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March 3, 2023

Ms. Sarah Krueger  
Contaminated Sediments Specialist  
Remediation & Redevelopment Program  
Wisconsin Dept. of Natural Resources  
2984 Shawano Ave.  
Green Bay, WI 54313

**RE: Transmittal of 2022 Annual Groundwater Monitoring Report – Former We Energies Appleton MGP Site, 337 Water St., Appleton, WI WDNR BRRTs Activity #02-45-000042, FID #445033380**

Dear Ms. Krueger:

Enclosed for your information and file is the 2022 Annual Groundwater Monitoring Report for the above referenced site. Notifications to the abutting property owners were also sent.

Based on the stability of the groundwater plumes and NAPL observations, Annual routine monitoring events will continue to occur in April of each year. Groundwater in Area 1 and Area 2 will continue to be monitored for the current Annual list of parameters as presented in this report.

Please do not hesitate to contact me at (414) 221-2156 or via email at [frank.dombrowski@wecenergygroup.com](mailto:frank.dombrowski@wecenergygroup.com) if you have any questions or if further information may be required.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frank Dombrowski'.

Frank Dombrowski  
Principal Environmental Consultant  
WEC Energy Group – Business Services  
Environmental Dept.

Enclosure

CC: Project File  
B. Hennings, Ramboll  
A. Cawrse, Ramboll

Mr. Frank Dombrowski  
WEC Business Services, LLC- We Energies  
333 W. Everett Street, A231  
Milwaukee, WI 53203

## 2022 Annual Report

**Appleton City (Coal Tar), aka Appleton MGP, 337 Water Street, Appleton, Wisconsin: WDNR BRRTs Activity #02-45-000042, FID #445033380**

Dear Mr. Dombrowski:

Ramboll Americas Engineering Solutions, Inc. (Ramboll) is providing this 2022 Annual Report for the former manufactured gas plant (MGP) site located at 337 Water Street in Appleton, Wisconsin. The enclosed report contains the following Sections:

- Executive Summary
- Section 1- Field Activities: A summary of groundwater sampling activities and deviations
- Section 2 - Groundwater Flow: A summary of groundwater flow observations including water table and piezometric surface maps.
- Section 3 - Groundwater Quality: A summary of groundwater quality analyses including updated tables and graphs, as well as specific discussions of arsenic sampling and non-aqueous phase liquid (NAPL) observations
- Section 4 - Summary and Project Direction: A summary of observations and discussion of future reporting.

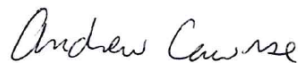
The Operation, Maintenance, Monitoring and Optimization Reporting of Soil and Groundwater Remediation Systems Form 4400-194 is attached as Appendix D.

Sincerely,



**Brian G. Hennings, PG**  
Managing Hydrogeologist

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Attachments: 2022 Annual Report

For Distribution to: Ms. Sarah Krueger, WDNR (Hardcopy & Electronic)  
Mr. Ross Buetow, City of Appleton (Hardcopy & Electronic)  
Mr. Dean Bornemann, Oakbrook Corp. (Hardcopy & Electronic)

March 3, 2023

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Intended for  
**We Energies**

Date  
**March 3, 2023**

Project No.  
**19401001019**

# **2022 ANNUAL REPORT**

## **APPLETON CITY (COAL TAR), AKA APPLETON MGP**

## 2022 ANNUAL REPORT APPLETON CITY (COAL TAR), AKA APPLETON MGP

Project name **Former Appleton MGP**  
Project no. **1940101019**  
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Document type **Annual Report**  
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Prepared by **Lauren Anderson**  
Checked by **Andrew G. Cawrse**  
Approved by **Brian G. Hennings, PG**  
Description **Annual report in support of groundwater monitoring in 2022**

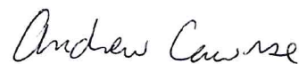
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Geologist



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**Brian G. Hennings, PG**  
Senior Managing Hydrogeologist

"I, BRIAN G. HENNINGS, HEREBY CERTIFY THAT I AM A HYDROGEOLOGIST AS THAT TERM IS DEFINED IN S. NR 712.03 (1), WIS. ADM. CODE, AM REGISTERED IN ACCORDANCE WITH THE REQUIREMENTS OF CH. GHSS 2, WIS. ADM. CODE, OR LICENSED IN ACCORDANCE WITH THE REQUIREMENTS OF CH. GHSS 3, WIS. ADM. CODE, AND THAT, TO THE BEST OF MY KNOWLEDGE, ALL OF THE INFORMATION CONTAINED IN THIS DOCUMENT IS CORRECT AND THE DOCUMENT WAS PREPARED IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS IN CHS. NR 700 TO 726, WIS. ADM. CODE."



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## ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
cm/s	centimeters per second
CSM	conceptual site model
DNAPL	dense non-aqueous phase liquid
ES	Enforcement Standard
ft	foot/feet
ft/ft	feet per foot
ft/yr	feet per year
ISS	in-situ solidification
MGP	Manufactured Gas Plant
NA	natural attenuation
NAPL	non-aqueous phase liquid
NAVD88	North American Vertical Datum of 1988
O&M	Operations and Maintenance
PAL	Preventive Action Limit
Ramboll	Ramboll Americas Engineering Solutions, Inc.
Site	Former We Energies Appleton MGP site
WDNR	Wisconsin Department of Natural Resources

## EXECUTIVE SUMMARY

At the former We Energies Appleton MGP site and abutting properties, groundwater flow directions and groundwater elevations are consistent with previous years. Groundwater quality data collected in 2022 are also consistent with previous data collected at the Site. Wells with the highest concentrations of contaminants are located in the lower till unit beneath the in-situ solidification (ISS) treatment area. The concentrations of contaminants in the lower till unit display stable to decreasing trends.

Concentrations of contaminants in groundwater south of the canal (Area 2) are lower than those observed in at the former MGP site north of the Canal (Area 1). Residual dense non-aqueous phase liquid (DNAPL) is measurable in two wells screened in the upper weathered bedrock unit of Area 2 and was observed in trace amounts in one well screened in the lower till unit of Area 1. DNAPL levels are stable and, with Wisconsin Department of Natural Resources (WDNR) concurrence, product recovery efforts were discontinued in 2018.

In June 2022, the City of Appleton began construction of a trail system and park at the vacant portion (Area 1) of the Site. The construction activities were part of the creation of the Ellen Kort Peace Park that is being developed at the Site and properties adjoining to the west. Once construction activities are complete, the City of Appleton will submit a construction documentation report detailing the construction activities. In addition, an updated cap maintenance plan will be submitted by We Energies to WDNR following construction activities as specified in the WDNR "Approval to Manage Solid Waste under Wis. Admin. Code § NR718.12 For On-Site Management" letter dated July 30, 2020.

An offsite release notification from WDNR dated August 9, 2021 identified the Appleton MGP site as the source of groundwater impacts at the Lawrence University Academy of Music property. A forensic analysis was conducted on groundwater collected from both the Appleton MGP site and the Lawrence University property to determine if the impacts observed at the Lawrence University property are related to the release at the former MGP site. The forensic analyses were unable to conclusively rule out MGP-related impacts at the Lawrence University property. The data associated with MW-3 at the Lawrence University property is included in this submittal and the extent of the groundwater plume for the Appleton MGP site includes MW-3.

Routine annual groundwater and DNAPL monitoring and reporting events will continue according to the current schedule in 2023.

## 1. FIELD ACTIVITIES

### 1.1 2022 Routine Field Activities

Routine field activities on the former MGP property (Figure 1) began in April 2022. An annual site visit was made in accordance with the 2022 Groundwater Monitoring Plan (Table 6). Groundwater and surface water conditions observed in April 2022 were consistent with previous observations.

### 1.2 Ellen Kort Peace Park Development

In June 2022, the City of Appleton began construction of a trail system and park at the vacant portion (Area 1) of the Site as outlined in the WDNR "Approval to Manage Solid Waste under Wis. Admin. Code § NR718.12 For On-Site Management" letter dated July 30, 2020. The construction activities were part of the creation of the Ellen Kort Peace Park that is being developed at the Site and abutting, City-owned properties to the west. In accordance with the approved cap modification plan, clean fill material was used to bring the Site to the planned grade. In addition, a concrete path was constructed along the southern portion of Area 1. On November 21, 2022, ten of the existing monitoring wells were converted from above ground well protectors to flush mounted well protectors to facilitate park construction. Wells MW-21, PZ-21B, and PZ-22B were not converted due to access issues from surrounding vegetation. Photos depicting the converted wells are included as Appendix A.

Once construction activities are complete, the City of Appleton will submit a construction documentation report detailing the construction activities. In addition, at that time an updated cap maintenance plan will be submitted by We Energies to WDNR.

### 1.3 Lawrence University Academy of Music Property

WDNR was provided with a July 6, 2021 "Soil and Groundwater Sampling, Lawrence University Academy of Music Property (BRRTS #02-45-582612) Site Status Letter" prepared by Westwood Infrastructure, Inc. WDNR reviewed the data and concluded that elevated concentrations of benzene, naphthalene, and ethylbenzene that were observed at well MW-3 located on the Lawrence Academy of Music Property site are related to the release at the Appleton City (Coal Tar) MGP site. On August 9, 2021, WDNR issued a "Notification of Related Groundwater Data" letter to We Energies and indicated that the additional data from the Lawrence Academy of Music Property site should be included in the site investigation dataset for the Appleton City (Coal Tar) MGP site and "...used to guide further investigation." Following review of the information, We Energies issued a response letter dated September 22, 2021 which disputes the conclusion that the impacts identified at this property are associated with the former Appleton MGP site. In addition, We Energies and WDNR discussed the issue in a teleconference on October 6, 2021 to determine possible next steps to resolve outstanding questions and concerns.

Following those discussions, a forensic analysis sampling plan was submitted to WDNR on November 15, 2021. The sampling plan proposed forensic analysis of the groundwater from wells at both the Appleton MGP site and Lawrence University property to determine if the impacts observed at the Lawrence University property may be related to the release at the former MGP site. The goals of the analyses would 1) evaluate whether the samples from the affected well MW-3 are similar or different from the site wells, and 2) to determine the nature of the potential source materials that may have affected the Lawrence University well. The forensic analysis sampling plan was approved by WDNR on November 30, 2021.

During the April 2022 annual groundwater sampling event, groundwater samples were collected from Appleton MGP monitoring wells MW-22, MW-24, and MW-12R. The sample from well MW-12R is considered representative of dissolved phase impacts within the former MGP and wells MW-22 and MW-24 are the nearest MGP site wells upgradient and downgradient (respectively) of the Lawrence University property. In addition, a groundwater sample was collected from the impacted well (MW-3) located on the Lawrence University property. The groundwater samples were analyzed by Alpha Analytical in Westborough, MA for the following parameters:

- Saturated hydrocarbons (USEPA Method 8015 Modified)
- Parent and alkylated PAHs and phenols (USEPA Method 8270 Modified)
- PIANO analytes (paraffins, isoparaffins, mono-aromatics, naphthenes, olefins) (USEPA Method 8260)

The samples were analyzed using analytical methods for hydrocarbon forensics to allow for the evaluation of the compositional and concentration differences among and between the samples. Results of the forensic analysis indicated that the samples collected from the former MGP site (wells MW-12R and MW-22) had the highest concentrations while only trace levels of PAH or PIANO analytes found in downgradient sentinel well MW-24. Lawrence University well MW-3 had lower detections of PAH and PIANO analytes compared to MW-12R and MW-22. Overall, the evaluation found compositional differences among all samples, particularly for the PIANO analytes. However, the results suggest that PAHs in MW-3 appear to be from a pyrogenic source with similarities to PAHs found in both MW-12R and MW-22. Therefore, the forensic analyses was unable to conclusively rule out MGP-related impacts in MW-3.

We Energies and WDNR then discussed the path forward in a teleconference on July 14, 2022. During the teleconference, it was determined that data associated with MW-3 at the Lawrence University property will be included in future submittals and the extent of the groundwater plume for the Appleton MGP site will include MW-3. Well MW-3 was then abandoned prior to closure of the Lawrence Univ Academy of Music site (BRRTS Activity No. 02-45-582612).

## 2. GROUNDWATER FLOW

Due to differences in groundwater flow conditions between the former MGP property to the north of the Fox River, and the island of land on which Building 415 is located (Figure 2), the two areas have been designated as separate groundwater flow (hydrogeologic) areas (Figure 3).

