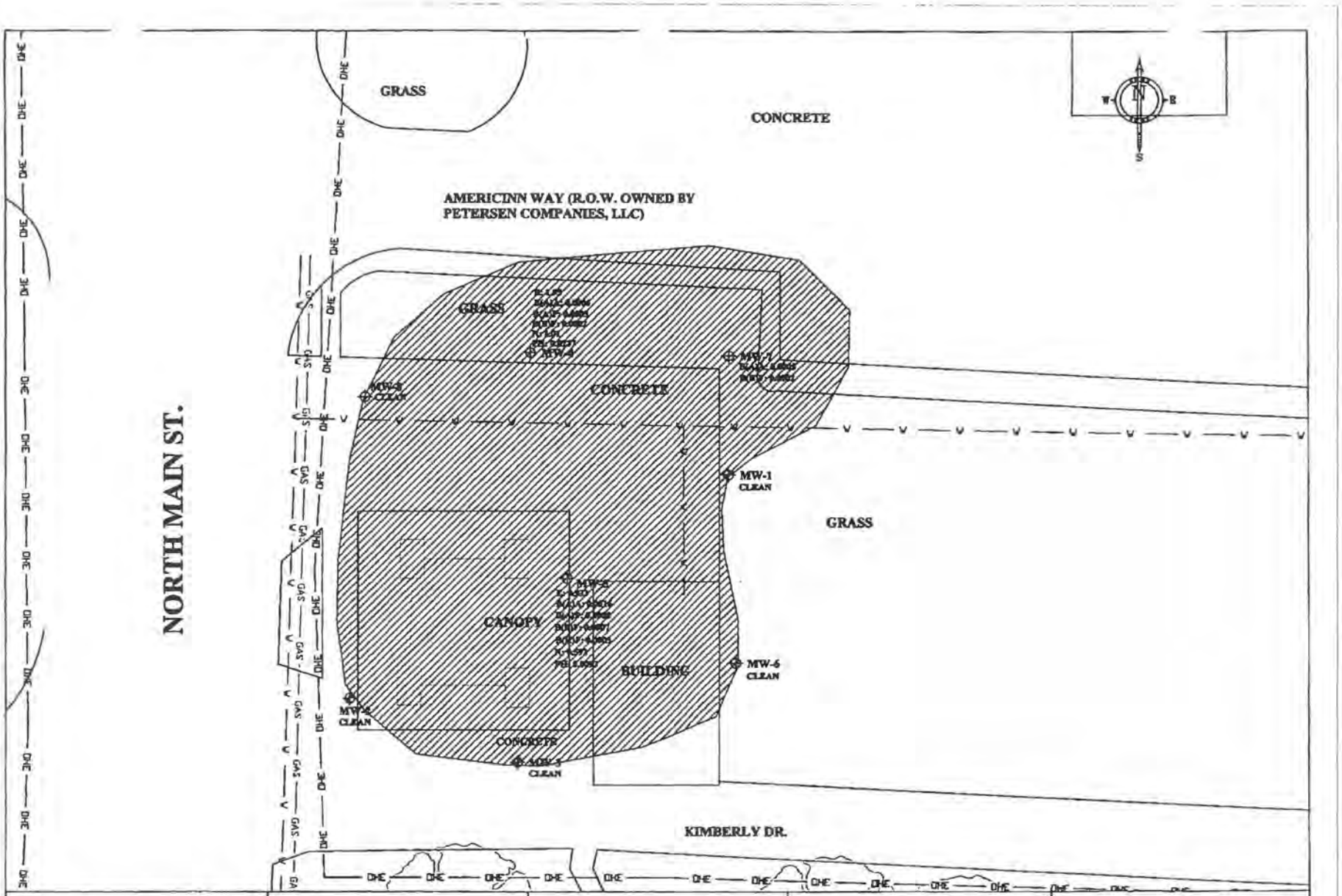
CW[redacted]M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	SOIL CONTAMINATION VALUES MAP	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0007	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR SOILCON.DWG



CW[M] COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	GROUNDWATER CONTAMINATION VALUES MAP	DATE: 6/17/2014 REVISED DATE: 3/30/15 SCALE 1"=30' DRAWING: 0008	DRAWN BY: MJS REVISED BY: BMW REVIEWED BY: CLR GWCON.DWG



CW²M COMPANY, INC. 701 W. SOUTH GRAND SPRINGFIELD, IL. 62704 (217) 522-8001	CITY OF MONMOUTH MONMOUTH, ILLINOIS INCIDENT 2014-0510 WARREN COUNTY	SOIL CONTAMINATION PLUME MAP	DATE: 10/13/16 REVISED DATE: SCALE 1"=30' DRAWING: 0009	DRAWN BY: MJS REVISED BY: REVIEWED BY: CLR SPLUME.DWG


GRASS
CONCRETE
AMERICINN WAY (R.O.W. OWNED BY
PETERSEN COMPANIES, LLC)
NORTH MAIN ST.
GRASS
CONCRETE
MW-1
CLEAN
GRASS
CANOPY
BUILDING
MW-6
CLEAN
MW-5
CLEAN
CONCRETE
MW-3
CLEAN
KIMBERLY DR.
CW²M COMPANY, INC.
701 W. SOUTH GRAND
SPRINGFIELD, IL. 62704
(217) 522-8001
CITY OF MONMOUTH
MONMOUTH, ILLINOIS
INCIDENT 2014-0510
WARREN COUNTY
GROUNDWATER
CONTAMINATION
PLUME MAP
DATE: 10/13/16
REVISED DATE:
SCALE 1"=30'
DRAWING: 0010
DRAWN BY: MJS
REVISED BY:
REVIEWED BY: CLR
GWPLUME.DWG

APPENDIX C

ILLINOIS OFFICE OF THE STATE FIRE MARSHAL ELIGIBILITY DETERMINATION

SITE INVESTIGATION COMPLETION REPORT
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

Office of the Illinois
State Fire Marshal
"Partnering With the Fire Service to Protect Illinois"

CERTIFIED MAIL - RECEIPT REQUESTED #7012 1010 0002 9120 9890

July 25, 2014

RECEIVED
JUL 25 2014
BY: CR

City of Monmouth
c/o CW3M Company
P.O. Box 571
Carlinville, IL 62626

In Re: Facility No. 3-005131
IEMA Incident No. 14-0510
Former Clark Station #2330
1125 North Main Street
Monmouth, Warren Co., IL

Dear Applicant:

The Reimbursement Eligibility and Deductible Application received on June 10, 2014 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 8,000 gallon Gasoline
Tank 8 8,000 gallon Gasoline
Tank 9 8,000 gallon Gasoline
Tank 10 4,000 gallon Diesel Fuel

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 deductibility. 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 mailing 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 4,000 gallon Gasoline
Tank 2 3,000 gallon Gasoline
Tank 3 3,000 gallon Gasoline
Tank 4 3,000 gallon Gasoline
Tank 5 1,000 gallon Gasoline
Tank 6 500 gallon Gasoline

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 or (217) 785-5878.

Sincerely,

Deanne Lock
Administrative Assistant
Division of Petroleum and Chemical Safety

cc: IEPA

APPENDIX D

BORING LOGS AND WELL COMPLETION REPORTS

SITE INVESTIGATION COMPLETION REPORT
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** WC-1
SITE NAME: City of Monmouth	**BORING LOCATION:** 8'N & 10' W of NW Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 5/5/14 10:45	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 5/5/14 11:30	**BACKFILL:** 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						Odor and slight discoloration throughout
2	Backfill / Pea Gravel	ML					
3			90%	868.5	Grab	WC-1 2.5'	
4							
5							
6				1245.0	Grab	WC-1 6'	BETX, MTBE, PNAs, Strong odor
7			95%				
8							
9	Brown Mottled Grey Silty Clay w/ some backfill pea gravel	CL					
10							
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 6' for lab analysis; highest PID reading, corresponding sample location from previous incident

Manway / Surface Elevation:

Groundwater Depth While Drilling:	N/A	**Auger Depth:**	10'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR/MCD

Illinois Environmental Protection Agency

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

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** WC-2
SITE NAME: City of Monmouth	**BORING LOCATION:** 30'N & 12' W of NW Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 5/5/14 11:30	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 5/5/14 12:15	**BACKFILL:** 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						Odor throughout
2	Backfill / Pea Gravel	ML					
3			90%	643.9	Grab	WC-2 2.5'	
4							
5							
6							
7							
8			95%	879.6	Grab	WC-2 7.5'	
9							
10							
11	Brown Mottled Grey Silty Clay w/ some backfill pea gravel	CL					
12				1132.3	Grab	WC-2 11'	BETX, MTBE, PNAs, Flash Point, Paint Filter, PH
13			90%				
14							
15	End of Boring 15'						

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

NOTES Sampled at 11' for lab analysis; highest PID reading, corresponding sample location from previous incident

Manway / Surface Elevation:

Groundwater Depth While Drilling:	NA	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR/MCD

Illinois Environmental Protection Agency

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

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** WC-3
SITE NAME: City of Monmouth	**BORING LOCATION:** 30'S & 38' W of NW Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 5/5/14 12:15	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 5/5/14 1:00	**BACKFILL:** 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						Odor throughout
2	Backfill / Pea Gravel	ML					
3			95%				
4							
5				763.0	Grab	WC-3 4'	BETX, MTBE, PNAs
6							
7							
8			95%	540.5	Grab	WC-3 7.5'	
9	Brown Mottled Grey Silty Clay w/ some backfill pea gravel	CL					
10							
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 4' for lab analysis; highest PID reading, corresponding sample location from previous incident

Manway / Surface Elevation:

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

Illinois Environmental Protection Agency

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

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** SB-1
SITE NAME: City of Monmouth	**BORING LOCATION:** 100'S & 12' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 12/11/14 3:00	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 12/11/14 3:15	**BACKFILL:** 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	Light brown mottled grey silty clay	CL					
3			95%	42.1	Grab	SB-1 2.5	BETX, MTBE, PNAs
4							
5							
6							
7							
8			100%	108.0	Grab	SB-1 7.5'	BETX, MTBE, PNAs
9		CL					
10							
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' per regs

Manway / Surface Elevation:

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

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** SB-2
SITE NAME: City of Monmouth	**BORING LOCATION:** 76'S & 50' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 12/11/14 3:15	**DRILLING/SAMPLE METHOD:** Push
DATE/TIME FINISHED: 12/11/14 3:30	**BACKFILL:** 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	Grey mottled brown silty clay	CL					
3			95%	36.3	Grab	SB-2 2.5	BETX, MTBE, PNAs
4							
5							
6	Light brown silty clay	CL					
7							
8			100%	18.7	Grab	SB-2 7.5'	BETX, MTBE, PNAs
9							
10							
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' per regs

Manway / Surface Elevation:

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

Illinois Environmental Protection Agency

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

Page 1 of 1

LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-1
SITE NAME: City of Monmouth	**BORING LOCATION:** 30'S & 102' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 12/11/14 11:30	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 12/11/14 12:15	**BACKFILL:** N/A - Set Well