Hydrogeologic Area 1 includes the former MGP property, completed remediation area, and surrounding areas to the north of the Fox River. Hydrogeologic Area 2 includes the island of land south of the Fox River Canal where Building 415 is located.

Area 1 is located entirely upstream of the Middle Appleton Dam and hydroelectric units located within the island area. Groundwater in Area 1 is monitored in the lower till/weathered bedrock unit (the flow zone below and surrounding the ISS treatment area, referred to as the “lower till” in this report) and the bedrock unit (piezometers are screened in more competent rock 10 to 15 ft below the weathered bedrock). Surface water in Area 1 is monitored at staff gauge SG-3 (see conceptual model profiles in Appendix B).

Area 2 is located on an island that is part of a collection of dams and hydroelectric units that span the Fox River and are collectively referred to as the Middle Appleton Dam. Building 415 and the areas around the building within Area 2 are effectively an extension of the Middle Appleton Dam spanning the distance between the surface water control gates south of Building 415 and the hydroelectric unit between Buildings 415 and 405. Groundwater in Area 2 is monitored in the fill unit (water table) and the upper weathered bedrock unit that is equivalent to the lower till/weathered bedrock unit present in Area 1. Upstream surface water is monitored at SG-3 (the same as Area 1); downstream surface water is monitored at SG-4 which is the outflow of water from the hydroelectric unit between Buildings 415 and 405 (see conceptual model profiles in Appendix B). Surface water measurements from SG-4 represent surface water elevation on the downstream side of the Middle Appleton Dam. Water levels observed at SG-4 are typically 10 ft lower than water levels observed at SG-3.

Groundwater elevations are provided in Table 1. Vertical gradient calculations and horizontal groundwater velocity calculations are not included in this report and were last updated in 2016. It is not expected that current groundwater gradients and velocities would have changed significantly from those previously calculated. Piezometric surface maps generated from annual groundwater monitoring data collected in April for Areas 1 and 2 are presented on Figures 4 through 7.

### 2.1 Lower Till Groundwater Flow (Area 1)

Groundwater measurements in Area 1 are collected on an annual basis during the month of April (Table 1). A piezometric surface map for the 2022 annual sampling event (Figure 4) was prepared to illustrate groundwater flow. Groundwater elevation readings from shallow wells MW-08, MW-09, and MW-19S are provided for reference on the lower till groundwater figures, but are not included in the contouring because these wells are screened above the lower till.

The lower till piezometric surface maps continue to display two distinct regions of groundwater flow:

- A western region, defined by the area between monitoring wells MW-02R, MW-12R, MW-13R, MW-19, MW 20, MW-21, and MW-25

- An eastern region, defined by the area between monitoring wells MW-20, MW-21, MW-22, and MW-24

The western region of the lower till is characterized by variable flow directions and hydraulic gradients. Groundwater elevation measurements at monitoring wells during April 2022 were approximately 1 to 1.5 ft higher than average, and river elevations, both upstream and downstream of the dam, were higher than average. River elevation upgradient of the dam at SG-3 was approximately 0.75 ft higher than average, and the elevation downgradient of the dam at SG-4 was approximately 1 ft higher than average. The increased groundwater and surface water elevations are likely due to high precipitation that occurs each spring leading up to the sampling event. Groundwater elevations during the April 2022 event were consistent with previous measurements. As discussed in previous reports, variable flow patterns observed beneath the western portion of the Site (including small scale flow reversals) are likely due to the convergence of upgradient recharge coming from the west and periodic influx from the canal towards the Site. MW-25 has consistently higher groundwater elevations than neighboring wells and the flow map (Figure 4) indicates this well is upgradient of the ISS treatment area.

The eastern region of the lower till is located closer to the Middle Appleton Dam and is characterized by consistent northeasterly flow direction. In proximity to MW-24, groundwater flow has a greater easterly component, towards the Fox River. The more consistent flow direction and gradient is associated with closer proximity to the dam. Groundwater elevation readings collected from MW-24 downgradient of the Site indicate the hydraulic gradients observed in the eastern region of the lower till continue toward the Middle Appleton Dam.

The surface water elevation measurements from SG-3 remain consistently higher than the lower till groundwater elevation measurements from the nearest wells on both sides of the canal (e.g., April 2022 MW-22 and MW-23, Table 1); indicating that the canal is behaving as a losing stream.

## **2.2 Bedrock Groundwater Flow (Area 1)**

Groundwater elevation measurements were collected from lower bedrock wells during April 2022. Bedrock groundwater flow direction was east to southeast (Figure 5), consistent with previous measurements and similar to the large-scale lower till groundwater flow direction.

## **2.3 Water Table Groundwater Flow (Area 2)**

Soil borings in Area 2 indicate the presence of fill material over weathered bedrock. Water table wells (MW-23, MW-26, MW-27, and MW-28) monitor shallow groundwater flow and quality in Area 2. Annual water level measurements were collected from water table wells (Table 1). A groundwater flow map was generated using measurements collected in April 2022.

Water table groundwater flow is influenced by a historic needle dam structure, drains associated with Building 415, and a hydroelectric unit. The needle dam structure, located between wells MW-26 and MW-28, was identified through file searches and confirmed by the property manager (Figure 6). Drains associated with Building 415 were identified through site visits and sub-slab investigation activities which indicate the presence of drains that redirect groundwater below Building 415 to the downstream side of the hydroelectric unit located between Buildings 415 and 405 (Figure 6, and conceptual model profiles, Appendix B). File searches also indicate the infrastructure of the hydroelectric unit located between Buildings 405 and 415 was constructed with a flume that extends deep into the bedrock. The remnant of the needle dam, the western



wall of Building 415, and the hydroelectric turbine infrastructure form a structural barrier to shallow groundwater flow indicated by the orange line on Figure 6. Groundwater above bedrock flows toward the structural barrier and is then intercepted by the drains and directed to the downstream side of the dam. Water table elevations collected from MW-26, immediately downgradient of the historic needle dam structure, are consistently 4 to 5 ft lower than water table elevations of the other wells. MW-26 is not believed to be directly connected with wells on the other side of this structural barrier as indicated in Figure 6.

Groundwater flows primarily from southwest to northeast across Area 2 toward Building 415 where it is intercepted by drains and discharged in the Fox River near SG-4 on the downstream side of the hydroelectric unit (Figure 6). Groundwater elevations at MW-26 are typically stable around the 712 ft NAVD88, which is about 7 to 9 ft lower than the surface water elevation of the Fox River upstream of the dam (SG-3) and about 1 to 2 ft higher than the surface water elevation of the Fox River downstream of the dam (SG-4). Note that the groundwater elevations at MW-26 remain relatively stable even though the surface water downstream of the dam changes a few feet between sampling events (Figure 6) which suggests that the water table around MW-26 is not strongly influenced by changes in downstream or upstream surface water elevation. Relatively stable groundwater elevations at MW-26 likely reflect controls by drains that run under Building 415 which also creates a consistent north and northeast groundwater flow.

Groundwater flow is northeast to southeast during the April 2022 event, which is consistent with flow direction during previous sampling events in Area 2. Hydraulic gradients and vertical gradients were last calculated for the 2016 Annual Report (NRT/OBG, 2017). Hydraulic gradients were calculated to be 0.0486 feet per foot (ft/ft), much steeper than those of Area 1, due to the drains below Building 415. Flow velocity in Area 2 was calculated using slug test conductivity values, the hydraulic gradient near MW-27, and an effective porosity of 30 percent (Maidment, 1993). Groundwater velocity in the fill unit was calculated to be 862 feet per year (ft/yr) in Area 2 (Table 3, OBG, 2018).

Vertical gradients were last calculated for all nested wells in Area 2 in 2018. The vertical gradients are generally downward and range from  $2.9 \times 10^{-1}$  to  $8.1 \times 10^{-3}$  ft/ft (Table 2, OBG, 2018) which is consistent for wells located upgradient of a dam. The most frequent exception is well nest 27 where vertical gradients have been consistently and strongly upward near  $2.3 \times 10^{-1}$  ft/ft. The upward gradients observed at this location are caused by the close proximity of these wells to the building drains which effectively lower the elevation of the water table (MW-27) relative to potentiometric head in the upper weathered bedrock below (PZ-27).

## **2.4 Upper Weathered Bedrock Groundwater Flow (Area 2)**

Area 2 weathered bedrock monitoring wells PZ-23, PZ-26, PZ-27, and PZ-28 (Figure 7) are screened in material that is similar in origin to the lower till/weathered bedrock in Area 1. Wells are screened in the top 15 ft of weathered bedrock. The building drains and former needle dam structure do not extend into the weathered bedrock and do not influence groundwater flow in this unit, as reflected by the southerly groundwater flow direction.

Groundwater flow in the weathered bedrock was from north to south across Area 2 during the 2022 annual sampling event (Figure 7), which is consistent with flow direction during previous sampling events.

Slug testing was completed at PZ-27 on July 15, 2015 and included in the 2015 Annual Report. Calculated conductivity values ranged from a maximum of  $1.2 \times 10^{-2}$  centimeters per second (cm/s) to a minimum of  $9.4 \times 10^{-3}$  cm/s and a mean value of  $1.0 \times 10^{-2}$  cm/s, which is within the expected range for weathered or fractured bedrock (NRT, 2015).

Flow velocity through the bedrock in Area 2 was last calculated in 2018 using slug test conductivity values, the hydraulic gradient, and an effective porosity of 15 percent (Maidment, 1993). Groundwater velocity was calculated to be 5,089 ft/yr (Table 3, OBG, 2018) which is not unreasonable for groundwater flow through weathered or fractured rock. Groundwater flow velocities observed in the upper weathered bedrock of Area 2 appear to be driven by the steep gradient between headwaters of the dam (SG-3) and the tailwater (SG-4). Calculated flow velocities are limited to vicinity of the dam structures. Flow velocities outside the influence of the dam are expected to be similar to those in the lower till in Area 1.

### 3. GROUNDWATER QUALITY

Groundwater analytical results are summarized in Tables 2 through 4, presented on Figures 8 through 14, and analytical reports are included in Appendix C. Benzene, toluene, ethylbenzene, and xylenes (BTEX) and naphthalene have been identified as indicators of MGP constituents in groundwater, with benzene being the most frequently detected BTEX compound above the NR140 Enforcement Standard (ES) at the Site. Benzene and naphthalene concentrations and trends are discussed in Sections 3.1 through 3.4 below. Arsenic results for Area 1 and Area 2 are discussed in Section 3.5 below. Field and laboratory indicators of natural attenuation (NA) continue to be collected and are summarized on Table 4. NA parameters are considered in Form 4400-194 (Appendix D) as part of the Site evaluation. Benzene and naphthalene trends were analyzed at wells both on a short-term (over the preceding five years) and long-term (since installation of each well) basis. Trend analyses results are summarized in Appendix E with trend graphs provided in Appendices E1 and E2. Results of trend analyses are discussed in Sections 3.1 through 3.4 below.

#### 3.1 Lower Till Groundwater Quality (Area 1)

Groundwater analytical results from MW-25 (upgradient) and MW-24 (downgradient) establish the lateral extent of the groundwater plume in the lower till of Area 1 (Table 2). The continued variable flow pattern in the lower till suggests that neither Mann-Kendall nor Mann-Whitney statistical analyses may be appropriate for trend analysis. Concentration ( $\text{Log}_{10}$ ) time series, concentration ( $\text{Log}_{10}$ ) versus groundwater elevation graphs, and isoconcentration contours provide the best means to evaluate concentration trends and plume stability.

In April 2022, concentrations of benzene in wells MW-02R, MW-12R, MW-13R, MW-19, MW-20, MW-21, and MW-22 were detected exceeding the ES. Naphthalene concentrations were also above the ES in wells MW-02R, MW-12R, MW-13R, MW-20, MW-21, and MW-22 during the April 2022 sampling event. In addition, naphthalene has not exceeded the ES at MW-19 since 2014.

Concentrations of benzene and naphthalene at upgradient well MW-25 have been detected above and below the ES in sampling events, but provide adequate upgradient definition of groundwater impacts in the lower till. Benzene and naphthalene were below the ES at MW-25 during the annual sampling event in 2022. Benzene has been below the ES during 15 of 19 sampling events, and naphthalene has been below the ES during 16 of 19 sampling events. This is consistent with the conceptual site model that MW-25 is located at the very upgradient edge of the benzene plume in the lower till. Benzene and naphthalene were both non-detect in downgradient well MW-24 during the 2022 sampling event. Naphthalene has not been detected in MW-24, and benzene has been detected during 3 of 15 sampling event, all below the ES.

Long-term and short-term trends for benzene and naphthalene were evaluated for the lower till wells in Area 1 (Appendix E). All wells in the lower till Area 1 displayed decreasing to stable trends with the following exceptions:

- MW-02R displayed increasing short-term trends for benzene and naphthalene, while displaying flat (stable) long-term trends for benzene and decreasing long-term trends for naphthalene. The slopes for the increasing short-term trend lines are very close to stable threshold (near 0.0001), and the coefficient of determination is low for both trend lines, indicating weak correlation between concentration and time.

- MW-12R displayed increasing short-term trends for benzene and increasing long-term and short-term trends for naphthalene; however, the slopes for these trend lines are very close to stable threshold (near 0.0001), and the coefficient of determination is low for both trend lines, indicating weak correlation between concentration and time.
- MW-13R displayed increasing short-term trends for benzene and naphthalene, while displaying flat (stable) long-term trends. The slopes for these trend lines are very close to stable threshold (near 0.0001), and the coefficient of determination is low for both trend lines, indicating weak correlation between concentration and time.
- MW-22 displayed flat (stable) short-term trends for naphthalene, while displaying decreasing short-term trends for benzene and flat (stable) long-term trends for benzene and naphthalene.
- MW-25 displayed increasing long-term trends for naphthalene, while displaying decreasing short-term trends for benzene and naphthalene and flat (stable) long-term trends for benzene. The coefficient of determination on the long-term trends has decreased from 0.78 to 0.13 for naphthalene between 2017 and 2022, indicating groundwater quality is trending more toward stable. The slope of the increasing long-term trend line is very close to stable threshold (near 0.0001), and the coefficient of determination is low further, indicating weak correlation between concentration and time.

Isoconcentration contours are generated using the annual data collected in April of each year for benzene and naphthalene (Figures 8 and 9). The isoconcentration lines fluctuate slightly from year to year but remain in the same general location over time; indicating the plume is stable. Groundwater data from wells MW-24 and MW-25 allow for isoconcentration lines to be drawn that estimate the limits of benzene and naphthalene concentrations in groundwater above their respective ES in Area 1. Isoconcentration lines on Figures 8 and 9 indicate the limits of the plume are adequately defined by the monitoring well network. Improving groundwater quality, specifically reductions in benzene concentration at MW-20 and MW-21 below 1,000 µg/L illustrate portions of the Site above 1,000 µg/L are decreasing. Figure 9 also illustrates how the isoconcentration contours are stable and continue to contract toward the center of the Site, indicating improving groundwater quality.

### **3.2 Bedrock Groundwater Quality (Area 1)**

Benzene concentrations have been below the ES in all Area 1 bedrock wells since 2015, and naphthalene concentrations have been below the ES in Area 1 bedrock wells, except for PZ-22B, since their installations (Table 2). Concentration graphs illustrate concentrations over time in the bedrock at individual well locations (Figure 10).

Concentration trends indicate stable (flat) to decreasing long-term trends in all deep bedrock wells for benzene and naphthalene (Appendix E). While all Area 1 bedrock wells had increasing naphthalene short-term trends in 2019, trends at PZ-20B and PZ-21B are now decreasing and PZ-22B is flat (stable) which further indicates improving groundwater quality. Isoconcentration lines were not generated for the bedrock wells due to the presence of benzene and naphthalene detections above the ES being limited to a single well (PZ-22B).

### **3.3 Water Table Groundwater Quality (Area 2)**

Of the four water table wells in Area 2, MW-23 and MW-28 contain very low to non-detectable concentrations of BTEX and naphthalene (Table 2). Analytical sampling of MW-23 was stopped in 2012 after three sampling events with no naphthalene detections, and seven events with no BTEX detections. A confirmation sample collected in October 2018 confirmed benzene and naphthalene were not detectable, and groundwater samples were not collected from MW-23 in 2022. Monitoring of BTEX and naphthalene continues at MW-28 with no detections. MW-26 and MW-27 have consistently exceeded the ES for benzene since their installations in 2015, with the exception of 2021 when benzene did not exceed the ES at MW-26. MW-27 has also exceeded the ES for naphthalene since its installation; however, concentrations were observed below the ES for the first time during the 2022 sampling event. Concentrations of benzene and naphthalene in wells MW-26 and MW-27 are lower than concentrations observed in the lower till wells MW-21 and MW-22 (Area 1). Time series of concentrations in Area 2 water table wells are presented on Figures 11 and 12. Benzene and naphthalene trends indicate short- and long-term trends are decreasing in MW-26 and in MW-27 (Appendix E). Concentration trends at MW-27 have improved from displaying increasing trends in 2017 to displaying decreasing trends in 2022. Visual inspection of the graphs presented on Figures 11 and 12 also indicate benzene and naphthalene trends are decreasing to stable in these wells.

### **3.4 Upper Weathered Bedrock Groundwater Quality (Area 2)**

Upper weathered bedrock (lower till equivalent) wells PZ-26 and PZ-28 contain measurable amounts of free product (Table 5). No groundwater quality analysis is completed when product is present. Further discussion of free product (non-aqueous phase liquid [NAPL] observations) is provided below in Section 3.6. Upper bedrock well in Area 2, PZ-27, has exceeded the ES for benzene and naphthalene during all sampling events since its installation, however, it remains lower than observed concentrations in lower till wells MW-21 and MW-22 (Area 1). Time series of benzene and naphthalene are presented on Figure 13. Remaining upper bedrock well, PZ-23, has exceeded the ES for benzene and naphthalene for all sampling events since installation with the exception of the 2022 sampling event. Benzene and naphthalene were not detected in April 2022 at PZ-23. Benzene and naphthalene trends at PZ-23 and PZ-27 are decreasing both long-term and short-term (Appendix E).

### **3.5 Arsenic in Groundwater**

Dissolved arsenic is monitored annually in Area 1 and Area 2 (Table 3, Figure 14). In Area 1, samples are collected only from wells screened in the lower till. Arsenic concentrations in Area 1 bedrock were historically below the ES and sampling was discontinued. The highest arsenic concentrations continue to be observed in the lower till near the center of the Site around MW-13R, MW-20, and MW-21. Arsenic concentrations at MW-02R, MW-12R, MW-13R, MW-20, MW-21, and MW-22 were above the PAL in 2022. All Area 1 wells were below the ES with the exception of wells MW-13R, MW-20, and MW-21 slightly above the ES.

Area 2 wells are sampled for arsenic annually, contingent on the absence of NAPL, with the exception of MW-23. Sampling was discontinued at MW-23 in 2010, after six consecutive samples below the ES. Water table wells MW-26 and MW-28 contained arsenic concentrations greater than the ES (Table 3, Figure 14) in 2022. Arsenic concentrations at MW-26 and MW-28 were consistent with previously observed arsenic concentrations at these locations. Arsenic at MW-27 was also consistent with previously observed concentrations above the PAL in 2020 and 2021.

Area 2 lower till/weathered bedrock wells PZ-23 and PZ-27 had detections of arsenic above the PAL (Table 3). PZ-26 and PZ-28 were not sampled in 2022 due to free product in both wells; however, neither well had arsenic detections when first installed in 2015. Arsenic concentrations in Area 2 are generally lower than those observed in Area 1 lower till well MW-21.

### **3.6 NAPL Observations (Area 1 and Area 2)**

In Area 1, 2022 NAPL observations and thickness measurements (Table 5) indicate NAPL and DNAPL was not observed in any wells.

In Area 2, measurable amounts of DNAPL are present in shallow bedrock wells PZ-26 and PZ-28. DNAPL thicknesses at well PZ-26 were 2.11 ft in 2022 and observed at trace amounts at well PZ-28. (Table 5). NAPL was not observed in rock recovered during installation of wells PZ-26 and PZ-28 indicating that NAPL thicknesses observed in these wells represents accumulation in the well. Conversely, oil droplets and a strong MGP-like odor were noted in the rock recovered from 17-20 ft below ground surface (bgs) in PZ-27 of Area 2. This piezometer was constructed from across the zone of NAPL observations (15-20 ft bgs) with filter pack extending up to 15 ft bgs. Regardless of the well screen and filter pack overlapping with observations of NAPL in this boring location, no measurable NAPL has been observed in PZ-27. Due to the stable nature of the DNAPL accumulation in the shallow bedrock wells and limited recovery, DNAPL thickness will continue to be monitored during future sampling events, but attempts will not be made to recover DNAPL from the wells.

### **3.7 Limit of Groundwater Impacts**

Groundwater flow in the lower till in Area 1 is illustrated on Figure 4. Topographic characteristics of the area immediately to the north of West Water Street prevent the installation of monitoring wells, which may otherwise be used to conclusively define lateral extent in this direction. To visualize groundwater flow outside of the well network north of the ISS area, a conceptual flow model was created for the 2014 Annual Report (Appendix B, Figure 15). Prior to the installation of the series of dams that span the Fox River in Appleton, groundwater would flow from upland areas (bluffs) toward the Fox River and discharge into the river, making the Fox River a gaining stream. Following the placement of the dam, groundwater flow upstream of the dam is locally reversed as increased surface water elevations caused a reversal of the hydraulic gradient and flow away from the canal, inland towards water flowing down from the bluffs (surface water recharge). This changed the river immediately upstream of the dam from a gaining stream (receiving groundwater) to a losing stream (discharging surface water into the ground) adjacent to the former MGP Site. Upland recharge is deflected downstream as it encounters the water flowing in from the river. Consequently, groundwater passing beneath the former MGP Site converges with the upland recharge and flows to the north around the dam (Appendix B, Figure 15). The flow from the upland bluffs creates a naturally occurring hydraulic barrier to further northward groundwater flow and contaminant migration beyond the area where these groundwater flow paths converge.

The information presented in the conceptual model was used to develop a line representing the limit of groundwater impacts (Figure 15). The limit of groundwater impacts (Figure 15) is based on groundwater data collected from Site wells and the conceptual model which indicates groundwater flow paths converge between West Water Street and the top of the bluffs. Unclosed benzene contours from Figure 8 are included on this figure with examples of closed contours drawn using the limit of groundwater impacts. Exceedances of other constituents of concern

(ethylbenzene, toluene, xylenes, and naphthalene) (Table 2) also occur within the limit of groundwater impacts. The orange line depicting the limit of groundwater impacts was updated to include the area adjacent to MW-3 on the Lawrence University property consistent with Section 1.3 of this report. The shape of the extent line within the Lawrence University property is informed and bounded by groundwater data collected from other wells (MW-4, MW-5, and MW-6) on the Lawrence University property that define the limits of groundwater exceedances within the property.

NAPL and groundwater impacts observed in Area 2 are consistent with the conceptual site model (CSM) presented as a series of profiles in Appendix B. The CSM includes Area 1 and Area 2, including details of Building 415. Pre-remedial conditions are illustrated on CSM-1 where NAPL deposited in the Fox River (removed during remedial construction, CSM-2) may have been the source for NAPL observed in shallow bedrock of Area 2 (Appendix B). The CSM-3 and CSM-4 illustrate the location of soil vapor probes and the relationship between groundwater and Building 415. Investigation of Building 415 indicates drains are present that lower the water table below the lowest occupied level of the building. Previously completed vapor intrusion evaluations indicate the vapor pathway is incomplete within the building.

## 4. SUMMARY AND PROJECT DIRECTION

Data collected during 2022 groundwater monitoring indicate the following:

- In Area 1, deep bedrock benzene concentrations have declined below the ES and, with the exception of PZ-22B, naphthalene concentrations have declined below the ES. In the lower till, variable groundwater flow patterns continue to be present in the western portion of the Site. The western extent of the area of variable flow is defined by MW-25. The presence of a groundwater hydraulic barrier located between West Water Street and the top of the bluffs allows for the limit of groundwater impacts north of the Fox River to be estimated and closed concentration contour lines to be drawn. The limit of groundwater impacts was updated to include the area adjacent to MW-3 on the Lawrence University property. MW-25 defines the upgradient edge of impacts and MW-24 defines the downgradient limit of impacts.
- In Area 2, the presence of DNAPL has been observed in wells PZ-26 and PZ-28 screened in upper weathered bedrock. DNAPL measurements are stable. In the water table zone, no DNAPL has been observed. Monitoring well MW-26, and MW-27 contained benzene concentrations above the ES in 2022. Monitoring well PZ-27 contained benzene and naphthalene concentrations above the ES in 2022. Monitoring wells PZ-23 and MW-28 have significantly lower (to non-detectable) benzene and naphthalene concentrations. All Area 2 water table and upper weathered bedrock wells have lower concentrations than the lower till wells MW-21 and MW-22 in Area 1. These results are consistent with the conceptual site model where trace amounts of MGP residual are contained within lower till/upper weathered bedrock. The upland and river sources of MGP residuals were removed during remedial construction.