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Grass						
1	Top soil						
2							
3			95%	8.7	Grab	MW-1 2.5'	BETX, MTBE, PNAs
4							
5	Light brown mottled grey silty clay	CL					
6							
7							
8			100%	27.6	Grab	MW-1 7.5'	BETX, MTBE, PNAs
9							
10							
11	Gray silty clay	CL					
12							
13			95%	23.2	Grab	MW-1 12.5'	
14							
15	End of boring						

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

NOTES: Sampled 2.5' and 7.5' per reg

Manway / Surface Elevation:	100.00'				
Groundwater Depth While Drilling:	~10'	**Auger Depth:**		**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**	15'	**Geologist:**	BMW/MDR

Illinois Environmental Protection Agency

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

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LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-2
SITE NAME: City of Monmouth	**BORING LOCATION:** 3'E & 76' S of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 12/11/14 12:15	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 12/11/14 1:00	**BACKFILL:** N/A - Set Well

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 silty clay	CL					
3			95%	15.3	Grab	MW-2 2.5'	BETX, MTBE, PNAs
4							
5							
6	Brown mottled grey silty clay	CL					
7							
8			100%	14.9	Grab	MW-2 7.5'	BETX, MTBE, PNAs
9							
10							
11	Gray silty clay	CL					
12							
13			100%	7	Grab	MW-2 12.5'	
14							
15	End of boring						

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

NOTES: Sampled 2.5' and 7.5' per reg

Manway / Surface Elevation:	101.95'				
Groundwater Depth While Drilling:	– 10'	**Auger Depth:**		**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**	15'	**Geologist:**	BMW/MDR

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-3
SITE NAME: City of Monmouth	**BORING LOCATION:** 100'S & 38' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 12/11/14 1:00	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 12/11/14 1:45	**BACKFILL:** N/A - Set Well

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 silt	CL					
3			90%	5.8	Grab	MW-3 2.5'	BETX, MTBE, PNAs
4							
5							
6	Brown mottled grey silty clay	CL					
7							
8			95%	15.0	Grab	MW-3 7.5'	BETX, MTBE, PNAs
9							
10							Softens
11							
12							
13			95%	0	Grab	MW-3 12.5'	
14							
15	End of boring						

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

NOTES: Sampled 2.5' and 7.5' per reg

Manway / Surface Elevation:	101.48'				
Groundwater Depth While Drilling:	~10'	**Auger Depth:**		**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**	15'	**Geologist:**	BMW/MDR

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-4
SITE NAME: City of Monmouth	**BORING LOCATION:** 10'N & 54' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 12/11/14 1:45	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 12/11/14 2:15	**BACKFILL:** N/A - Set Well

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Grass						
1	Topsoil						Slight odor and discoloration
2	Black silt	CL					
3			100%	10.0	Grab	MW-4 2.5'	
4	Dark brown mottled grey silty clay	CL					
5							
6							
7							
8			100%	15.2	Grab	MW-4 7.5'	
9							
10							Softens
11	Grey silty clay	CL					
12							
13			100%	4	Grab	MW-4 12.5'	
14							
15	End of boring						

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

NOTES: No samples / Field screened only

Manway / Surface Elevation:	100.01'				
Groundwater Depth While Drilling:	~8'	**Auger Depth:**		**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**	15'	**Geologist:**	BMW/MDR

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-5
SITE NAME: City of Monmouth	**BORING LOCATION:** 60'S & 55' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 12/11/14 2:15	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 12/11/14 3:00	**BACKFILL:** N/A - Set Well

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Gravel						
1	Fill (sand,pea gravel)						Slight odor and discoloration
2							
3			95%	13.5	Grab	MW-5 2.5'	
4							
5							
6							
7			95%	18.2	Grab	MW-5 7.5'	Wet
8							
9	Light brown silty clay	CL					
10							
11							
12							
13			95%				Too wet to PID
14							
15	End of boring						

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

NOTES: No samples / Field screened only

Manway / Surface Elevation:	101.55'				
Groundwater Depth While Drilling:	~8'	**Auger Depth:**		**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**	15'	**Geologist:**	BMW/MDR

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CW M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-6
SITE NAME: City of Monmouth	**BORING LOCATION:** 20'S & 5' E of NE Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15 11:30 AM	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 6/26/15 12:15 pm	**BACKFILL:** N/A - Set Well

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Grass						
1	Topsoil						
2	Black Clayey Silt	ML	95%	0.0			
3							
4	Dark Brown Mottled Gray Silty Clay	CL					
5							
7			100%	0.0			
8							
9							
10							
11							
12	Gray Silty Clay	CL					
13			100%				
14							
15	End of boring						

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

NOTES: No samples / Field screened only

Manway / Surface Elevation:

Groundwater Depth While Drilling:	~8'	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR/MJS

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CW M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-7
SITE NAME: City of Monmouth	**BORING LOCATION:** 55' N of NE Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15 12:15 pm	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 6/26/15 1:00 pm	**BACKFILL:** N/A - Set Well

DEPTH (FEET)	SOIL AND ROCK DESCRIPTION	USCS CLASS	Sample Recovery	PID (ppm)	Sample Type	SAMPLE NUMBER	REMARKS: (Odor, Color, Moisture, Penetrometer, etc.)
0	Gravel						
1	Subbase						
2	Black Clayey Silt	ML	100%	0.0			
3							
4	Brown Mottled Gray Silty Clay	CL					
5							
7			100%	0.0			
8							
9							
10							
11							
12	Gray Silty Clay	CL					
13			100%				
14							
15	End of boring						

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

NOTES: No samples / Field screened only

Manway / Surface Elevation:

Groundwater Depth While Drilling:	−8'	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR/MJS

Illinois Environmental Protection Agency

CW M COMPANY, INC.
DRILLING BOREHOLE LOG

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LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** MW-8
SITE NAME: City of Monmouth	**BORING LOCATION:** 45' N and 55' W of NW Corner of Building
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15 1:00 pm	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 6/26/15 1:45 pm	**BACKFILL:** N/A - Set Well

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						
2	Black Clayey Silt	ML	90%	0.0			
3	Brown Silty Clay						
4		CL					
5							
7	Brown Mottled Gray Silty Clay	CL	100%	0.0			
8							
9							
10							
11							
12	Gray Silty Clay	CL					
13			100%				
14							
15	End of boring						

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

NOTES: No samples / Field screened only

Manway / Surface Elevation:

Groundwater Depth While Drilling:	~8'	**Auger Depth:**	15'	**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**		**Geologist:**	MDR/MJS

Illinois Environmental Protection Agency

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

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LUST INCIDENT #: 2014-0510	**BOREHOLE NUMBER:** TACO-1
SITE NAME: City of Monmouth	**BORING LOCATION:** 100'S & 38' E of Hydrant
SITE ADDRESS: 1125 North Main Street Monmouth, IL	**RIG TYPE:** Longyear Truck-Mount
DATE/TIME STARTED: 6/26/15	**DRILLING/SAMPLE METHOD:** Hollow Stem Auger
DATE/TIME FINISHED: 12/11/14 1:45	**BACKFILL:** N/A - Set Well

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 silt	CL					
3			90%	0.0			
4							
5							
6	Brown mottled grey silty clay	CL					
7							
8			100%	0.0	Grab	TACO-1	Taco Peramaters
9							
10							
11	End of boring						
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:	~10'	**Auger Depth:**		**Driller:**	AEDC
Groundwater Depth After Drilling:		**Rotary Depth:**	15'	**Geologist:**	BMW/MDR

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

Incident No.	2014-0510	**Well No.**	MW-1
Site Name	City of Monmouth	**Date Drilled**	12/11/2014
Drilling Contractor	AEDC	**Date Completed**	12/11/2014
Driller	AEDC	**Geologist**	MDR
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

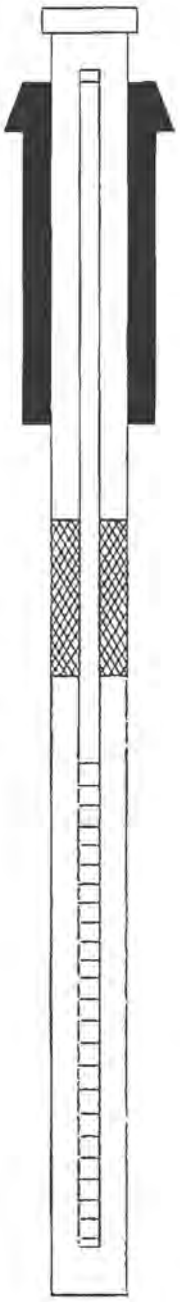
Well Construction Materials

	Stainless Steel Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint			
Riser Pipe Above w.l.		Sched.-40	
Riser Pipe Below w.l.			
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	~10-12 ft. while drilling
Depth to Water	94.58 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MJS



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

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

Incident No.	2014-0510	**Well No.**	MW-2
Site Name	City of Monmouth	**Date Drilled**	12/11/2014
Drilling Contractor	AEDC	**Date Completed**	12/11/2014
Driller	AEDC	**Geologist**	MDR
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

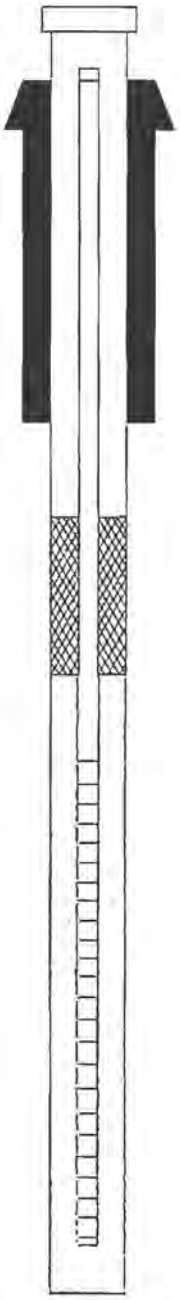
Well Construction Materials

	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	~10-12 ft. while drilling
Depth to Water	95.66 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MJS



101.95 ft. Top of Protective Casing
101.70 ft. Top of riser pipe
101.95 ft. Ground surface
101.45 ft. Top of Annular Sealant
N/A Casing Stickup
101.45 ft. Top of Seal
3.00 ft. Total Seal interval
98.45 ft. Top of Sand
97.45 ft. Top of Screen
10.0 ft. Total Screen Interval
87.45 ft. Bottom of Screen
86.95 ft. Bottom of Borehole

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

Incident No.	2014-0510	**Well No.**	MW-3
Site Name	City of Monmouth	**Date Drilled**	12/11/2014
Drilling Contractor	AEDC	**Date Completed**	12/11/2014
Driller	AEDC	**Geologist**	MDR
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