### 4.1 Groundwater Monitoring Program

Based on the stability of the groundwater plumes and NAPL observations, annual routine monitoring events will occur in April of each year (Table 6). Groundwater in Area 1 and Area 2 will continue to be monitored for the current annual list of parameters presented on Table 6.

### 4.2 Future Reporting

We propose to submit the following documents in 2023:

- Updated cap maintenance plan completed by We Energies in conjunction with the City's submittal of the final Construction Documentation Report for the Ellen Kort Peace Park as required by WDNR.
- Semi-annual progress reports will be submitted electronically as required by WDNR.
- 10-Day notification letters and data summaries will be prepared for the Fox River Mills Apartments and submitted as required by regulation following routine groundwater monitoring events.
- A 2023 Annual Report. The 2023 Annual report will include a summary tables and figures of the groundwater sampling events and Operations and Maintenance (O&M) Reporting Form 4400-194.



## 5. REFERENCES

Maidment, David R., 1993. *Handbook of Hydrology*. The University of Michigan, McGraw-Hill.

Natural Resource Technology, Inc., April 8, 2016. *2015 Annual Groundwater Report*, Table 3a.

Natural Resource Technology, Inc., December 23, 2015. *December 2015 Technical Memorandum*.

Natural Resource Technology, an OBG Company, April 13, 2017. *2016 Annual Update Report*.

O'Brien & Gere Engineers, Inc. (OBG), May 29, 2018. *2017 Annual Update Report*.

## **TABLES**

**TABLE 1. GROUNDWATER ELEVATION SUMMARY**

2020-2021 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Well	TOC <sup>A</sup> Elevation (feet) <sup>B</sup>	Ground Elevation (feet) <sup>B</sup>	Top of Screen Elevation (feet) <sup>B</sup>	Well Depth from TOC (feet)	Monitoring Date	Groundwater Elevation (feet) <sup>B</sup>	Depth to Groundwater (feet)
MW-01RS	727.38	725.28	722.38	717.38	02/18/2002	721.04	6.34
					05/07/2002	721.31	6.07
					08/19/2002	720.56	6.82
					09/06/2002	720.56	6.82
					11/12/2002	720.77	6.61
					02/20/2003	720.63	6.75
					05/20/2003	721.12	6.26
					08/05/2003	718.09	9.29
					Well Abandoned		
MW-02	727.34	726.01	721.94		02/18/2002	721.06	6.28
					05/07/2002	721.45	5.89
					08/19/2002	720.15	7.19
					09/06/2002	720.78	6.56
					11/12/2002	720.84	6.50
					02/20/2003	719.78	7.56
					05/22/2003	722.15	5.19
					08/01/2003	722.96	4.38
					Well Abandoned, replaced with MW-2R		
MW-02R	743.93	741.41	706.00	43.02	10/19/2004	720.26	23.67
					11/30/2004	720.43	23.50
					01/11/2005	720.62	23.31
					02/08/2005	720.36	23.57
					03/08/2005	720.47	23.46
					04/18/2005	720.56	23.37
					07/05/2005	720.35	23.58
					10/17/2005	720.32	23.61
					01/10/2006	720.45	23.48
					04/19/2006	720.64	23.29
					07/19/2006	720.27	23.66
					08/28/2006	720.31	23.62
					10/24/2006	720.27	23.66
					03/08/2007	720.35	23.58
					04/25/2007	720.43	23.50
					10/08/2007	720.45	23.48
					04/07/2008	721.16	22.77
					10/20/2008	720.43	23.50
					04/20/2009	720.65	23.28
					09/15/2009	720.51	23.42
					10/07/2009	720.45	23.48
					04/06/2010	720.56	23.37
					10/04/2010	720.72	23.21
					01/18/2011	720.60	23.33
					04/11/2011	721.58	22.35
					07/13/2011	720.63	23.30
					10/03/2011	720.62	23.31
					10/10/2011	718.75	25.18
					10/14/2011	718.77	25.16
					10/20/2011	718.52	25.41
					11/17/2011	719.23	24.70
					01/04/2012	720.11	23.82
					04/23/2012	720.66	23.27
06/26/2012	720.12	23.81					
09/12/2012	719.99	23.94					
01/28/2013	720.41	23.52					
04/23/2013	721.85	22.08					
07/16/2013	720.61	23.32					
10/15/2013	719.97	23.96					
04/29/2014	721.43	22.50					
10/13/2014	720.33	23.60					
04/21/2015	720.72	23.21					
10/19/2015	720.49	23.44					
04/21/2016	721.25	22.68					
10/04/2016	720.75	23.18					
04/19/2017	721.28	22.65					
10/23/2017	719.14	24.79					
04/10/2018	720.30	23.63					
10/25/2018	721.30	22.63					
04/22/2019	721.81	22.12					
10/30/2019	721.11	22.82					
04/21/2020	721.63	22.30					
04/27/2021	720.74	23.19					
04/22/2022	721.66	22.27					
MW-03	728.89	727.46	726.89	716.89	02/18/2002	739.55	4.38
					05/07/2002	739.76	4.17
					08/19/2002	738.37	5.56
					09/06/2002	739.27	4.66
					11/12/2002	738.91	5.02
					02/20/2003	737.54	6.39
					05/21/2003	739.99	3.94
					08/01/2003	740.62	3.31
					Well Abandoned		

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MW-04	726.03	724.63	722.43	712.43	02/18/2002	738.10	5.83
					05/07/2002	737.98	5.95
					08/19/2002	737.62	6.31
					09/06/2002	737.54	6.39
					11/12/2002	737.82	6.11
					02/20/2003	737.65	6.28
					05/21/2003	738.27	5.66
					08/04/2003	735.39	8.54
Well Abandoned							
MW-05	728.02	726.05	723.52	713.52	02/18/2002	736.21	7.72
					05/07/2002	736.03	7.90
					08/19/2002	735.28	8.65
					09/06/2002	735.87	8.06
					11/12/2002	735.78	8.15
					02/20/2003	735.55	8.38
					05/21/2003	736.83	7.10
Well Abandoned							
MW-07RD	739.07	737.22	710.57	707.57	02/18/2002	725.44	18.49
					05/07/2002	725.48	18.45
					08/19/2002	724.97	18.96
					09/06/2002	724.96	18.97
					11/12/2002	725.26	18.67
					02/20/2003	725.07	18.86
					05/20/2003	725.52	18.41
					08/05/2003	722.12	21.81
Well Abandoned							
MW-07RS	738.74	736.83	725.74	720.74	02/18/2002	728.84	15.09
					05/07/2002	731.76	12.17
					08/19/2002	731.50	12.43
					09/06/2002	727.00	16.93
					11/12/2002	730.89	13.04
					02/20/2003	729.83	14.10
					05/20/2003	731.34	12.59
					08/05/2003	731.51	12.42
Well Abandoned							
MW-08	726.19	724.51			02/18/2003	720.37	5.82
					05/07/2002	720.20	5.99
					08/19/2002	719.88	6.31
					09/06/2002	719.77	6.42
					11/12/2002	719.93	6.26
					02/20/2003	719.98	6.21
					05/22/2003	721.64	4.55
					08/01/2003	720.89	5.30
					10/18/2004	720.90	5.29
					12/02/2004	720.08	6.11
					01/11/2005	719.98	6.21
					02/10/2005	720.12	6.07
					03/10/2005	719.96	6.23
					04/19/2005	720.21	5.98
					07/07/2005	719.91	6.28
					10/17/2005	719.94	6.25
					01/11/2006	720.00	6.19
					04/20/2006	720.04	6.15
					07/20/2006	719.88	6.31
					08/28/2006	719.92	6.27
					10/24/2006	719.80	6.39
					03/08/2007	719.97	6.22
					04/26/2007	720.01	6.18
					10/09/2007	720.28	5.91
					04/08/2008	721.54	4.65
					10/20/2008	719.90	6.29
					04/20/2009	720.11	6.08
					09/15/2009	720.08	6.11
					10/08/2009	719.94	6.25
					04/07/2010	720.33	5.86
					10/05/2010	720.27	5.92
					01/18/2011	720.10	6.09
					04/12/2011	720.78	5.41
07/13/2011	720.01	6.18					
10/03/2011	720.28	5.91					
10/10/2011	718.88	7.31					
10/14/2011	718.91	7.28					
10/20/2011	718.41	7.78					
11/17/2011	719.71	6.48					
01/04/2012	719.57	6.62					
04/23/2012	720.14	6.05					
06/26/2012	719.70	6.49					
Well surveyed 01/30/13							
	726.22	726.94			09/12/2012	719.62	6.57
					01/28/2013	720.04	6.18
					04/23/2013	721.40	4.82
					07/16/2013	720.34	5.88
					10/15/2013	719.63	6.59
					04/29/2014	721.09	5.13

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MW-08, cont'd					10/13/2014	720.06	6.16
					04/21/2015	720.37	5.85
					10/19/2015	720.18	6.04
					04/21/2016	720.83	5.39
					10/04/2016	720.53	5.69
					04/19/2017	720.81	5.41
					10/23/2017	719.93	6.29
					04/10/2018	720.91	5.31
					10/23/2018	721.64	4.58
					04/22/2019	722.48	3.74
					10/30/2019	721.61	4.61
					04/20/2020	722.00	4.22
					04/26/2021	720.80	5.42
					04/21/2022	721.76	4.46
MW-09	727.47	725.46			02/18/2003	721.00	6.47
					05/07/2002	721.17	6.30
					08/19/2002	720.60	6.87
					09/06/2002	720.47	7.00
					11/12/2002	720.75	6.72
					02/20/2003	720.62	6.85
					05/22/2003	721.38	6.09
					08/01/2003	721.13	6.34
					10/18/2004	720.52	6.95
					12/02/2004	721.34	6.13
					01/11/2005	720.65	6.82
					02/08/2005	720.75	6.72
					03/10/2005	720.59	6.88
					04/20/2005	720.79	6.68
					07/07/2005	720.53	6.94
					10/17/2005	720.59	6.88
					01/11/2006	720.89	6.58
					04/20/2006	720.59	6.88
					07/20/2006	720.49	6.98
					08/28/2006	720.57	6.90
					10/24/2006	720.66	6.81
					03/08/2007	720.51	6.96
					04/26/2007	720.77	6.70
					10/09/2007	720.83	6.64
					04/08/2008	721.44	6.03
					10/20/2008	720.63	6.84
					04/20/2009	721.07	6.40
					09/15/2009	720.77	6.70
					10/08/2009	720.71	6.76
					04/07/2010	721.04	6.43
					10/05/2010	721.23	6.24
					01/18/2011	720.96	6.51
					04/12/2011	721.57	5.90
					07/13/2011	Not Accessible	
					10/04/2011	720.77	6.70
					10/10/2011	719.94	7.53
					10/14/2011	719.78	7.69
					10/20/2011	719.32	8.15
					11/17/2011	720.11	7.36
					01/04/2012	720.29	7.18
					04/23/2012	721.09	6.38
					06/26/2012	720.61	6.86
				09/12/2012	720.35	7.12	
				01/28/2013	720.66	6.81	
				04/23/2013	722.30	5.17	
				07/16/2013	721.18	6.29	
				10/15/2013	720.49	6.98	
				04/29/2014	721.95	5.52	
				10/13/2014	720.94	6.53	
				04/21/2015	720.98	6.49	
				10/19/2015	720.78	6.69	
				04/21/2016	721.48	5.99	
				10/04/2016	721.35	6.12	
				04/19/2017	721.62	5.85	
				10/23/2017	720.14	7.33	
				04/10/2018	720.82	6.65	
				10/23/2018	721.78	5.69	
				04/22/2019	722.34	5.13	
				10/30/2019	722.01	5.46	
				04/20/2020	722.14	5.33	
				04/26/2021	720.95	6.52	
				04/21/2022	722.03	5.44	
MW-10	740.66	738.96			02/18/2002	727.10	13.56
					05/07/2002	726.69	13.97
					08/19/2002	725.73	14.93
					09/06/2002	725.78	14.88
					11/12/2002	726.14	14.52