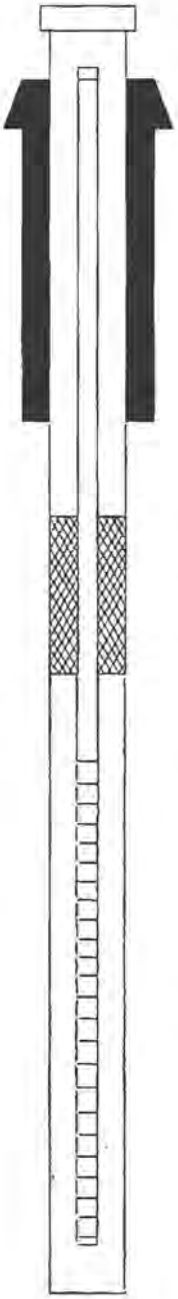
Well Construction Materials

	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	~10-12 ft. while drilling
Depth to Water	94.76 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MJS



101.48 ft.	Top of Protective Casing
101.23 ft.	Top of riser pipe
101.48 ft.	Ground surface
100.98 ft.	Top of Annular Sealant
N/A	Casing Stickup
100.98 ft.	Top of Seal
3.00 ft.	Total Seal interval
97.98 ft.	Top of Sand
96.98 ft.	Top of Screen
10.0 ft.	Total Screen Interval
86.98 ft.	Bottom of Screen
86.48 ft.	Bottom of Borehole

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

Incident No.	2014-0510	**Well No.**	MW-4
Site Name	City of Monmouth	**Date Drilled**	12/11/2014
Drilling Contractor	AEDC	**Date Completed**	12/11/2014
Driller	AEDC	**Geologist**	MDR
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

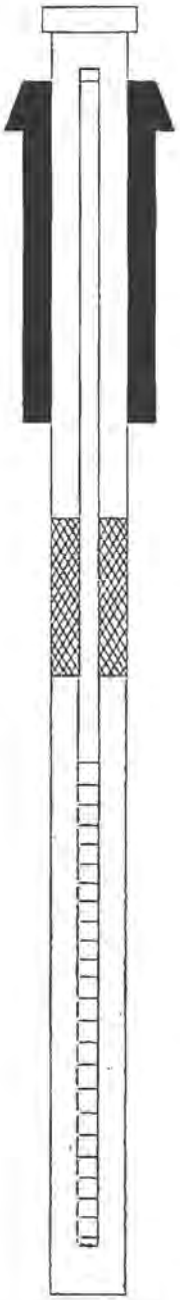
Well Construction Materials

	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	~8 ft. while drilling
Depth to Water	94.24 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MJS



100.01 ft.	Top of Protective Casing
99.76 ft.	Top of riser pipe
100.01 ft.	Ground surface
99.51 ft.	Top of Annular Sealant
N/A	Casing Stickup
99.51 ft.	Top of Seal
3.00 ft.	Total Seal interval
96.51 ft.	Top of Sand
95.51 ft.	Top of Screen
10.0 ft.	Total Screen Interval
85.51 ft.	Bottom of Screen
85.01 ft.	Bottom of Borehole

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

Incident No.	2014-0510	**Well No.**	MW-5
Site Name	City of Monmouth	**Date Drilled**	12/11/2014
Drilling Contractor	AEDC	**Date Completed**	12/11/2014
Driller	AEDC	**Geologist**	MDR
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

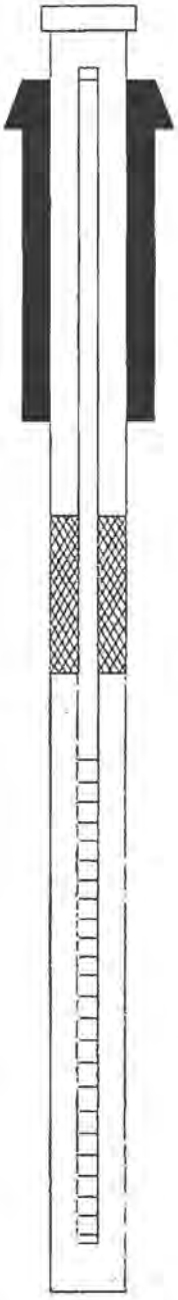
Well Construction Materials

	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	~8 ft. while drilling
Depth to Water	94.74 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MJS



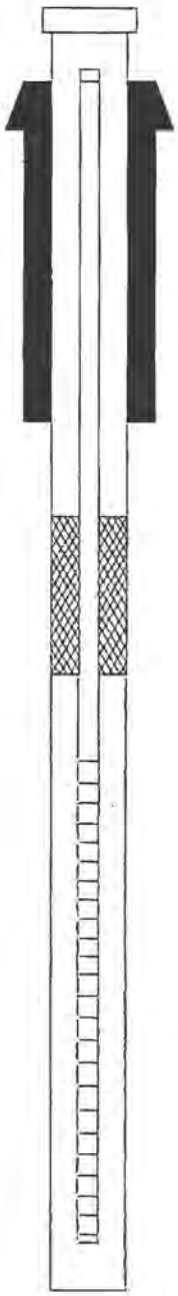
101.55 ft.	Top of Protective Casing
101.30 ft.	Top of riser pipe
101.55 ft.	Ground surface
101.05 ft.	Top of Annular Sealant
N/A	Casing Stickup
101.05 ft.	Top of Seal
3.00 ft.	Total Seal interval
98.05 ft.	Top of Sand
97.05 ft.	Top of Screen
10.0 ft.	Total Screen Interval
87.05 ft.	Bottom of Screen
86.55 ft.	Bottom of Borehole

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

Incident No.	2014-0510	**Well No.**	MW-6
Site Name	City of Monmouth	**Date Drilled**	6/26/2015
Drilling Contractor	AEDC	**Date Completed**	6/26/2015
Driller	AEDC	**Geologist**	MDR
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



99.79 ft. Top of Protective Casing
99.54 ft. Top of riser pipe
99.79 ft. Ground surface
99.29 ft. Top of Annular Sealant
N/A Casing Stickup

99.29 ft. Top of Seal
3.00 ft. Total Seal interval
96.29 ft. Top of Sand
95.29 ft. Top of Screen

10.0 ft. Total Screen Interval

85.29 ft. Bottom of Screen
84.79 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	~8 ft. while drilling
Depth to Water	95.26 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MDR

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

Incident No.	2014-0510	**Well No.**	MW-7
Site Name	City of Monmouth	**Date Drilled**	6/26/2015
Drilling Contractor	AEDC	**Date Completed**	6/26/2015
Driller	AEDC	**Geologist**	MDR
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

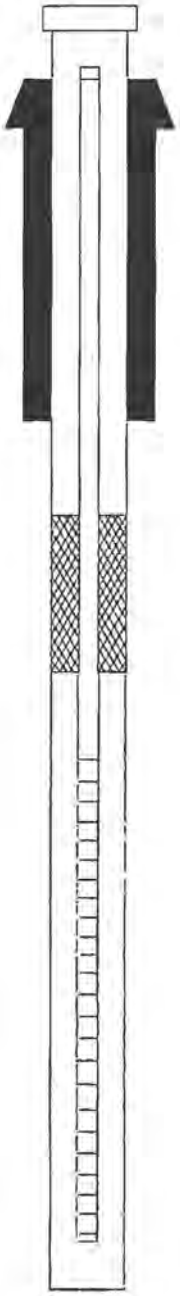
Well Construction Materials

	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	~8 ft. while drilling
Depth to Water	97.03 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MDR



100.96 ft.	Top of Protective Casing
100.71 ft.	Top of riser pipe
100.96 ft.	Ground surface
100.46 ft.	Top of Annular Sealant
N/A	Casing Stickup
100.46 ft.	Top of Seal
3.00 ft.	Total Seal interval
97.46 ft.	Top of Sand
96.46 ft.	Top of Screen
10.0 ft.	Total Screen Interval
86.46 ft.	Bottom of Screen
85.96 ft.	Bottom of Borehole

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

Incident No.	2014-0510	**Well No.**	MW-8
Site Name	City of Monmouth	**Date Drilled**	6/26/2015
Drilling Contractor	AEDC	**Date Completed**	6/26/2015
Driller	AEDC	**Geologist**	MDR
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

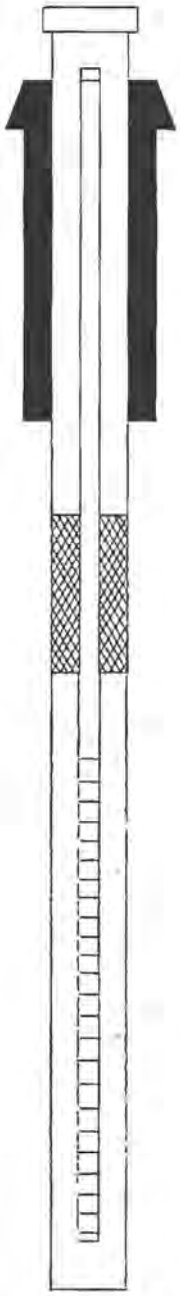
Well Construction Materials

	Stainless Steel Type	PVC Specify Type	Other Specify Type
Riser Coupling Joint			
Riser Pipe Above w.l.		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	~8 ft. while drilling
Depth to Water	94.58 ft. static
Free Product Thickness	N/A
Gallons removed (develop)	~3
Gallons removed (purge)	~3
Other	

Completed by: MDR



99.52 ft. Top of Protective Casing
99.27 ft. Top of riser pipe
99.52 ft. Ground surface
99.02 ft. Top of Annular Sealant
N/A Casing Stickup

99.02 ft. Top of Seal
3.00 ft. Total Seal interval
96.02 ft. Top of Sand
95.02 ft. Top of Screen

10.0 ft. Total Screen Interval

85.02 ft. Bottom of Screen
84.52 ft. Bottom of Borehole

APPENDIX E

ANALYTICAL RESULTS

SITE INVESTIGATION
COMPLETION REPORT
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

City of Monmouth
Site Assessment Data

Waste Characterization

	Location		WC-1	WC-2	WC-3
	Date		5/5/2014	5/5/2014	5/5/2014
	Depth		6'	11'	4'
Parameter	Tier 1 CUO	Tier 2 CUO			
Benzene	0.03	0.03	5.75	3.61	1.32
Ethylbenzene	13.0	13.0	110.	63.1	23.6
Toluene	12.0	12.0	101.	75.4	27.1
Total Xylenes	5.6	5.6	523.	320.	124.
MTBE	0.32	0.32	ND	ND	ND
Acenaphthene	570.0	570.0	ND	ND	ND
Acenaphtylene	15.0	15.0	ND	0.065	ND
Anthracene	12,000.0	12,000.0	ND	ND	ND
Benzo(a)anthracene	0.9	0.9	ND	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	ND
Fluorene	560.0	560.0	ND	0.108	ND
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND
Naphthalene	1.8	1.8	0.544	98.7	4.59
Phenanthrene	140.0	140.0	ND	0.329	0.05
Pyrene	2,300.0	2,300.0	ND	0.077	ND
Exceeds Tier 1 COUs					
Exceeds Tier 2 COUs					
values in mg/kg					

City of Monmouth
Site Assessment Data

EA excavation

	Location		1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Date		6/5/2014	6/5/2014	6/5/2014	6/5/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/6/2014	6/9/2014	6/9/2014
	Depth		15'	15'	15'	15'	15'	15'	7'	7'	7'	7'	7'	7'	7'	15'
Parameter	Tier 1 CUO	Tier 2 CUO														
Benzene	0.03	0.03	0.021	ND	1.41	0.375	4.26	1.54	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	13.0	13.0	ND	ND	13.9	3.27	38.8	16.7	ND	ND	ND	ND	ND	ND	ND	36.2
Toluene	12.0	12.0	ND	ND	18.3	4.38	58.1	22.9	ND	ND	ND	0.12	ND	ND	ND	ND
Total Xylenes	5.6	5.6	ND	ND	78.	18.1	216.	97.2	ND	ND	ND	ND	ND	ND	ND	44.5
MTBE	0.32	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	570.0	570.0	0.067	0.068	0.089	ND	0.365	0.154	ND	ND	ND	ND	ND	ND	ND	0.147
Acenaphtylene	15.0	15.0	ND	ND	0.094	ND	0.397	0.172	ND	ND	ND	0.124	ND	ND	ND	0.059
Anthracene	12,000.0	12,000.0	0.085	0.178	0.084	ND	0.277	0.111	ND	ND	ND	0.237	ND	ND	ND	0.19
Benzo(a)anthracene	0.9	0.9	ND	ND	ND	ND	0.174	0.074	ND	ND	ND	0.937	ND	ND	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND	ND	0.058	ND	ND	ND	ND	2.08	ND	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.46	ND	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND	ND	0.069	ND	ND	ND	ND	1.17	ND	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.832	ND	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND	ND	0.123	0.059	ND	ND	ND	1.29	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.335	ND	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	0.058	ND	0.207	0.086	ND	ND	ND	0.343	ND	ND	ND	ND
Fluorene	560.0	560.0	0.209	0.272	0.101	ND	0.429	0.173	ND	ND	ND	ND	ND	ND	ND	0.414
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.06	ND	ND	ND	ND
Naphthalene	1.8	1.8	0.132	0.093	18.1	3.95	96.	31.4	ND	ND	ND	ND	ND	ND	ND	7.83
Phenanthrene	140.0	140.0	0.451	0.168	0.209	ND	0.937	0.378	ND	ND	ND	0.089	ND	ND	ND	0.321
Pyrene	2,300.0	2,300.0	ND	0.078	0.089	ND	0.253	0.106	ND	ND	ND	0.534	ND	ND	ND	0.057
Exceeds Tier 1 COUs																
Exceeds Tier 2 COUs																
values in mg/kg																

City of Monmouth
Site Assessment Data

EA excavation

	Location		I5	I6	P1	P2	P3	P4	P5	I7	I8
	Data		6/9/2014	6/9/2014	6/9/2014	6/9/2014	6/9/2014	6/9/2014	6/9/2014	6/10/2014	6/10/2014
	Depth		15'	7'	3'	3'	3'	3'	3'	7'	7'
Parameter	Tier 1 COC	Tier 2 COC									
Benzene	0.03	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	13.0	13.0	ND	1.3	ND	0.108	ND	117.	75.4	ND	ND
Toluene	12.0	12.0	ND	ND	ND	ND	ND	109.	72.1	ND	ND
Total Xylenes	5.6	5.6	ND	1.71	ND	0.738	ND	687.	435.	ND	ND
MTBE	0.32	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	570.0	570.0	ND	ND	ND	ND	ND	0.264	0.286	ND	ND
Acenaphylene	15.0	15.0	ND	ND	ND	ND	ND	0.202	0.248	ND	ND
Anthracene	12,000.0	12,000.0	ND	ND	ND	ND	ND	0.136	0.169	ND	ND
Benzo(a)anthracene	0.9	0.9	ND	ND	ND	ND	ND	0.056	0.069	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND	ND	ND	0.058	0.07	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	ND	ND	ND	0.247	0.278	ND	ND
Fluorene	560.0	560.0	ND	ND	ND	ND	ND	0.481	0.538	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	1.8	1.8	ND	ND	ND	ND	ND	278.	303.	ND	ND
Phenanthrene	140.0	140.0	ND	ND	ND	ND	ND	4.41	5.58	ND	ND
Pyrene	2,300.0	2,300.0	ND	ND	ND	ND	ND	0.648	0.53	ND	ND
Exceeds Tier 1 COCs											
Exceeds Tier 2 COCs											
values in mg/kg											

City of Monmouth
Site Assessment Data

Soil Stage 1

	Location		MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	SB-1
	Date		12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014	12/11/2014
	Depth		2.5'	7.5'	2.5'	7.5'	2.5'	7.5'	2.5'
Parameter	Tier 1 CUO	Tier 2 CUO							
Benzene	0.03	0.03	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	13.0	13.0	ND	ND	ND	ND	ND	ND	ND
Toluene	12.0	12.0	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	5.6	5.6	ND	ND	ND	ND	ND	ND	ND
MTBE	0.32	0.32	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	570.0	570.0	ND	ND	ND	ND	ND	ND	ND
Acenaphtylene	15.0	15.0	ND	ND	ND	ND	ND	ND	ND
Anthracene	12,000.0	12,000.0	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND	ND	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	ND	ND	ND	ND	ND
Fluorene	560.0	560.0	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND	ND	ND	ND	ND
Naphthalene	1.8	1.8	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	140.0	140.0	ND	ND	ND	ND	ND	ND	ND
Pyrene	2,300.0	2,300.0	ND	ND	ND	ND	ND	ND	ND
Exceeds Tier 1 COUs									
Exceeds Tier 2 COUs									
values in mg/kg									

City of Monmouth
Site Assessment Data

Soil Stage 1

	Location		SB-1	SB-2	SB-2
	Date		12/11/2014	12/11/2014	12/11/2014
	Depth		7.5'	2.5'	7.5'
Parameter	Tier 1 CUO	Tier 2 CUO			
Benzene	0.03	0.03	ND	ND	ND
Ethylbenzene	13.0	13.0	ND	ND	ND
Toluene	12.0	12.0	ND	ND	ND
Total Xylenes	5.6	5.6	ND	ND	ND
MTBE	0.32	0.32	ND	ND	ND
Acenaphthene	570.0	570.0	ND	ND	ND
Acenaphtylene	15.0	15.0	ND	ND	ND
Anthracene	12,000.0	12,000.0	ND	ND	ND
Benzo(a)anthracene	0.9	0.9	ND	ND	ND
Benzo(a)pyrene	0.09	0.09	ND	ND	ND
Benzo(b)fluoranthene	0.9	0.9	ND	ND	ND
Benzo(g,h,i)perylene	2,300.0	2,300.0	ND	ND	ND
Benzo(k)fluoranthene	9.0	9.0	ND	ND	ND
Chrysene	88.0	88.0	ND	ND	ND
Dibenz(a,h)anthracene	0.09	0.09	ND	ND	ND
Fluoranthene	4,300.0	4,300.0	ND	ND	ND
Fluorene	560.0	560.0	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	0.9	ND	ND	ND
Naphthalene	1.8	1.8	ND	ND	ND
Phenanthrene	140.0	140.0	ND	ND	ND
Pyrene	2,300.0	2,300.0	ND	ND	ND
Exceeds Tier 1 COUs					
Exceeds Tier 2 COUs					
values in mg/kg					

City of Monmouth
Site Assessment Data

GW Stage 1

	Location	MW1	MW2	MW3	MW4	MW5
	Date	12/12/2014	12/12/2014	12/12/2014	12/12/2014	12/12/2014
Parameter	Class I CUO					
Benzene	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.7	0.002	0.0017	ND	1.95	0.933
Toluene	1.0	ND	ND	ND	ND	ND
Total Xylenes	10.0	0.0032	0.0026	ND	2.25	1.4
MTBE	0.07	ND	ND	ND	ND	ND
Acenaphthene	0.42	0.0001	ND	ND	0.0107	0.0041
Acenaphtylene	0.010	ND	ND	ND	0.0046	0.003
Anthracene	2.1	ND	ND	ND	0.0124	0.0049
Benzo(a)anthracene	0.00013	ND	ND	ND	0.0006	0.0016
Benzo(a)pyrene	0.0002	ND	ND	ND	0.0003	0.0008
Benzo(b)fluoranthene	0.00018	ND	ND	ND	0.0002	0.0007
Benzo(g,h,i)perylene	0.00076	ND	ND	ND	0.0002	0.0006
Benzo(k)fluoranthene	0.00017	ND	ND	ND	ND	0.0003
Chrysene	0.0015	ND	ND	ND	0.0005	0.0011
Dibenz(a,h)anthracene	0.0003	ND	ND	ND	ND	ND
Fluoranthene	0.28	ND	ND	ND	0.0022	0.0033
Fluorene	0.28	ND	ND	ND	0.0223	0.0062
Indeno(1,2,3-cd)pyrene	0.00043	ND	ND	ND	ND	0.0002
Naphthalene	0.14	0.0015	0.0004	0.0001	1.01	0.592
Phenanthrene	0.0064	ND	ND	ND	0.0237	0.0093
Pyrene	0.21	0.0001	ND	ND	0.0039	0.0037

Exceeds Tier 1 Class I COUs
values in mg/kg

City of Monmouth
Site Assessment Data

GW Stage 2

	Location	MW-6	MW-7	MW-8
	Date	4/20/2016	4/20/2016	4/20/2016
Parameter	Class I CUO			
Benzene	0.005	ND	ND	ND
Ethylbenzene	0.7	ND	0.0074	ND
Toluene	1.0	ND	ND	ND
Total Xylenes	10.0	ND	0.002	ND
MTBE	0.07	ND	0.001	ND
Acenaphthene	0.42	ND	ND	ND
Acenaphtylene	0.010	ND	0.001	ND
Anthracene	2.1	ND	0.002	ND
Benzo(a)anthracene	0.00013	ND	0.0005	ND
Benzo(a)pyrene	0.0002	ND	0.0002	ND
Benzo(b)fluoranthene	0.00018	ND	0.0002	ND
Benzo(g,h,i)perylene	0.00076	ND	0.0004	ND
Benzo(k)fluoranthene	0.00017	ND	ND	ND
Chrysene	0.0015	ND	0.0003	ND
Dibenz(a,h)anthracene	0.0003	ND	ND	ND
Fluoranthene	0.28	ND	0.0094	ND
Fluorene	0.28	ND	0.0012	ND
Indeno(1,2,3-cd)pyrene	0.00043	ND	0.0001	ND
Naphthalene	0.14	ND	0.004	ND
Phenanthrene	0.0064	ND	0.005	ND
Pyrene	0.21	ND	0.0015	ND

Exceeds Tier 1 Class I COUs
values in mg/kg

APPENDIX F

STAGE 3 ACTUAL COSTS

SITE INVESTIGATION COMPLETION REPORT
CITY OF MONMOUTH
MONMOUTH, 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 2014-0510. 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: City of Monmouth

Authorized Representative: Lowell Crow Title: City Administrator

Signature: Date: 3NOV2016

RECEIVED
NOV 10 2016
IEPA/BOL

Subscribed and sworn to before me the 3rd day of November 2016.