**TABLE 1. GROUNDWATER ELEVATION SUMMARY**

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Well	TOC <sup>A</sup> Elevation (feet) <sup>B</sup>	Ground Elevation (feet) <sup>B</sup>	Top of Screen Elevation (feet) <sup>B</sup>	Well Depth from TOC (feet)	Monitoring Date	Groundwater Elevation (feet) <sup>B</sup>	Depth to Groundwater (feet)
MW-10, cont'd					02/20/2003	726.24	14.42
					05/22/2003	725.53	15.13
					08/01/2003	724.69	15.97
Well Relocated after WWTP Demolition in 2012							
					01/28/2013	722.72	17.94
					04/23/2013	725.14	15.52
					07/16/2013	723.72	16.94
					10/15/2013	722.52	18.14
					04/29/2014	Well Damaged	
					04/21/2015	Well Damaged	
					10/19/2015	Well Damaged	
					04/21/2016	Well Damaged	
					10/04/2016	Well Damaged	
					04/19/2017	Well Damaged	
					10/23/2017	722.81	17.85
					04/10/2018	722.11	18.55
					10/23/2018	725.45	15.21
					04/22/2019	725.02	15.64
					10/30/2019	724.98	15.68
					04/20/2020	725.44	15.22
					04/26/2021	724.51	16.15
Well Abandoned July 16, 2021							
MW-11D	729.86	727.86	707.36	704.36	02/18/2002	731.64	9.02
					05/07/2002	731.72	8.94
					08/19/2002	731.14	9.52
					09/06/2002	731.14	9.52
					11/12/2002	731.46	9.20
					02/20/2003	731.17	9.49
					05/22/2003	731.70	8.96
					08/06/2003	728.54	12.12
Well Abandoned							
MW-11S	729.29	727.47	725.79	715.79	02/18/2002	733.07	7.59
					05/07/2002	733.49	7.17
					08/19/2002	732.35	8.31
					09/06/2002	732.50	8.16
					11/12/2002	732.37	8.29
					02/20/2003	732.95	7.71
					05/22/2003	733.50	7.16
					08/06/2003	732.07	8.59
Well Abandoned							
MW-12D	727.58	725.68	713.08		02/18/2002	720.98	6.60
					05/07/2002	721.04	6.54
					08/19/2002	720.53	7.05
					09/06/2002	720.59	6.99
					11/12/2002	720.79	6.79
					02/20/2003	720.66	6.92
					05/20/2003	721.12	6.46
					08/05/2003	717.55	10.03
Well Abandoned, replaced with MW-12R							
MW-12R	728.31	725.71	710.71	25.10	10/21/2004	720.48	7.83
					11/30/2004	720.60	7.71
					01/11/2005	720.57	7.74
					02/10/2005	720.70	7.61
					03/08/2005	720.61	7.70
					04/20/2005	720.79	7.52
					07/07/2005	720.48	7.83
					10/19/2005	720.57	7.74
					01/12/2006	720.62	7.69
					04/20/2006	720.63	7.68
					07/20/2006	720.47	7.84
					08/28/2006	720.52	7.79
					10/23/2006	720.54	7.77
					03/08/2007	720.57	7.74
					04/26/2007	720.67	7.64
					10/09/2007	720.67	7.64
					04/08/2008	721.12	7.19
					10/20/2008	719.66	8.65
					04/20/2009	720.60	7.71
					09/15/2009	719.68	8.63
					10/08/2009	720.52	7.79
					04/07/2010	720.79	7.52
					10/04/2010	720.85	7.46
					01/18/2011	720.70	7.61
					04/12/2011	721.44	6.87
					07/13/2011	720.63	7.68
					10/03/2011	720.73	7.58
					10/10/2011	719.07	9.24
					10/14/2011	719.08	9.23
					10/20/2011	718.56	9.75
					11/17/2011	719.42	8.89
					01/04/2012	720.08	8.23
					04/24/2012	720.63	7.68
					06/26/2012	720.12	8.19

**TABLE 1. GROUNDWATER ELEVATION SUMMARY**

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Well	TOC <sup>A</sup> Elevation (feet) <sup>B</sup>	Ground Elevation (feet) <sup>B</sup>	Top of Screen Elevation (feet) <sup>B</sup>	Well Depth from TOC (feet)	Monitoring Date	Groundwater Elevation (feet) <sup>B</sup>	Depth to Groundwater (feet)
<i>MW-12R, cont'd</i>					09/12/2012	720.17	8.14
					01/28/2013	720.53	7.78
					01/28/2013	720.53	7.78
					04/23/2013	721.74	6.57
					07/16/2013	720.62	7.69
					10/15/2013	719.87	8.44
					04/29/2014	721.33	6.98
					10/13/2014	720.54	7.77
					04/21/2015	720.77	7.54
					10/20/2015	720.64	7.67
					04/21/2016	721.17	7.14
					10/04/2016	720.99	7.32
					04/19/2017	721.16	7.15
					10/23/2017	719.09	9.22
					04/10/2018	717.49	10.82
					10/24/2018	721.32	6.99
					04/22/2019	721.86	6.45
					10/30/2019	721.16	7.15
					04/20/2020	721.72	6.59
					04/26/2021	720.67	7.64
					04/21/2022	721.60	6.71
PZ-12B	727.41	725.02	694.02	45.89	10/21/2004	711.99	15.42
					11/30/2004	712.31	15.10
					01/11/2005	712.66	14.75
					02/10/2005	712.74	14.67
					03/08/2005	712.81	14.60
					04/20/2005	712.78	14.63
					07/07/2005	712.31	15.10
					10/19/2005	712.19	15.22
					01/12/2006	712.47	14.94
					04/20/2006	713.34	14.07
					07/20/2006	711.81	15.60
					08/28/2006	711.49	15.92
					10/23/2006	712.39	15.02
					03/08/2007	711.95	15.46
					04/26/2007	712.22	15.19
					10/09/2007	712.53	14.88
					04/08/2008	713.41	14.00
					10/20/2008	711.97	15.44
					04/20/2009	713.24	14.17
					09/15/2009	711.78	15.63
					10/08/2009	712.23	15.18
					04/07/2010	713.40	14.01
					10/04/2010	712.98	14.43
					01/18/2011	712.83	14.58
					04/12/2011	713.93	13.48
					07/13/2011	713.29	14.12
					10/03/2011	713.71	13.70
					10/10/2011	713.32	14.09
					10/14/2011	713.32	14.09
					10/20/2011	712.93	14.48
					11/17/2011	713.06	14.35
					01/04/2012	713.34	14.07
					04/24/2012	713.77	13.64
					06/26/2012	713.48	13.93
					09/12/2012	712.90	14.51
					04/23/2013	714.56	12.85
					07/16/2013	713.44	13.97
					10/15/2013	712.81	14.60
					04/29/2014	714.45	12.96
					10/13/2014	713.36	14.05
					04/21/2015	713.56	13.85
					10/19/2015	713.25	14.16
					04/21/2016	714.22	13.19
					10/04/2016	713.60	13.81
					04/19/2017	714.23	13.18
					04/10/2018	713.49	13.92
					10/23/2018	714.09	13.32
					04/22/2019	714.84	12.57
					10/30/2019	713.87	13.54
					04/20/2020	714.56	12.85
					04/26/2021	713.56	13.85
					04/21/2022	714.35	13.06

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MW-13D	726.07	723.99	710.57		02/18/2002	720.97	5.10
					05/07/2002	720.86	5.21
					08/19/2002	720.46	5.61
					09/06/2002	720.35	5.72
					11/12/2002	720.82	5.25
					02/20/2003	720.58	5.49
					05/20/2003	720.95	5.12
					08/05/2003	717.24	8.83
Well Abandoned, replaced with MW-13R							
MW-13R	726.72	724.22	707.22	25.00	10/20/2004	720.20	6.52
					12/02/2004	720.68	6.04
					01/12/2005	720.42	6.30
					02/09/2005	720.62	6.10
					03/10/2005	720.49	6.23
					04/19/2005	720.68	6.04
					07/06/2005	720.29	6.43
					10/19/2005	720.35	6.37
					01/10/2006	720.59	6.13
					04/19/2006	720.69	6.03
					07/19/2006	720.44	6.28
					08/28/2006	720.44	6.28
					10/24/2006	720.30	6.42
					03/08/2007	720.47	6.25
					04/25/2007	720.37	6.35
					10/08/2007	720.55	6.17
					04/08/2008	721.08	5.64
					10/20/2008	720.05	6.67
					04/20/2009	721.24	5.48
					09/15/2009	720.63	6.09
					10/07/2009	720.33	6.39
					04/06/2010	720.60	6.12
					10/04/2010	720.79	5.93
					01/18/2011	720.67	6.05
					04/11/2011	721.24	5.48
					07/13/2011	720.63	6.09
					10/03/2011	720.69	6.03
					10/10/2011	718.41	8.31
					10/14/2011	718.44	8.28
					10/20/2011	718.08	8.64
					11/17/2011	719.06	7.66
					01/04/2012	720.13	6.59
					04/23/2012	720.65	6.07
					06/26/2012	720.09	6.63
					09/13/2012	720.13	6.59
					01/28/2013	720.47	6.25
04/23/2013	721.55	5.17					
07/16/2013	720.58	6.14					
10/15/2013	719.84	6.88					
04/29/2014	721.22	5.50					
10/13/2014	720.43	6.29					
04/21/2015	720.66	6.06					
10/20/2015	720.49	6.23					
04/21/2016	720.87	5.85					
10/04/2016	720.81	5.91					
04/19/2017	720.90	5.82					
10/23/2017	718.85	7.87					
04/10/2018	720.26	6.46					
10/24/2018	721.00	5.72					
04/22/2019	721.42	5.30					
10/30/2019	720.81	5.91					
04/20/2020	721.30	5.42					
04/26/2021	720.47	6.25					
04/21/2022	721.15	5.57					
MW1-13S	726.34	724.25	722.34	714.34	02/18/2002	721.35	5.37
					05/07/2002	721.25	5.47
					08/19/2002	720.85	5.87
					09/06/2002	720.80	5.92
					11/12/2002	721.12	5.60
					02/20/2003	720.96	5.76
					05/20/2003	721.50	5.22
					08/05/2003	718.34	8.38
Well Abandoned							
MW1-14D	727.33	725.25	711.83	708.83	02/18/2002	720.10	6.62
					05/07/2002	720.09	6.63
					08/19/2002	719.56	7.16
					09/06/2002	719.58	7.14
					11/12/2002	719.74	6.98
					02/20/2003	719.70	7.02
					05/21/2003	720.17	6.55
					08/04/2003	716.38	10.34
Well Abandoned							



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MW1-14S	727.34	725.23	722.34	717.34	02/18/2002	720.15	6.57				
					05/07/2002	720.11	6.61				
					08/19/2002	719.55	7.17				
					09/06/2002	719.55	7.17				
					11/12/2002	719.74	6.98				
					02/20/2003	719.65	7.07				
					05/21/2003	720.19	6.53				
Well Abandoned											
MW1-15D	727.55	725.68	708.55	705.55	02/18/2002	719.04	7.68				
					05/07/2002	719.34	7.38				
					08/19/2002	718.64	8.08				
					09/06/2002	718.64	8.08				
					11/12/2002	718.78	7.94				
					02/20/2003	718.56	8.16				
					05/21/2003	719.14	7.58				
				08/04/2003	716.83	9.89					
Well Abandoned											
MW1-17D	727.67	725.78	716.67	713.67	02/18/2002	714.91	11.81				
					05/07/2002	718.75	7.97				
					08/19/2002	719.44	7.28				
					(see note C)	09/06/2002	713.11	13.61			
					11/12/2002	718.77	7.95				
					02/20/2003	718.58	8.14				
					05/21/2003	718.66	8.06				
				08/04/2003	719.09	7.63					
Well Abandoned											
MW1-18D	728.16	726.21	716.66	713.66	02/18/2002	719.67	7.05				
					05/07/2002	719.75	6.97				
					08/19/2002	719.14	7.58				
					09/06/2002	719.15	7.57				
					11/12/2002	719.53	7.19				
					02/20/2003	719.18	7.54				
					05/22/2003	719.67	7.05				
				08/01/2003	719.49	7.23					
Well Abandoned											
MW-19S	746.81	744.21	729.71	29.60	10/19/2004	722.94	23.87				
					12/01/2004	723.58	23.23				
					01/12/2005	724.62	22.19				
					02/09/2005	724.94	21.87				
					03/10/2005	720.72	26.09				
					04/20/2005	726.32	20.49				
					07/06/2005	724.19	22.62				
					10/17/2005	723.61	23.20				
					01/11/2006	725.04	21.77				
					04/19/2006		Well damaged				
					08/28/2006		Well damaged				
					10/23/2006		Well damaged				
					743.59	744.10	729.70	29.60	03/08/2007		Well under 3-ft of snow
							Well surveyed 05/11/07		04/26/2007	727.02	16.57
									10/09/2007	723.69	19.9
									04/08/2008	730.46	13.13
									10/20/2008	723.72	19.87
									04/20/2009	727.48	16.11
									09/15/2009	723.74	19.85
									10/08/2009	723.61	19.98
									04/07/2010	726.65	16.94
									10/05/2010	725.90	17.69
									01/18/2011		Not Accessible
									04/12/2011	734.82	8.77
									07/13/2011	726.29	17.3
									10/04/2011	724.27	19.32
									10/10/2011	724.36	19.23
				10/14/2011	724.49	19.1					
				10/20/2011	724.47	19.12					
				11/17/2011	725.36	18.23					
				01/04/2012	725.64	17.95					
				04/23/2012	727.41	16.18					
				06/26/2012	724.71	18.88					
				09/12/2012	723.27	20.32					
				01/28/2013	724.75	18.84					
				04/23/2013	732.74	10.85					
				07/16/2013	726.78	16.81					
				10/15/2013	723.74	19.85					
				04/29/2014	729.70	13.89					
				10/13/2014	724.93	18.66					
				04/21/2015	726.94	16.65					
				10/19/2015	725.09	18.50					
				04/21/2016	731.22	12.37					
				10/04/2016	725.73	17.86					
				04/19/2017	731.14	12.45					
				10/23/2017	724.79	18.80					
				04/10/2018	724.93	18.66					
				10/24/2018	728.27	15.32					