(Notary Public)

OFFICIAL SEAL
Seal: CAROL L. ROWE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 3-18-2017

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 2013 ILLINOIS

L.P.E./L.P.G. Signature: Date: 11/7/16

Subscribed and sworn to before me the 7th day of November 2016.

(Notary Public)

OFFICIAL SEAL
CAROL L. ROWE
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 3-18-2017

The Illinois EPA is authorized to require this information under 415 ILCS 5/4. 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 #: 1870155032 County: Warren

City: Monmouth Site Name: City of Monmouth

Site Address: 1125 North Main

IEMA Incident No.: 2014-0510

IEMA Notification Date: May 5, 2014

Date this form was prepared: Oct 17, 2016

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NOV 10 2016
IEPA/BOL

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 Actual

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

IL 532-2825
LPC 630 Rev. 1/2007

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: City of Monmouth

Send in care of: CW3M 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: 2

Incident Numbers assigned to the site due to releases from USTs: 2014-0510 92-0055

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 ☐	92-0055	Unknown
Gasoline	3,000	Yes ☒ No ☐	92-0055	Unknown
Gasoline	3,000	Yes ☒ No ☐	92-0055	Unknown
Gasoline	3,000	Yes ☒ No ☐	92-0055	Unknown
Gasoline	1,000	Yes ☒ No ☐	92-0055	Unknown
Gasoline	500	Yes ☒ No ☐	92-0055	Unknown
Gasoline	8,000	Yes ☒ No ☐	2014-0510	Overfills
Gasoline	8,000	Yes ☒ No ☐	2014-0510	Overfills
Gasoline	8,000	Yes ☒ No ☐	2014-0510	Overfills

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
Diesel Fuel	4,000	Yes ☒ No ☐	2014-0510	Overfill
		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
				Actual	
Drilling and Monitoring Well Costs Form	$	$	$	$	$
Analytical Costs Form	$	$	$	$	$
Remediation and Disposal Costs Form	$	$	$	$	$
UST Removal and Abandonment Costs Form	$	$	$	$	$
Paving, Demolition, and Well Abandonment Costs Form	$	$	$	$	$
Consulting Personnel Costs Form	$	$	$	$ 23,027.43	$
Consultant's Materials Costs Form	$	$	$	$ 390.00	$
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	$	$	$	$ 23,417.43	$

Consulting Personnel Costs Form

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	Task			
	Engineer III	45.00	125.15	$5,631.75
Stage 3-Plan	Stage 3 Plan Preparation and Design / Drill Plan			
	Senior Draftperson/CAD	5.00	75.08	$375.40
Stage 3-Plan	Drafting/Editing of Maps for Report			
	Senior Admin. Assistant	1.00	56.32	$56.32
Stage 3-Plan	Stage 3 Plan Compilation, Assembly, and Distribution			
	Senior Project Manager	2.00	125.15	$250.30
Stage 3-Plan	Site Investigation Plan Development Oversight and Review			
	Senior Prof. Engineer	2.00	162.70	$325.40
Stage 3-Plan	Stage 3 Plan Certification			
	Senior Project Manager	6.00	125.15	$750.90
Stage 3-Field	Off-site Access Request / Correspondence			
	Engineer III	5.00	125.15	$625.75
Stage 3-Field	Off-site Access Request			
	Engineer II	10.00	93.86	$938.60
Stage 3-Field	Off-site Access Request			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Engineer II	10.00	93.86	$938.60
Stage 3-Budget	Stage 3 Budget Calculations and Inputs			
	Senior Prof. Engineer	4.00	162.70	$650.80
Stage 3-Budget	Stage 3 Budget Certification			
	Senior Project Manager	8.00	125.15	$1,001.20
Stage 3-Budget	Stage 3 Budget Technical Compliance and Oversight			
	Senior Project Manager	12.00	125.15	$1,501.80
Stage 3-Pay	Stage 3 Reimbursement Coordination / Oversight and Technical Compliance			
	Senior Prof. Engineer	4.00	162.70	$650.80
Stage 3-Pay	Stage 3 Reimbursement Certification			
	Senior Acct. Technician	25.00	68.83	$1,720.75
Stage 3-Pay	Stage 3 Reimbursement Preparation			
	Senior Admin. Assistant	4.00	56.32	$225.28
Stage 3-Pay	Stage 3 Reimbursement Compilation, Assembly, and Distribution			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	Task			
	Senior Project Manager	6.00	125.15	$750.90
SICR	SICR Technical Compliance / Oversight			
	Senior Prof. Engineer	4.00	162.70	$650.80
SICR	SICR Certification			
	Engineer III	40.00	125.15	$5,006.00
SICR	SICR Development			
	Senior Admin. Assistant	4.00	56.32	$225.28
SICR	SICR Compilation, Assembly, and Distribution			
	Senior Draftperson/CAD	10.00	75.08	$750.80
SICR	Drafting/Editing Maps for the SICR			

*Refer to the applicable Maximum Payment Amounts document.

Total of Consulting Personnel Costs	$23,027.43

Consultant's Materials Costs Form

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Copies	600.00	.15	/copy	$90.00
Stage 3-Plan	Copies/Drafts of Stage 3 Plan / IEPA Correspondences			
Postage	2.00	6.00	/each	$12.00
Stage 3-Plan	Stage 3 Report and Forms Distribution			
Copies	250.00	.15	/copy	$37.50
Stage 3-Budget	Copies of Stage 3 Budget / Draft / Forms			
Postage	2.00	6.00	/each	$12.00
Stage 3-Budget	Stage 3 Budget / Forms Distribution			
Copies	150.00	.15	/copy	$22.50
Stage 3-Field	Copies of Off-site Access Correspondence			
Postage	2.00	6.00	/each	$12.00
Stage 3-Field	Off-site Access Distribution			
Copies	600.00	.15	/copy	$90.00
Stage 3-Pay	Copies of Stage 3 Reimbursement Request / Supporting Documentation			
Postage	2.00	6.00	/each	$12.00
Stage 3-Pay	Stage 3 Forms and Reimbursement Distribution			

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Copies	600.00	.15	/copy	$90.00
SICR	Copies of SICR Draft and Attachments			
Postage	2.00	6.00	/each	$12.00
SICR	SICR Distribution			

Total of Consultant Materials Costs	**$390.00**

APPENDIX G

HYDRAULIC CONDUCTIVITY DETERMINATION

SITE INVESTIGATION COMPLETION REPORT
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

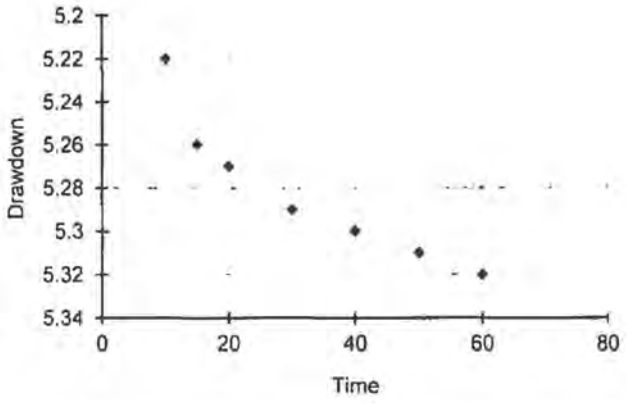
SLUG TEST DATA ENTRY FORM

Client Name: City of Monmouth
Project No.: 2014-0510
Project Name: City of Monmouth

Well Number: MW-2
Topo. Elev.: 101.95
Analysis By: MDR/MJS

Test Type: Slug Test
Weather: 70,Rainy, light wind
Date Started: 4/19/2016

BASIC TEST DATA	
Measurement Units (1-6):	1
Unconfined(1)/Confined(2):	1
Well Depth - TOC (feet):	15
Static W/L-Depth (ft.):	5.4
Riser Pipe Diameter (feet):	0.1667
Initial Test Depth Value (ft.):	4.68
TOC Elevation (feet):	
Intake/Soil Col. Diam. (feet):	0.604
Depth to Top of Pack (feet):	3.5
Intake/Soil Col. Length (ft.):	10
Saturat. Col. Thickness (ft.):	9.58
Casing Soil Length (if appl.):	N/A
Casing Stickup (feet):	N/A
Slug Volume (ft^3):	
Thickness of Aquifer (feet):	10



AQUIFER RECOVERY DATA

Time (sec)	Depth (ft.)	Time (sec)	Depth (ft.)	Time (sec)	Depth (ft.)	Time (sec)	Depth (ft.)
10	5.22						
15	5.26						
20	5.27						
30	5.29						
40	5.3						
50	5.31						
60	5.32						

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.

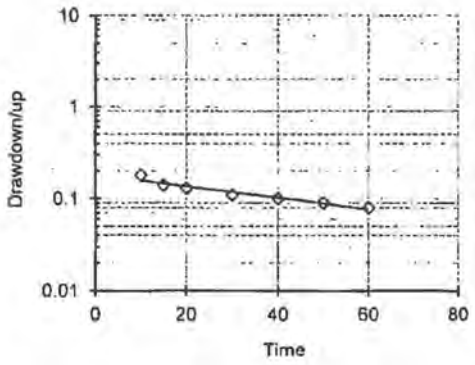
Calculation Status: Automatic Calculation

Bouwer & Rice Method for Calculating Hydraulic Conductivity

Project Name: City of Monmouth
Client Name: City of Monmouth
Analysis By: MDR/MJS
Run Date: 4/19/2016

Project No.: 2014-0510
Identification: MW-2

Riser Pipe Diameter:	0.1667	feet
Intake Diameter:	0.604	feet
Intake Length:	10	feet
Saturated Column Length:	9.58	feet
Water Table Depth:	5.4	feet
Aquifer Thickness:	10	feet
Line Fit Starting No.:	1	Min 1 to
Line Fit Ending No.:	7	Max 7
Specify Output Units:	7	1 to 9
Hyd. Cond., K(h):	3.85E-04	cm./sec.
Error of Fit:	0.030	



Meas. #	Time seconds	Field Meas. feet	Drawdown/up feet		Line Fit To LN(Yt)	Regression On LN(Yt)
1)	10.00	5.22	0.18		-1.715	-1.846
2)	15.00	5.26	0.14		-1.966	-1.918
3)	20.00	5.27	0.13		-2.040	-1.991
4)	30.00	5.29	0.11		-2.207	-2.135
5)	40.00	5.30	0.10		-2.303	-2.280
6)	50.00	5.31	0.09		-2.408	-2.425
7)	60.00	5.32	0.08		-2.526	-2.569

APPENDIX H

OFF-SITE ACCESS REQUEST DOCUMENTATION

SITE INVESTIGATION COMPLETION REPORT
CITY OF MONMOUTH
MONMOUTH, ILLINOIS

CW³M Company
Environmental Consulting Services

701 W. South Grand Avenue
Springfield, IL 62704

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

September 12, 2016

Petersen Companies, LLC
830 W. Trailcreek Drive
Peoria, Illinois 61614

Certified Mail # 7011 1570 0001 5599 7329

RE: Off-Site Access Request/City of Monmouth

To Whom It May Concern:

We have been hired by the City of Monmouth for site assessment and remedial proceedings at their North Main Street site located at 1125 North Main Street in Monmouth, Illinois. This effort has been required by the Illinois Environmental Protection Agency (IEPA) as a result of a petroleum release reported to the IEPA, and identified as incident number 2014-0510. Prior investigations to date have apparently confirmed contamination to the soil and groundwater on this site. In accord, and pursuant to Illinois Administrative Code 734, the IEPA is requiring additional investigation of neighboring properties in order to determine the extent (if any) of off-site soil and/or groundwater contamination.

In association with the City of Monmouth, we have determined you to be the owner of property located within the right-of-way of Americinn Way in Monmouth immediately north of the City of Monmouth site. Provided of course that you are the owner of this property, and in order to satisfy the requirements of the IEPA, we are requesting access to perform an investigation. If you would like to allow us access to your property, please notify our office. Our standard access agreements will be prepared and forwarded to you for your review and signature. If, however, you intend to deny us access to this property, please notify our office in writing. Please be advised that the IEPA has allowed the City of Monmouth a limited amount of time to complete this investigation. Therefore, we respectfully request a response within 14 days of the date of this letter.

If you have any questions about this project, or require additional information, please do not hesitate to contact Mr. Matt Rives or me. We can be reached at (217) 522-8001. On behalf of the City of Monmouth, thank you for your consideration of our request.

Sincerely,

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

xc: Mr. Lowell Crow, *City Administrator for the City of Monmouth*
Mr. William T. Sinnott, *CW³M Company, Inc.*

10/17/

7011 1570 0001 5599 7329

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
PEORIA, IL 61614
OFFICIAL USE

Postage	$3.60
Certified Fee	$0.00
Return Receipt Fee (Endorsement Required)	$0.00
Restricted Delivery Fee (Endorsement Required)	$0.00
Total Postage & Fees	$3.77

USPS Postmark Here
SEP 13 2016
SPRINGFIELD, IL 62701

Sent To: CITY OF MONMOUTH OFF-SITE
Street, Apt. No.; or PO Box No.:
City, State, ZIP+4:

PS Form 3800, August 2006 See Reverse for Instructions

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Still Have Questions?
Browse our FAQs ›

Get Easy Tracking Updates ›
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City of Monmouth. Off-Site

On Time
Updated Delivery Day: Thursday, September 15, 2016

Product & Tracking Information

Postal Product:
First-Class Mail®

Features:
Certified Mail™

DATE & TIME	STATUS OF ITEM	LOCATION
September 15, 2016, 9:49 am	Delivered, Left with Individual	PEORIA, IL 61614
Your item was delivered to an individual at the address at 9:49 am on September 15, 2016 in PEORIA, IL 61614.		
September 15, 2016, 7:28 am	Arrived at Unit	PEORIA, IL 61614
September 14, 2016, 10:43 am	Departed USPS Destination Facility	PEORIA, IL 61601
September 14, 2016, 9:40 am	Arrived at USPS Destination Facility	PEORIA, IL 61601
September 13, 2016, 10:24 pm	Departed USPS Facility	SPRINGFIELD, IL 62703
September 13, 2016, 9:37 pm	Arrived at USPS Facility	SPRINGFIELD, IL 62703
September 13, 2016, 5:33 pm	Departed Post Office	SPRINGFIELD, IL 62701
September 13, 2016, 4:30 pm	Acceptance	SPRINGFIELD, IL 62701

Available Actions

Text Updates

Email Updates

Track Another Package

Tracking (or receipt) number

Track It

Manage Incoming Packages

Track all your packages from a dashboard.
No tracking numbers necessary.

Sign up for My USPS ›

CW³M Company
Environmental Consulting Services

701 W. South Grand Avenue
Springfield, IL 62704

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

September 27, 2016

Petersen Companies, LLC **Certified Mail # 7011 1570 0001 5599 7336**
830 W. Trailcreek Drive
Peoria, Illinois 61614

Re: Off-Site Access Request/City of Monmouth

To Whom It May Concern:

As you are aware, we have been hired by the City of Monmouth for site assessment and remedial proceedings at their North Main Street site, located at 1125 North Main Street, Monmouth, Illinois. This effort has been required by the Illinois Environmental Protection Agency (IEPA) as a result of a petroleum release reported to the IEPA and identified as incident number 2014-0510. Prior investigations to date have apparently confirmed contamination to the soil and groundwater on this site. In accord, and pursuant to Ill. Adm. Code § 732, 165(a), the IEPA is requiring additional investigation of adjacent properties to further determine the extent (if any) of off-site soil and/or groundwater contamination.

In association with the City of Monmouth, we have determined you to be the owner of property located within the right-of-way of Americinn Way and neighboring the above referenced site. We have previously requested, by certified mail, access to your property. As of the date of this letter we have not received a response. We have, therefore, concluded that access to your property is denied. While we respect your right and privilege to deny us access to your property, the IEPA requires that we notify you of some specific issues regarding denial of access before they will accept the denial. These issues are as follows:

1) According to Section 57 of the Environmental Protection Act (Act), the Underground Storage Tank (UST) owner or operator, the City of Monmouth, is legally responsible for remediation of any contamination caused by the UST system release;
2) If a property owner denies access to the UST owner or operator, the UST owner or operator may seek to gain entry by a court order pursuant to Section 22.2c of the Act;
3) In performing the requested investigation, the UST owner or operator will work so as to minimize any disruption on the property, will maintain, or its environmental consultant will maintain, appropriate insurance and will repair any damage caused by the investigation;

4) If contamination results from a UST release by the UST owner or operator, the UST owner or operator will conduct all associated remediation at its own expense; and
5) Threats to human health and the environment and diminished property value may result from failure to remediate contamination from the UST release.

If you would now like to allow us access to your property, please notify our office. Our standard access agreements will be prepared and forwarded to you for your review and signature. However, if you intend to deny us access to your property, please notify our office in writing. Please be advised that the IEPA has allowed the City of Monmouth a limited amount of time to complete this investigation. Therefore, we respectfully request a response within 30 days of the date of this letter.

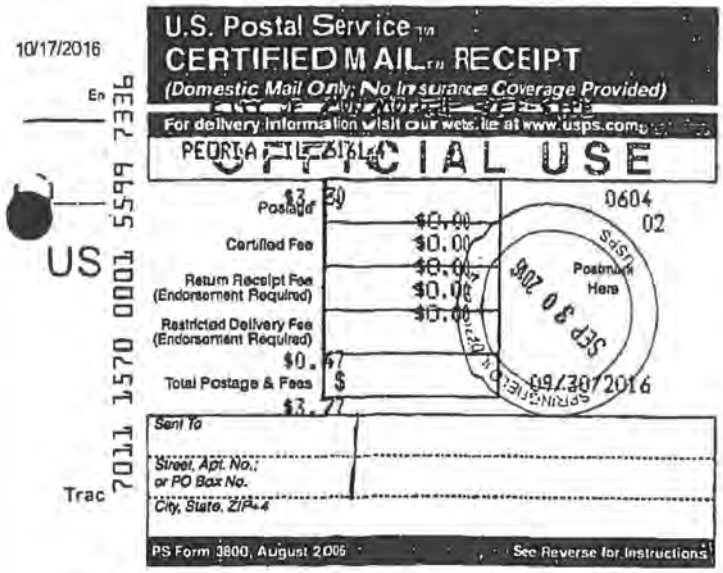
If you have any questions about this project, or require additional information, please do not hesitate to contact Mr. Matt Rives or me at (217) 522-8001. On behalf of the City of Monmouth, thank you for your consideration of our request.

Sincerely,

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

Xc: Mr. Lowell Crow, *City Administrator for the City of Monmouth*
Mr. William T. Sinnott, *CW²M Company, Inc.*

10/17/2016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Certified Fee $0.00
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $3.77
0604 02
Postmark Here
SEP 30 2016
SPRINGFIELD, IL 62703
09/30/2016
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Street, Apt. No.; or PO Box No.
City, State, ZIP+4
PS Form 3800, August 2006 See Reverse for Instructions

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City of Monmouth - Off-Site

Updated Delivery Day: Tuesday, October 4, 2016

Product & Tracking Information

Postal Product:
First-Class Mail®

Features:
Certified Mail™

DATE & TIME	STATUS OF ITEM	LOCATION
October 4, 2016, 11:00 am	Delivered, Front Desk/Reception	PEORIA, IL 61614
Your item was delivered to the front desk or reception area at 11:00 am on October 4, 2016 in PEORIA, IL 61614.		
October 4, 2016, 9:29 am	Out for Delivery	PEORIA, IL 61614
October 4, 2016, 7:05 am	Sorting Complete	PEORIA, IL 61614
October 3, 2016, 12:02 pm	Arrived at Unit	PEORIA, IL 61614
October 3, 2016, 12:41 am	Departed USPS Destination Facility	PEORIA, IL 61601
October 1, 2016, 12:11 pm	Arrived at USPS Destination Facility	PEORIA, IL 61601
September 30, 2016, 10:38 pm	Departed USPS Facility	SPRINGFIELD, IL 62703
September 30, 2016, 7:18 pm	Arrived at USPS Facility	SPRINGFIELD, IL 62703
September 30, 2016, 5:31 pm	Departed Post Office	SPRINGFIELD, IL 62701
September 30, 2016, 4:18 pm	Acceptance	SPRINGFIELD, IL 62701

Available Actions

Text Updates

Email Updates

Track Another Package

Tracking (or receipt) number

Track It

Manage Incoming Packages

Track all your packages from a dashboard. No tracking numbers necessary.

Sign up for My USPS ›

LEAKING UST TECHNICAL REVIEW NOTES

Reviewed by: Dave Myers
Date Reviewed: 11/23/16

Re: LPC #1870155032 -- Monmouth County
Warren/ Monmouth, City of
1125 North Main St.
Leaking UST Incident No. 20140510
Leaking UST Technical File

Document(s) Reviewed:
SICR Stage 3 Actual Costs dated 11/7/16 and received 11/10/16

General Site Information:

Site subject to: 734

IEMA date(s): 5/5/14	Payment from the Fund? (Y/N/unknown): Y, 5000 ded
UST system removed? (Y/N): Y, 6/2/14	OSFM Fac. ID #: 3-005131
Encountered groundwater? (Y/N/unknown): Y	SWAP mapping and evaluation completion date: 11-23-16
Free product? (Y/N/unknown): N	Site placement correct in SWAP? (Y/N): N
Current/past land use: vacant/station	MTBE > 40 ppb in groundwater? (Y/N/unknown): N
Size & product of USTs: 3-8000 gas, 1-4000 diesel	
Is site located in EJ area? N	Is investigation of indoor inhalation exposure route required? N

BOL File Information:(optional) (Arranged chronologically):

File contains info on previous incident #920055 which received nfr letter 8/12/10.