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MW-19S, cont'd					04/22/2019	731.49	12.10				
					10/30/2019	727.18	16.41				
					04/20/2020	730.66	12.93				
					04/26/2021	727.37	16.22				
					04/21/2022	730.00	13.59				
MW-19D	746.40	744.09	708.09	45.81	10/19/2004	720.16	26.24				
					12/01/2004	720.37	26.03				
					01/11/2005	720.26	26.14				
					02/09/2005	720.35	26.05				
					03/10/2005	720.42	25.98				
					04/20/2005	720.54	25.86				
					07/06/2005	720.13	26.27				
					10/17/2005	720.25	26.15				
					01/11/2006	720.38	26.02				
					04/19/2006	Well damaged					
					07/20/2006	n/a	23.22				
					08/28/2006	n/a	23.45				
					10/23/2006	n/a	23.11				
					03/08/2007	Well under 3-ft of snow					
					04/26/2007	743.35	744.10	708.10	04/26/2007	720.43	22.92
					10/09/2007	Well surveyed 05/11/07		10/09/2007	720.34	23.01	
					04/08/2008			04/08/2008	720.97	22.38	
					10/20/2008			10/20/2008	720.25	23.10	
					04/20/2009			04/20/2009	720.58	22.77	
					09/15/2009			09/15/2009	720.20	23.15	
					10/08/2009			10/08/2009	720.29	23.06	
					04/07/2010			04/07/2010	720.57	22.78	
					10/05/2010			10/05/2010	720.62	22.73	
					01/18/2011			01/18/2011	Well under ice and snow		
					04/12/2011			04/12/2011	721.43	21.92	
					07/13/2011			07/13/2011	720.52	22.83	
					10/04/2011			10/04/2011	720.59	22.76	
					10/10/2011			10/10/2011	718.85	24.50	
					10/14/2011			10/14/2011	718.91	24.44	
					10/20/2011			10/20/2011	718.58	24.77	
					11/17/2011			11/17/2011	719.24	24.11	
					01/04/2012			01/04/2012	719.90	23.45	
					04/23/2012			04/23/2012	720.56	22.79	
06/26/2012			06/26/2012	719.97	23.38						
09/12/2012			09/12/2012	719.93	23.42						
01/28/2013			01/28/2013	720.28	23.07						
04/23/2013			04/23/2013	721.77	21.58						
07/16/2013			07/16/2013	720.48	22.87						
10/15/2013			10/15/2013	719.78	23.57						
04/29/2014			04/29/2014	721.32	22.03						
10/13/2014			10/13/2014	720.25	23.10						
04/21/2015			04/21/2015	720.60	22.75						
10/19/2015			10/19/2015	720.37	22.98						
04/21/2016			04/21/2016	721.22	22.13						
10/04/2016			10/04/2016	720.70	22.65						
04/19/2017			04/19/2017	721.15	22.20						
10/23/2017			10/23/2017	719.03	24.32						
04/10/2018			04/10/2018	720.17	23.18						
10/24/2018			10/24/2018	721.04	22.31						
04/22/2019			04/22/2019	721.66	21.69						
10/30/2019			10/30/2019	720.93	22.42						
04/20/2020			04/20/2020	721.58	21.77						
04/26/2021			04/26/2021	720.62	22.73						
04/21/2022			04/21/2022	721.61	21.74						
MW-20	739.06	736.46	710.46	36.10	10/20/2004	720.38	18.68				
					11/30/2004	720.52	18.54				
					01/11/2005	720.52	18.54				
					02/08/2005	720.47	18.59				
					03/09/2005	720.44	18.62				
					04/18/2005	720.65	18.41				
					07/05/2005	720.47	18.59				
					10/17/2005	719.95	19.11				
					01/10/2006	720.54	18.52				
					04/19/2006	720.69	18.37				
					07/20/2006	720.36	18.70				
					08/28/2006	720.45	18.61				
					10/24/2006	720.12	18.94				
					03/08/2007	720.49	18.57				
					04/25/2007	720.41	18.65				
					10/08/2007	720.57	18.49				
					04/09/2008	721.13	17.93				
					10/20/2008	720.55	18.51				
					04/20/2009	720.64	18.42				
					09/15/2009	720.62	18.44				
10/07/2009	720.51	18.55									
04/06/2010	720.62	18.44									

**TABLE 1. GROUNDWATER ELEVATION SUMMARY**

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 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
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Well	TOC <sup>A</sup> Elevation (feet) <sup>B</sup>	Ground Elevation (feet) <sup>B</sup>	Top of Screen Elevation (feet) <sup>B</sup>	Well Depth from TOC (feet)	Monitoring Date	Groundwater Elevation (feet) <sup>B</sup>	Depth to Groundwater (feet)
MW-20, cont'd					10/04/2010	720.79	18.27
					01/18/2011	720.63	18.43
					04/11/2011	721.18	17.88
					07/13/2011	720.40	18.66
					10/03/2011	720.67	18.39
					10/10/2011	717.04	22.02
					10/14/2011	717.12	21.94
					10/20/2011	716.91	22.15
					11/17/2011	719.03	20.03
					01/04/2012	720.12	18.94
					04/23/2012	720.66	18.40
					06/26/2012	720.09	18.97
					09/12/2012	720.12	18.94
					01/28/2013	720.47	18.59
					04/23/2013	721.52	17.54
					07/16/2013	720.63	18.43
					10/15/2013	719.95	19.11
					04/29/2014	721.22	17.84
					10/13/2014	720.43	18.63
					04/21/2015	720.77	18.29
					10/19/2015	720.57	18.49
					04/21/2016	720.88	18.18
					10/04/2016	720.96	18.10
					04/19/2017	721.08	17.98
					10/23/2017	719.07	19.99
					04/10/2018	720.49	18.57
				10/25/2018	721.13	17.93	
				04/22/2019	721.66	17.40	
				10/30/2019	720.13	18.93	
				04/21/2020	721.41	17.65	
				04/27/2021	720.75	18.31	
				04/22/2022	721.58	17.48	
PZ-20B	739.31	736.49	692.49	59.32	10/20/2004	711.96	27.35
					11/30/2004	712.27	27.04
					01/11/2005	712.45	26.86
					02/08/2005	712.55	26.76
					03/09/2005	712.64	26.67
					04/18/2005	712.69	26.62
					07/05/2005	712.29	27.02
					10/17/2005	712.05	27.26
					01/10/2006	712.27	27.04
					04/19/2006	713.19	26.12
					07/20/2006	711.78	27.53
					08/28/2006	711.45	27.86
					10/24/2006	711.27	28.04
					03/08/2007	711.92	27.39
					04/25/2007	712.09	27.22
					10/08/2007	712.47	26.84
					04/07/2008	713.41	25.90
					10/20/2008	712.23	27.08
					04/20/2009	712.62	26.69
					09/15/2009	711.67	27.64
					10/07/2009	712.14	27.17
					04/06/2010	712.92	26.39
					10/04/2010	712.82	26.49
					01/18/2011	712.59	26.72
					04/11/2011	713.83	25.48
					07/13/2011	713.17	26.14
					10/03/2011	713.64	25.67
					10/10/2011	713.23	26.08
					10/14/2011	713.16	26.15
					10/20/2011	712.86	26.45
					11/17/2011	713.01	26.30
					01/04/2012	713.24	26.07
					04/23/2012	713.68	25.63
					06/26/2012	713.35	25.96
					09/12/2012	712.79	26.52
					04/23/2013	714.51	24.80
					07/16/2013	713.40	25.91
					10/15/2013	712.71	26.60
					04/29/2014	714.37	24.94
					10/13/2014	713.27	26.04
					04/21/2015	713.51	25.80
					10/19/2015	713.05	26.26
					04/21/2016	714.06	25.25
					10/04/2016	713.51	25.80
					04/19/2017	714.11	25.20
					04/10/2018	713.40	25.91
					10/23/2018	714.04	25.27
					04/22/2019	714.72	24.59
					10/30/2019	713.82	25.49
					04/21/2020	714.45	24.86

**TABLE 1. GROUNDWATER ELEVATION SUMMARY**

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Well	TOC <sup>A</sup> Elevation (feet) <sup>B</sup>	Ground Elevation (feet) <sup>B</sup>	Top of Screen Elevation (feet) <sup>B</sup>	Well Depth from TOC (feet)	Monitoring Date	Groundwater Elevation (feet) <sup>B</sup>	Depth to Groundwater (feet)
PZ-20B, cont'd					04/27/2021	713.46	25.85
					04/22/2022	714.29	25.02
MW-21	728.20	726.09	712.09	24.11	10/20/2004	720.45	7.75
					12/02/2004	720.52	7.68
					01/12/2005	720.43	7.77
					02/09/2005	720.51	7.69
					03/09/2005	720.52	7.68
					04/19/2005	720.79	7.41
					07/06/2005	720.28	7.92
					10/18/2005	720.33	7.87
					01/11/2006	720.60	7.60
					04/20/2006	720.72	7.48
					07/19/2006	720.46	7.74
					08/28/2006	720.50	7.70
					10/24/2006	720.33	7.87
					03/08/2007	720.49	7.71
					04/26/2007	720.68	7.52
					10/08/2007	720.67	7.53
					04/09/2008	721.58	6.62
					10/20/2008	720.45	7.75
					04/20/2009	720.63	7.57
					09/15/2009	720.66	7.54
					10/07/2009	720.53	7.67
					04/06/2010	720.62	7.58
					10/04/2010	720.90	7.30
					01/18/2011	720.68	7.52
					04/11/2011	721.65	6.55
					07/13/2011	720.65	7.55
					10/03/2011	720.73	7.47
					10/10/2011	716.59	11.61
					10/14/2011	716.63	11.57
					10/20/2011	716.33	11.87
					11/17/2011	719.47	8.73
					01/04/2012	720.20	8.00
					04/23/2012	720.84	7.36
					06/26/2012	720.11	8.09
					09/12/2012	720.15	8.05
					01/28/2013	720.52	7.68
					04/23/2013	721.92	6.28
					07/16/2013	720.72	7.48
					10/15/2013	719.93	8.27
					04/29/2014	721.50	6.70
					07/21/2014	720.05	8.15
					10/13/2014	720.46	7.74
					04/21/2015	720.92	7.28
					10/19/2015	720.76	7.44
					04/21/2016	721.19	7.01
					10/04/2016	721.07	7.13
					04/19/2017	721.36	6.84
					10/23/2017	719.19	9.01
					04/10/2018	720.54	7.66
					10/25/2018	721.32	6.88
					04/22/2019	721.15	7.05
					10/30/2019	721.24	6.96
					04/21/2020	721.29	6.91
					04/27/2021	720.66	7.54
					04/22/2022	721.70	6.50
PZ-21B	728.13	725.70	694.20	46.43	10/20/2004	711.93	16.20
					12/02/2004	712.32	15.81
					01/12/2005	712.63	15.50
					02/09/2005	712.66	15.47
					03/09/2005	712.64	15.49
					04/19/2005	712.69	15.44
					07/06/2005	712.22	15.91
					10/18/2005	712.15	15.98
					01/10/2006	712.40	15.73
					04/20/2006	713.19	14.94
					07/19/2006	711.80	16.33
					08/28/2006	711.47	16.66
					10/24/2006	711.38	16.75
					03/08/2007	711.93	16.20
					04/26/2007	712.21	15.92
					10/08/2007	712.52	15.61
					04/09/2008	713.53	14.60
					10/20/2008	712.15	15.98
					04/20/2009	712.96	15.17
					09/15/2009	711.66	16.47
					10/07/2009	712.16	15.97
					04/06/2010	712.24	15.89
					10/04/2010	712.81	15.32
					01/18/2011	712.55	15.58

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<i>PZ-21B, cont'd</i>					04/11/2011	713.83	14.30
					07/13/2011	713.12	15.01
					10/03/2011	713.64	14.49
					10/10/2011	713.23	14.90
					10/14/2011	713.25	14.88
					10/20/2011	712.91	15.22
					11/17/2011	713.02	15.11
					01/04/2012	713.21	14.92
					04/24/2012	713.66	14.47
					06/26/2012	713.36	14.77
					09/12/2012	712.78	15.35
					04/23/2013	714.51	13.62
					07/16/2013	713.41	14.72
					10/15/2013	712.72	15.41
					04/29/2014	714.34	13.79
					10/13/2014	713.24	14.89
					04/21/2015	713.51	14.62
					10/19/2015	713.04	15.09
					04/21/2016	714.06	14.07
					10/04/2016	713.45	14.68
					04/19/2017	714.09	14.04
					04/10/2018	713.32	14.81
					10/23/2018	713.92	14.21
					04/22/2019	713.67	14.46
					10/30/2019	713.79	14.34
					04/21/2020	714.44	13.69
				04/27/2021	713.39	14.74	
				04/22/2022	714.22	13.91	
MW-22	728.42	725.88	707.88	25.54	10/18/2004	719.34	9.08
					12/01/2004	719.50	8.92
					01/11/2005	719.51	8.91
					02/08/2005	719.45	8.97
					03/09/2005	719.45	8.97
					04/19/2005	719.85	8.57
					07/06/2005	719.35	9.07
					10/18/2005	719.33	9.09
					01/10/2006	719.51	8.91
					04/19/2006	719.80	8.62
					07/19/2006	719.38	9.04
					08/28/2006	719.39	9.03
					10/24/2006	719.19	9.23
					03/08/2007	719.23	9.19
					04/25/2007	719.40	9.02
					10/09/2007	719.64	8.78
					04/09/2008	720.36	8.06
					10/20/2008	719.50	8.92
					04/20/2009	719.82	8.60
					09/15/2009	719.58	8.84
					10/07/2009	719.79	8.63
					04/06/2010	719.79	8.63
					10/04/2010	720.01	8.41
					01/18/2011	719.67	8.75
					04/11/2011	720.69	7.73
					07/13/2011	719.84	8.58
					10/03/2011	719.78	8.64
					10/10/2011	714.51	13.91
					10/14/2011	714.50	13.92
					10/20/2011	714.54	13.88
					11/17/2011	719.10	9.32
					01/04/2012	719.33	9.09
					04/23/2012	719.95	8.47
					06/26/2012	719.30	9.12
					09/13/2012	719.18	9.24
					01/28/2013	719.40	9.02
					04/23/2013	720.76	7.66
					07/16/2013	719.77	8.65
					10/15/2013	719.25	9.17
					04/29/2014	720.37	8.05
10/13/2014	719.51	8.91					
04/21/2015	719.76	8.66					
10/19/2015	719.44	8.98					
04/21/2016	720.08	8.34					
10/04/2016	719.83	8.59					
04/19/2017	719.74	8.68					
10/23/2017	718.50	9.92					
04/10/2018	719.05	9.37					
10/25/2018	719.89	8.53					
04/22/2019	720.53	7.89					
10/30/2019	720.03	8.39					
04/21/2020	720.20	8.22					
04/27/2021	719.51	8.91					
04/22/2022	720.24	8.18					

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PZ-22B	727.63	725.02	693.72	46.51	10/18/2004	711.82	15.81
					12/01/2004	712.10	15.53
					01/11/2005	712.21	15.42
					02/08/2005	712.32	15.31
					03/09/2005	712.40	15.23
					04/19/2005	712.53	15.10
					07/06/2005	711.95	15.68
					10/18/2005	711.79	15.84
					01/10/2006	712.11	15.52
					04/19/2006	712.85	14.78
					07/19/2006	711.58	16.05
					08/28/2006	711.23	16.40
					10/24/2006	711.23	16.40
					03/08/2007	711.69	15.94
					04/25/2007	711.90	15.73
					10/09/2007	712.25	15.38
					04/09/2008	712.77	14.86
					10/20/2008	711.90	15.73
					04/20/2009	712.59	15.04
					09/15/2009	710.91	16.72
					10/07/2009	711.82	15.81
					04/06/2010	712.55	15.08
					10/04/2010	712.37	15.26
					01/18/2011	712.15	15.48
					04/11/2011	713.39	14.24
					07/13/2011	712.67	14.96
					10/03/2011	713.29	14.34
					10/10/2011	712.88	14.75
					10/14/2011	712.87	14.76
					10/20/2011	712.55	15.08
					11/17/2011	712.76	14.87
					01/04/2012	712.80	14.83
04/23/2012	713.31	14.32					
06/26/2012	712.95	14.68					
09/12/2012	712.41	15.22					
04/23/2013	714.24	13.39					
07/16/2013	713.15	14.48					
10/15/2013	712.40	15.23					
04/29/2014	714.05	13.58					
10/13/2014	712.92	14.71					
04/21/2015	713.29	14.34					
10/19/2015	712.65	14.98					
04/21/2016	713.78	13.85					
10/04/2016	713.22	14.41					
04/19/2017	713.75	13.88					
04/10/2018	713.08	14.55					
10/23/2018	713.69	13.94					
04/22/2019	714.43	13.20					
10/30/2019	713.52	14.11					
04/21/2020	714.16	13.47					
04/27/2021	713.05	14.58					
04/22/2022	713.91	13.72					
MW-23	Well Installed 9/15/2008						
	723.65	724.10	712.60	16.05	10/20/2008	719.92	3.73
					02/19/2009	719.67	3.98
					04/20/2009	719.87	3.78
					09/15/2009	719.62	4.03
					Well surveyed 10/9/2009		
					10/08/2009	719.57	4.08
	723.65	724.07	712.60	16.08	11/12/2009	719.66	3.99
					04/07/2010	719.41	4.24
					10/05/2010	719.69	3.96
					01/18/2011	719.34	4.31
					04/12/2011	719.74	3.91
					07/13/2011	719.53	4.12
					10/04/2011	719.66	3.99
					10/10/2011	714.13	9.52
					10/14/2011	714.03	9.62
					10/20/2011	Not Accessible	
					11/17/2011	718.34	5.31
					01/04/2012	718.81	4.84
					04/24/2012	719.37	4.28
					06/26/2012	718.98	4.67
					09/12/2012	719.27	4.38
					01/28/2013	719.24	4.41
					04/23/2013	719.88	3.77
					07/16/2013	719.37	4.28
					10/15/2013	719.17	4.48
	723.90	724.07	712.60	16.08	04/29/2014	719.92	3.98
					05/14/2014	720.14	3.76
					10/13/2014	Not Accessible	
					01/28/2015	719.02	4.88
					04/22/2015	719.17	4.73

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MW-23, cont'd					07/14/2015	718.87	5.03	
					10/19/2015	719.44	4.46	
					01/07/2016	719.02	4.88	
					04/21/2016	719.54	4.36	
					07/14/2016	Not Accessible		
					10/04/2016	719.56	4.34	
					04/19/2017	719.44	4.46	
					07/12/2017	718.87	4.78	
		723.43	724.03		10/23/2017	718.25	5.18	
					01/22/2018	718.82	4.61	
					04/10/2018	Not accessible		
					07/26/2018	719.11	4.32	
					10/24/2018	719.51	3.92	
					04/22/2019	720.01	3.42	
					10/30/2019	719.75	3.68	
					04/20/2020	719.73	3.70	
					04/26/2021	718.95	4.48	
					04/21/2022	719.72	3.71	
	PZ-23	Well Installed 10/05/2009						
		723.56	723.94	703.94	24.62	10/08/2009	719.56	4.00
					11/12/2009	719.59	3.97	
					02/02/2010	719.28	4.28	
					04/07/2010	719.30	4.26	
					10/05/2010	719.59	3.97	
					01/18/2011	719.17	4.39	
					04/12/2011	719.67	3.89	
					07/13/2011	719.39	4.17	
					10/04/2011	719.50	4.06	
					10/10/2011	713.78	9.78	
					10/14/2011	713.76	9.80	
					10/20/2011	713.67	9.89	
					11/17/2011	718.14	5.42	
					01/04/2012	718.68	4.88	
					04/24/2012	719.18	4.38	
					06/26/2012	718.84	4.72	
					09/12/2012	718.96	4.60	
					01/29/2013	718.90	4.66	
					04/23/2013	719.88	3.68	
					07/17/2013	719.19	4.37	
					10/15/2013	718.67	4.89	
		723.56	723.94	703.94	24.62	04/29/2014	719.42	4.14
						05/12/2014	719.64	3.92
						05/14/2014	719.62	3.94
						07/21/2014	718.78	4.78
						10/13/2014	718.92	4.64
						01/28/2015	718.67	4.89
						04/22/2015	718.61	4.95
						07/14/2015	718.23	5.33
						10/20/2015	718.46	5.10
						01/07/2016	718.21	5.35
						04/21/2016	718.58	4.98
						07/14/2016	718.34	5.22
						10/04/2016	718.64	4.92
						01/08/2017	718.25	5.31
						04/19/2017	718.41	5.15
						07/12/2017	718.17	5.39
						10/23/2017	717.23	6.33
						01/22/2018	717.82	5.74
					04/11/2018	717.94	5.62	
					07/26/2018	717.99	5.57	
					10/24/2018	718.64	4.92	
					04/22/2019	718.86	4.70	
					10/30/2019	718.44	5.12	
					04/20/2020	718.64	4.92	
					04/26/2021	717.94	5.62	
					04/21/2022	718.42	5.14	
MW-24	Well Installed 1/14/2013							
	736.87	734.60	709.31	32.56	01/29/2013	718.33	18.54	
					04/23/2013	720.19	16.68	
					07/17/2013	718.43	18.44	
					10/15/2013	718.02	18.85	
					04/29/2014	719.79	17.08	
					10/14/2014	718.45	18.42	
					04/22/2015	719.27	17.60	
					10/20/2015	718.68	18.19	
					04/22/2016	720.41	16.46	
					10/05/2016	719.65	17.22	
					04/19/2017	720.42	16.45	
		736.71	734.38			10/23/2017	719.15	17.72
					04/11/2018	719.00	17.71	
					10/24/2018	719.76	16.95	