Site Investigation Completion Report Review Notes: REVIEWER: JMR

Stage 3 Plan and Budget were approved with modifications in Agency's 8/17/16 letter to install 4-2" monitoring wells off site to the ne and north of the site to define the gw extent. Soil plume was previously defined on site.

Site is a former Clark that is now vacant and waiting redevelopment. All usts have been removed.

685 cy were removed during ea and investigation now completed. Potable well search shows the nearest well 1214 ft from the site with a 200 ft setback.

Slug test and geotech sample was collected during Stage 2 with results reported in the Stage 3 plan. 4/20/16 survey shows the gw flow direction to the north and east under a gradient of 0.014947. Slug test result from MW-2 was 3.85e-04 cm/sec.

Certified letter was sent to offsite property owner Petersen Companies, LLC on 9/12/16 and delivered 9/15/16 with no response. A second certified letter was sent 9/27/16 and delivered 10/4/16 again with no response. Denied access will be assumed and an affidavit to that effect will be prepared and presented in the CACR.

Report states indoor air will be evaluated.

Supporting documentation included SICR form, maps, osfm letter, boring logs, well completion forms, results tables, Stage 3 budget forms, slug test data, budget cert/

Stage 3 Actual Costs:

$0.00	Drilling and Monitoring Well Costs
$0.00	Analytical Costs
$0.00	Remediation and Disposal Costs
$0.00	UST Removal and Abandonment Costs
$0.00	Paving, Demolition, and Well Abandonment Costs
$23,027.43	Consulting Personnel Costs
$390.00	Consultant's Materials Costs
$23,417.43	**Total**

Under consulting personnel, hrs and rate associated with Stage 3 plan prep is unreasonable and exceeds min for a deduction of **-2628.23**. (allow 32 hrs of Eng I time as approved in the proposed budget) Cost associated with offsite results by the Eng III exceed min, unreasonable and inconsistent with tech plan for a deduction of **-625.75**. Per 850(b) cost associated with Eng II time for offsite access should be reimbursed at the Sr. Adm. Asst. rate as budgeted (clerical) for a deduction of **-375.40**. Cost associated with Sr. PE certification of Stage 3 budget for a deduction of **-162.70**. Cost associated with technical compliance/oversite by the Sr. PM lack supporting documentation for a deduction of **-750.90**. Cost associated with SICR certification by the Sr. PE lack supporting documentation for a deduction of **-650.80**. Cost associated with SICR development by the Engineer III lacks supporting documentation for a deduction of **-5006.00**. Cost associated with SICR compilation and distribution by the Sr. Administrative Assistant lack supporting documentation for a deduction of **-225.28**. Cost associated with SICR maps by the Sr. Draftsman lacks supporting documentation for a deduction of **-750.80.**

Under Consultant's Materials, cost associated with off site access copies lack supporting documentation for a deduction of **-22.50.**

Following the above deductions, these amounts are approved:

$0.00	Drilling and Monitoring Well Costs

$0.00		Analytical Costs
$0.00		Remediation and Disposal Costs
$0.00		UST Removal and Abandonment Costs
$0.00		Paving, Demolition, and Well Abandonment Costs
$11,851.57		Consulting Personnel Costs
$367.50		Consultant's Materials Costs
$12,219.07	**Total**	

L.P.E./L.P.G. Certification:
Vince E. Smith, PE
062-046118
Expires 11/30/17

Illinois EPA Recommendation/Comments:

Discussed budget in 11/28/16 phone conversation with Matt Rives of CWM. Email response was received from Matt on 12/5/16.

VI route is incomplete per 8/15/16 cklist.

Due to the gw ordinance, R26 modeling may be performed to define gw extent .

Approve SICR, modify Budgets per above.

Response Due:

CAP in 30 days.

dm\notes11-23-16.doc

LPC 1870155032 - Warren County
Monmouth/ Monmouth, City of
1125 North Main Street
Leaking UST Incident No. 20140510
Leaking UST Technical File

Right-to-Know Evaluation

The Bureau of Land site identified above has been reviewed. A check mark next to any one of the following criteria indicates further evaluation of the site is necessary.

CRITERIA:

☐ Groundwater contamination is measured or modeled to exceed, within the setback zone or regulated recharge area of a potable Community Water Supply (CWS) well, or setback zone of a private well or non-CWS well, either TACO Tier 1 groundwater remediation objectives under Part 742, Appendix B, Table E or Class I groundwater standards under Part 620; or ☐ Five or fewer properties ☐ More than five properties

☐ Measured off-site groundwater contamination from volatile chemicals from the site where a release occurred poses a threat of indoor inhalation exposure above appropriate Tier 1 remediation objectives for the current use of the site; or
☐ Five or fewer properties ☐ More than five properties

☐ Soil contamination exceeding applicable remediation objectives for the soil component of the groundwater ingestion route is modeled to exceed, within the setback zone or regulated recharge area of a potable Community Water Supply (CWS) well, or setback zone of a private well or non-CWS well, either TACO Tier 1 groundwater remediation objectives under Part 742, Appendix B, Table E or Class I groundwater standards under Part 620; or
☐ Five or fewer properties ☐ More than five properties

☐ Contaminated soil is measured off-site to exceed the appropriate Tier 1 remediation objectives based on the current use of the off-site property; or ☐ Five or fewer properties ☐ More than five properties

☐ Measured off-site soil gas contamination from the site where the release occurred poses a threat of exposure above the appropriate Tier 1 remediation objectives for the current use of the site; or
☐ Five or fewer properties ☐ More than five properties

☐ BOL refers a matter to the Division of Legal Counsel for enforcement under Section 43(a) of the Act; or

☐ BOL refers a site to the Division of Legal Counsel for issuance of a seal order under Section 34(a) of the Act.

Comments:

☐ At least one of the above criteria is met and the above-identified site must be further evaluated.

☐ Insufficient information submitted to make an adequate RTK decision.

☑ None of the above criteria are met and the above-identified site does not warrant any further evaluation.

Project Manager Signature:_____ Date:_____1/26/17_____

LPC#1870155032 - Monmouth
Monmouth, City of
LUST TECH

Myers, Dave

From: matt@cwmcompany.com
Sent: Monday, December 05, 2016 4:12 PM
To: Myers, Dave
Subject: [External] RE: Monmouth, City of Lust # 20140510

Dave,

Thanks for giving me a call the other day and giving a couple days to get back to you, I am feeling much better now. I had a chance to look over the Actual time and budgeting for this project, as a overview and this is what I am finding.

I first compared the proposed to the actual on a total job basis. I removed the line items in the proposed that pertained to field investigation ($8,815.51) with the exception of access and found that we proposed $25,830.73 of completed work and of that proposed completed work we only submitted $23,027.43 for actual approval. The actual cost occurred is 11% under the proposed costs of work completed. So, these proposed additional cuts are on an actual budget that already came in under the proposed.

Per the cuts you proposed.

1. Top of page 1 of Consulting Personnel, 45 Hrs of Eng III time are budgeted for plan preparation/ drill plan. The proposed budget for this task was 32 hrs of Eng I time. Given that no field work took place, the planning associated should not have been needed. I would approve 32 hrs of Eng. I time as approved in the proposed budget.

There was a total of 42 hours proposed for Plan development and drill plan (32 for Eng. I and 10 for Eng. III). The description of drill plan in the line item describes the development and design of the drilling plan in the plan not the development of the field plan to drill, so the removal of the field work doesn't effect this. After reviewing the proposed budget in hindsight, we should have just proposed development hours for stage 3 plan for just an Eng. III and not split it between Eng. I and Eng. III . Even though we used higher personnel for this task it is still a comparable title by the IEPA standards to complete such task, and even though higher personnel were used for the task as I stated earlier the total project cost came in under the proposed budget. Even though we incurred well more, I will agree to reduce the hours to 40 of Eng III to further reduce the projects total cost, if that helps.

2. Bottom of page 1 of Consulting Personnel, total of 21 hrs were budgeted for denied access work. This compares favorably with the proposed total hrs of 36, but included 12 hrs of Sr. Adm. Asst. time for assembly and distribution. The Actual cost budget was performed by the Sr. PM, Eng III and Eng II, all higher rates than the Sr. Adm. Asst. I would propose the 10 hr Eng II be replaced at 12 hrs of Sr. Adm. Asst. per 850(b).

During development of a proposed budget there is no way we can know exactly who will be available to perform and complete the specific tasks or activities. Specifically, in this situation, where we proposed work that was completed months after the proposed budget was submitted. Available personnel at the time are used for the tasks at hand, and though their specific title may not match the proposed line item they are still a comparable title established by IEPA standards per 850(b) to complete such task. To report anything for reimbursement other than our actual personnel who performed the work would just be wrong and not match the technical report either. We review the totals for each subsection completed to verify if actual is under or over within reasonable margins of the proposed. This is truly the only way to give the Agency reasonable budgets. The budget represents the personnel who actually preformed the work. In order to present a budget reflective of actual costs, by actual personnel, we have no choice. As I stated earlier the total project cost came in under the proposed budget already.

3. Top of 2nd page of Consulting Personnel, only 3 hrs of Sr. PE time was proposed for Stage 3 Budget certification.

Not all actual line items should be expected to come in under the proposed as it is proposed budget of expected costs, and the actual budget should reflect the actual cost incurred. Due to our experience and expertise, most items closely resemble the proposed budget; but may be slightly different when the work is actually completed. Our due diligence and ability to reduce costs should not result in the denial of work on a specific line item's time that was actual required to complete the task. The regulatory intent of the proposal budget was to provide consultants and owner operators approval of costs in stages and the proposal was to be an estimate of likely cost, followed by actual costs for which the agency would approve as the budget. If this wasn't the case it would require us to propose and the IEPA to deem acceptable the extreme worst case scenario hours and personnel for every task. We both know that would not be acceptable to the IEPA. The purpose of the actual budget is to help the IEPA flag/quickly notice costs that are exorbitantly higher than what was previously proposed allowing the IEPA to ask for clarification on the large amount of cost. In this case, the extra hour that will be required for Stage 3 budget certification Wasn't an item that flagged us as requiring explanation of extra hours. The explanation was simply that is the time it will take to complete a review.

4. Middle of 3rd page of Consulting Personnel, 40 hrs are budgeted for SICR development, identical to the hrs budgeted in the proposed budget. Given the reduced scope, no field work, no new data, etc. these hours should have been less. 10 hrs are requested for CAD work when only 2 new maps were provided. I would expect 20 hrs for SICR development by the Eng III to be more appropriate.

As I stated to you in our phone conversation, I believe this is a general misconception in the EPA LUST department. I assume it comes from the lack of knowledge of all the "behind the scene work" that is required for drilling, plan development, reimbursements, etc. and not just an attempt to reduce overall costs across a whole project. These tasks/ steps cannot be generalized into an equal proportionate equation for the steps and procedures it takes to complete a project. By this I mean if you remove a step (sampling) the work/ reports that follows is not proportionally reduced and may not be reduced at all. You are only wanting to approve 20 of the 40 actual hours on the basis that field portion of Stage 3 investigation was not conducted and only Early Action, Stage 1 and stage 2 investigations was conducted. So, you are saying that 20 more hours would be approvable if the Stage three was submitted and that an SICR submitted after a Stage 2 only takes 20 hours? We both know

this doesn't add up, making this cut is arbitrary seem just a requirement to reduce overall costs and not required by any regulations. Even though the total project cost came in under the proposed budget already.

Matthew D. Rives

CW3M Company, Inc.
701 W. South Grand Ave.
Springfield, IL 62704
p: (217) 522-8001
f: (217) 522-8009

--------- Original Message ---------
Subject: Monmouth, City of Lust # 20140510
From: "Myers, Dave" <Dave.Myers@Illinois.gov>
Date: 11/28/16 8:41 am
To: "'matt@cwmcompany.com'" <matt@cwmcompany.com>

Matt, per our phone discussions this morning, here are the budget items I found issue with:

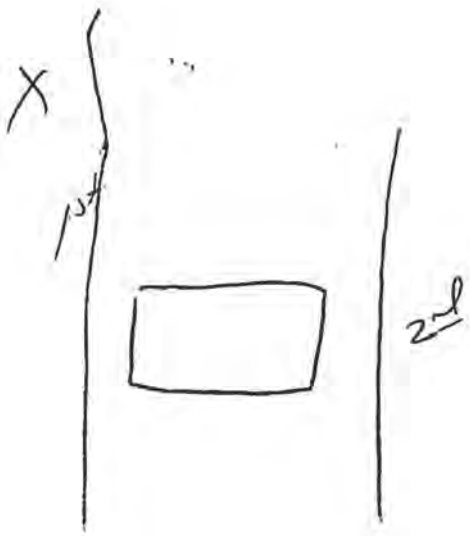
<![if !supportLists]>1. <![endif]> Top of page 1 of Consulting Personnel, 45 Hrs of Eng III time are budgeted for plan preparation/ drill plan. The proposed budget for this task was 32 hrs of Eng I time. Given that no field work took place, the planning associated should not have been needed. I would approve 32 hrs of Eng. I time as approved in the proposed budget.

<![if !supportLists]>2. <![endif]>Bottom of page 1 of Consulting Personnel, total of 21 hrs were budgeted for denied access work. This compares favorably with the proposed total hrs of 36, but included 12 hrs of Sr. Adm. Asst. time for assembly and distribution. The Actual cost budget was performed by the Sr. PM, Eng III and Eng II, all higher rates than the Sr. Adm. Asst. I would propose the 10 hr Eng II be replaced at 12 hrs of Sr. Adm. Asst. per 850(b).

<![if !supportLists]>3. <![endif]>Top of 2nd page of Consulting Personnel , only 3 hrs of Sr. PE time was proposed for Stage 3 Budget certification.

<![if !supportLists]>4. <![endif]>Middle of 3rd page of Consulting Personnel, 40 hrs are budgeted for SICR development, identical to the hrs budgeted in the proposed budget. Given the reduced scope, no field work, no new data, etc. these hours should have been less. 10 hrs are requested for CAD work when only 2 new maps were provided. I would expect 20 hrs for SICR development by the Eng III to be more appropriate.

Dave Myers, IEPA



Myers, Dave

From: Myers, Dave
Sent: Monday, November 28, 2016 9:41 AM
To: 'matt@cwmcompany.com'
Subject: Monmouth, City of Lust # 20140510

Matt, per our phone discussions this morning, here are the budget items I found issue with:

1. Top of page 1 of Consulting Personnel, 45 Hrs of Eng III time are budgeted for plan preparation/ drill plan. The proposed budget for this task was 32 hrs of Eng I time. Given that no field work took place, the planning associated should not have been needed. I would approve 32 hrs of Eng. I time as approved in the proposed budget.
2. Bottom of page 1 of Consulting Personnel, total of 21 hrs were budgeted for denied access work. This compares favorably with the proposed total hrs of 36, but included 12 hrs of Sr. Adm. Asst. time for assembly and distribution. The Actual cost budget was performed by the Sr. PM, Eng III and Eng II, all higher rates than the Sr. Adm. Asst. I would propose the 10 hr Eng II be replaced at 12 hrs of Sr. Adm. Asst. per 850(b).
3. Top of 2nd page of Consulting Personnel , only 3 hrs of Sr. PE time was proposed for Stage 3 Budget certification.
4. Middle of 3rd page of Consulting Personnel, 40 hrs are budgeted for SICR development, identical to the hrs budgeted in the proposed budget. Given the reduced scope, no field work, no new data, etc. these hours should have been less. 10 hrs are requested for CAD work when only 2 new maps were provided. I would expect 20 hrs for SICR development by the Eng III to be more appropriate.

Dave Myers, IEPA

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, ACTING DIRECTOR

217/524-3300

CERTIFIED MAIL

7014 2120 0002 3290 6667

FEB 02 2017

City of Monmouth
Mr. Lowell Crow
100 E. Broadway
Monmouth, IL 61462

IEPA - DIVISION OF RECORDS MANAGEMENT
RELEASABLE

FEB 06 2017

REVIEWER: JMR

Re: LPC #1870155032 -- Warren County
Monmouth/ Monmouth, City of
1125 North Main Street
Leaking UST Incident No. 20140510
Leaking UST Technical File

Dear Mr. Crow:

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed the Site Investigation Completion Report (report) submitted for the above-referenced incident. This report, dated November 7, 2016, was received by the Illinois EPA on November 10, 2016. Supplemental information was received by electronic mail on December 5, 2016. 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 Illinois EPA has determined that the requirements of Title XVI of the Act have been satisfied (Sections 57.7(a)(5) and 57.7(c) of the Act and 35 Ill. Adm. Code 734.505(b) and 734.510(a)). Therefore, the report is approved.

Evaluation of the site specific data indicates the indoor air route of exposure is incomplete and need not be addressed pursuant to 35 Ill. Adm. Code 742.900.

In addition, the actual costs budget for Stage 3 is modified pursuant to Sections 57.7(a)(2) 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 are approved. Be aware that the amount of payment from the Fund may be limited by Sections 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.

Pursuant to Sections 57.7(b)(2) and (3) and 57.12(c) and (d) of the Act and 35 Ill. Adm. Code 734.100, 734.125, and 734.335(a), the Illinois EPA requires submittal of a Corrective Action Plan and budget within 30 days from the date of this letter 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 note that the Illinois EPA does not require the submission of a budget if the owner or operator does not intend to seek payment from the Underground Storage Tank Fund.

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 Dave Myers at 217/785-7491.

Sincerely,

SA Colantino

Stephen A. Colantino
Acting Unit Manager
Leaking Underground Storage Tank Section
Division of Remediation Management
Bureau of Land

SAC: dm: \SICRappBUDmod.dot

Attachments: A, Appeal Rights

c: Matt Rives, CWM Company (electronic copy), matt@cwmcompany.com
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 of time 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:

John Therriault, Assistant Clerk
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

Attachment A

Re: LPC #1870155032 -- Warren County
Monmouth/ Monmouth, City of
1125 North Main Street
Leaking UST Incident No. 20140510
Leaking UST Technical File

SECTION 1

STAGE 3 Actual Costs

As a result of the Illinois EPA's modifications in Section 2 of this Attachment A, the following amounts are approved:

$0.00	Drilling and Monitoring Well Costs
$0.00	Analytical Costs
$0.00	Remediation and Disposal Costs
$0.00	UST Removal and Abandonment Costs
$0.00	Paving, Demolition, and Well Abandonment Costs
$11,851.57	Consulting Personnel Costs
$367.50	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 (Act) and 35 Illinois Administrative Code (35 Ill. Adm. Code) 734.635.

SECTION 2

STAGE 3 Modifications

1. $2628.23 for costs for Consulting Personnel associated with Stage 3 Plan preparation by the Engineer III, which are unreasonable pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd) and inconsistent with the associated technical plan. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.510(b).

   32 hours of Engineer I time at $93.32 per hour was approved August 17, 2016 in the Stage 3 Budget.

2. $625.75 for costs for Consulting Personnel associated with off-site access request by the Engineer III, which are unreasonable pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd) and inconsistent with the associated technical plan. Such costs

are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.510(b).

Costs associated with the Engineer III were approved August 17, 2016 in the Stage 3 Budget for off-site data analysis.

3. $375.40, deduction for a reduction in the personnel title listed in Section 734.APPENDIX E Personnel Titles and Rates. Pursuant to Section 734.850(b) personnel costs must not exceed the amounts set forth in Appendix E and the personnel costs must be based on the work performed, regardless the title of the person performing the work. The Engineer II rate has been reduced to a Sr. Administrative Assistant rate of $56.32 per hour.

   The costs exceed the maximum payment amounts set forth in Subpart H, Appendix D, and/or Appendix E of 35 Ill. Adm. Code 734. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(zz). In addition, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they are not reasonable and 35 Ill. Adm. Code 734.630(dd).

   Clerical cost associated with off-site access correspondence was approved August 17, 2016 at the Sr. Administrative Assistant rate.

4. $162.70 for costs for Consulting Personnel associated with Stage 3 Budget Certification by the Sr. Professional Engineer, which are unreasonable pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd) and inconsistent with the associated technical plan. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.510(b).

   3 hours of Sr. Professional Engineer time was approved August 17, 2016 in the Stage 3 Budget.

5. $5006.00 for costs for Consulting Personnel associated with SICR development by the Engineer III, 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 because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act.

   Hours requested are inconsistent with the documentation provided.

6. $750.90 for costs for technical compliance/oversite by the Sr. Project Manager, 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 because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act.

Hours requested are inconsistent with the documentation provided.

7. $650.80 for costs for SICR certification by the Sr. Professional Engineer, 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 because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act.

   Hours requested are inconsistent with the documentation provided.

8. $225.28 for costs for SICR compilation and distribution by the Sr. Administrative Assistant , 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 because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act.

   Hours requested are inconsistent with the documentation provided.

9. $750.80 for costs for Consulting Personnel associated with SICR maps by the Sr. Draftsperson, 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 because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act.

   Hours requested are inconsistent with the documentation provided.

10. $22.50 for costs for Consultant's Materials associated with off-site access correspondence copies, 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 because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act.

Copies requested are inconsistent with the documentation provided.

dm: \SICRappBUDmodA.dot

CERTIFICATE OF SERVICE

I, the undersigned, on affirmation state the following:

That I have served the attached **CERTIFICATE OF RECORD ON APPEAL and the accompanying documents comprising the entire record of the Respondent's decision** by e-mail upon Patrick D. Shaw at the e-mail address of pdshaw1law@gmail.com and upon Hearing Officer Carol Webb at the e-mail address of Carol.Webb@Illinois.gov.

That my e-mail address is Scott.Sievers@Illinois.gov.

That the number of pages in the e-mail transmission is two hundred and forty-four (244).

That the e-mail transmission took place before 5:00 p.m. on the date of April 13, 2017.

/s/Scott B. Sievers
April 13, 2017