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Well	TOC <sup>A</sup> Elevation (feet) <sup>B</sup>	Ground Elevation (feet) <sup>B</sup>	Top of Screen Elevation (feet) <sup>B</sup>	Well Depth from TOC (feet)	Monitoring Date	Groundwater Elevation (feet) <sup>B</sup>	Depth to Groundwater (feet)
MW-24, cont'd					04/22/2019	720.76	15.95
					10/30/2019	720.20	16.51
					04/20/2020	720.82	15.89
					04/26/2021	719.96	16.75
					04/21/2022	720.59	16.12
MW-25					Well Installed 1/15/2013		
	730.30	727.73	709.05	26.25	01/28/2013	720.89	9.41
					04/23/2013	722.83	7.47
					07/16/2013	721.32	8.98
					10/15/2013	720.44	9.86
					04/29/2014	722.36	7.94
					10/14/2014	720.69	9.61
					04/21/2015	721.28	9.02
					10/20/2015	720.72	9.58
					04/21/2016	722.19	8.11
					10/05/2016	721.21	9.09
					04/19/2017	722.29	8.01
					10/23/2017	720.30	10.00
					04/10/2018	720.75	9.55
					10/24/2018	722.25	8.05
					04/22/2019	722.75	7.55
					10/30/2019	722.12	8.18
					04/20/2020	722.51	7.79
					04/26/2021	721.42	8.88
					04/21/2022	722.65	7.65
MW-26					Well Installed 04/06/2015		
	722.87	723.26	718.26	14.85	04/22/2015	712.07	10.80
					07/14/2015	712.07	10.80
					10/19/2015	712.51	10.36
					01/07/2016	712.13	10.74
					04/22/2016	712.61	10.26
					07/14/2016	711.84	11.03
					10/05/2016	717.56*	5.31*
					01/08/2017	712.23	10.64
					04/19/2017	712.49	10.38
					07/12/2017	712.09	10.78
					10/23/2017	711.90	10.97
					01/22/2018	712.12	10.75
					04/11/2018	712.22	10.65
					07/26/2018	711.90	10.97
					10/24/2018	712.35	10.52
					04/22/2019	713.44	9.43
					10/30/2019	712.33	10.54
					04/20/2020	713.06	9.81
					04/26/2021	712.14	10.73
					04/21/2022	712.74	10.13
PZ-26					Well Installed 04/15/2014		
	723.06	723.28	703.30	24.78	04/29/2014	712.64	10.42
					05/12/2014	712.81	10.25
					05/14/2014	712.75	10.31
					07/21/2014	711.68	11.38
					10/14/2014	711.51	11.55
					01/28/2015	711.76	11.30
					04/21/2015	712.42	10.64
					07/14/2015	711.76	11.30
					10/19/2015	711.99	11.07
					01/07/2016	712.04	11.02
					04/21/2016	712.07	10.99
					07/14/2016	712.37	10.69
					10/05/2016	713.40	9.66
					01/18/2017	712.23	10.83
					04/19/2017	712.61	10.45
					07/12/2017	711.94	11.12
					10/23/2017	710.64	12.42
					01/22/2018	710.60	12.46
					04/10/2018	712.23	10.83
					07/26/2018	711.67	11.39
					10/23/2018	712.08	10.98
					04/22/2019	713.37	9.69
					10/30/2019	712.85	10.21
					04/20/2020	714.96	8.10
					04/26/2021	721.16	1.90
					04/21/2022	715.96	7.10
MW-27					Well Installed 04/07/2015		
	722.76	723.03	720.03	12.73	04/22/2015	715.05	7.71
					07/14/2015	715.07	7.69
					10/20/2015	715.08	7.68
					01/07/2016	715.11	7.65
					04/22/2016	715.40	7.36
					07/14/2016	715.29	7.47



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Well	TOC <sup>A</sup> Elevation (feet) <sup>B</sup>	Ground Elevation (feet) <sup>B</sup>	Top of Screen Elevation (feet) <sup>B</sup>	Well Depth from TOC (feet)	Monitoring Date	Groundwater Elevation (feet) <sup>B</sup>	Depth to Groundwater (feet)
MW-27, cont'd					10/05/2016	715.22	7.54
					01/08/2017	715.15	7.61
					04/19/2017	715.36	7.40
					07/12/2017	715.28	7.48
					10/23/2017	715.09	7.67
					01/22/2018	715.04	7.72
					04/11/2018	715.46	7.30
					07/26/2018	715.31	7.45
					10/24/2018	715.19	7.57
					04/22/2019	718.88	3.88
					10/30/2019	715.48	7.28
					04/20/2020	715.91	6.85
					04/26/2021	715.66	7.10
				04/21/2022	716.01	6.75	
PZ-27	Well Installed 04/07/2015						
	722.69	723.00	704.00	23.69	04/22/2015	718.38	4.31
					07/14/2015	718.07	4.62
					10/20/2015	718.33	4.36
					01/07/2016	718.08	4.61
					04/22/2016	718.37	4.32
					07/14/2016	718.20	4.49
					10/05/2016	718.48	4.21
					01/08/2017	718.03	4.66
					04/19/2017	718.19	4.50
					07/12/2017	718.00	4.69
					10/23/2017	717.23	5.46
					01/22/2018	717.70	4.99
					04/11/2018	717.77	4.92
					07/26/2018	718.08	4.61
					10/24/2018	718.34	4.35
					04/22/2019	718.73	3.96
					10/30/2019	718.13	4.56
					04/20/2020	718.47	4.22
					04/26/2021	717.66	5.03
					04/21/2022	718.27	4.42
MW-28	Well Installed 04/06/2015						
	722.11	722.48	719.48	14.63	04/22/2015	717.16	4.95
					07/14/2015	716.06	6.05
					10/20/2015	716.48	5.63
					01/07/2016	716.52	5.59
					04/22/2016	717.25	4.86
					07/14/2016	716.43	5.68
					10/05/2016	716.80	5.31
					01/08/2017	716.75	5.36
					04/19/2017	717.13	4.98
					07/12/2017	716.37	5.74
					10/23/2017	715.92	6.19
					01/22/2018	716.79	5.32
					04/11/2018	716.79	5.32
					07/26/2018	716.55	5.56
					10/24/2018	717.09	5.02
					04/22/2019	717.51	4.60
					10/30/2019	717.18	4.93
					04/20/2020	717.75	4.36
					04/26/2021	717.01	5.10
					04/21/2022	717.37	4.74
PZ-28	Well Installed 04/06/2015						
	722.38	722.66	702.86	24.50	04/22/2015	716.23	6.15
					07/14/2015	712.90	9.48
					10/19/2015	712.82	9.56
					01/07/2016	713.09	9.29
					04/21/2016	713.15	9.23
					07/14/2016	712.78	9.60
					10/05/2016	712.72	9.66
					01/18/2017	712.82	9.56
					04/19/2017	714.28	8.10
					07/12/2017	712.67	9.71
					10/23/2017	712.26	10.12
					01/22/2018	Not Measured	
					04/10/2018	712.95	9.43
					07/26/2018	713.00	9.38
					10/23/2018	713.10	9.28
					04/22/2019	713.55	8.83
					10/30/2019	713.17	9.21
					04/20/2020	714.58	7.80
					04/26/2021	713.28	9.10
					04/21/2022	714.04	8.34

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Well	TOC <sup>A</sup> Elevation (feet) <sup>B</sup>	Ground Elevation (feet) <sup>B</sup>	Top of Screen Elevation (feet) <sup>B</sup>	Well Depth from TOC (feet)	Monitoring Date	Groundwater Elevation (feet) <sup>B</sup>	Depth to Groundwater (feet)
SG-3		724.12			04/23/2013	721.79	2.33
					07/16/2013	720.55	3.57
					10/15/2013	719.80	4.32
					04/29/2014	721.60	2.52
					05/12/2014	721.94	2.18
					05/14/2014	721.75	2.37
					07/21/2014	720.22	3.90
					10/13/2014	720.42	3.70
					01/28/2015	720.31	3.81
					04/21/2015	720.77	3.35
					07/14/2015	720.21	3.91
					10/19/2015	720.28	3.84
					01/07/2016	720.56	3.56
					04/21/2016	721.16	2.96
					07/14/2016	720.67	3.45
					10/04/2016	721.04	3.08
					01/08/2017	720.80	3.32
					04/19/2017	1.00	3.10
					07/12/2017	720.63	3.49
					10/23/2017	719.11	5.01
					01/22/2018	720.40	3.72
					04/10/2018	719.36	4.76
					07/26/2018	720.25	3.87
				10/23/2018	721.26	2.86	
				04/22/2019	722.99	1.13	
				10/30/2019	721.14	2.98	
				04/20/2020	722.00	2.12	
				04/26/2021	720.72	3.40	
				04/21/2022	721.59	2.53	
SG-4		715.36			04/21/2015	710.61	4.75
					07/14/2015	709.41	5.95
					09/09/2015	709.06	6.30
					10/19/2015	708.51	6.85
					01/07/2016	Not accessible	
					04/21/2016	711.25	4.11
					07/14/2016	709.62	5.74
					10/04/2016	710.01	5.35
					01/08/2017	710.04	5.32
					04/19/2017	710.63	4.73
					07/12/2017	709.91	5.45
					10/23/2017	709.89	5.47
					01/22/2018	709.85	5.51
					04/10/2018	709.83	5.53
					07/26/2018	709.72	5.64
					10/23/2018	711.33	4.03
					04/22/2019	712.07	3.29
					10/30/2019	711.12	4.24
					04/20/2020	711.78	3.58
					04/26/2021	709.81	5.55
				04/21/2022	711.31	4.05	

[JTB/RH 5/05; PAR/JTB 11/05; PAR/JTB 9/06; RJG/JTB 10/07; BGH/RMW 6/08; RJG/BGH 1/09; BGH/RJG 3/09; RMN/BGH 5/10; AMM/KJB 2/11; KJB/RJG 05/11; CJM/AMM 1/12; AMM/JW 5/12; AMM/ANS 7/12; AMM/RJG 10/12; RJG/ 3/13; ETO/RJG 5/13; PMH/NDK 9/13; ETE/NDK 10/13; U-ECK 06/14; U-KLT 1/29/15, C- PMH 2/15; U: KLT 11/12/15, C:PMH 11/18/15 ] [U: PMH 2/17, C: ANS 2/3/17 ; U: KLT 11/20/17, C:KJK 11/21/17; U-KLT 2/27/19, C- 3QW 2/27/19; U-KLT 4/10/20, C-MJM 4/13/20; U-KJS 8/21/21,C-AGC 8/4/21; U-KJS 7/26/22, C-LCA 11/28/22]

**Notes:**

- A: TOC-Top of Well Casing
  - B: Elevations relative to National Geodetic Vertical Datum.
  - C: Well drawdown due to slow recharge rate after well was purged / sampled.
  - D: TOC elevation was found to be incorrectly reported and was updated August 2011 by Natural Resource Technology, Inc. The TOC elevation at MW-2R was incorrectly entered on the table, this resulted in approximately 1-foot change in elevation. The error was tracked to a data table which contained a summary of post-construction survey data used to create Table 1. The error was corrected using data from the original post-construction survey drawing.
  - 1. MW-19 and MW-19S repaired October 27, 2006; surveyed by Martenson & Eisele May 11, 2007.
  - 2. MW-23 surveyed by Martenson & Eisele September 18, 2008.
  - 3. MW-23 and PZ-23 surveyed by Martenson & Eisele October 9, 2009.
  - 4. MW-24 and MW-25 surveyed by Martenson & Eisele January 30, 2013
  - 5. MW-23, PZ-23, MW-26, PZ-26, MW-27, PZ-27, MW-28, PZ-28, SG-3, and SG-4 were all surveyed/resurveyed by Martenson and Eisele April 4, 2015.
- \*Depth to water significantly deviates from normal measurement. Well under pressure prior to depth measurement.

**TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs**

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Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)															
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>	
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS	
<i>Enforcement Standard:</i>		5	700	800	2000	NS	9000	1000	NS	6	30	100	100	5	0.2	NS	
MW-02R	10/19/2004	710	260	12	110	1092	<12	<3.3	<2.0	<1.8	<1.2	--	<4.3	<2.4	<0.90	1092	
	11/30/2004	770	290	10	110	1180	<23	<6.6	<4.1	<3.7	<2.4	--	<8.6	<4.8	<1.8	1180	
	01/11/2005	650	250	11	100	1011	<23	<6.6	<4.1	<3.7	<2.4	--	<8.6	<4.8	<1.8	1011	
	02/08/2005	590	230	9.7	83	912.7	<23	--	--	<3.7	<2.4	--	--	--	--	912.7	
	03/08/2005	650	290	13	106	1059	--	--	--	--	--	--	--	--	--	--	1059
	04/18/2005	700	290	15	65	1070	--	--	--	--	--	--	--	--	--	--	1070
	07/05/2005	800	320	20	129	1269	--	--	--	--	--	--	--	--	--	--	1269
	10/17/2005	890	340	33	147	1410	--	--	--	--	--	--	--	--	--	--	1410
	01/10/2006	850	350	30	156	1386	--	--	--	--	--	--	--	--	--	--	1386
	04/19/2006	790	370	41	215	1416	--	--	--	--	--	--	--	--	--	--	1416
	07/19/2006	840	300	51	175	1366	--	--	--	--	--	--	--	--	--	--	1366
	10/24/2006	930	400	57	250	1637	--	--	--	--	--	--	--	--	--	--	1637
	04/25/2007	780	380	34	240	1434	--	--	--	--	--	--	--	--	--	--	1434
	10/08/2007	980	440	<27	270	1690	--	--	--	--	--	--	--	--	--	--	1690
	04/07/2008	658	372	36.1	285	1351.1	--	--	--	--	--	2280	--	--	--	--	3631.1
	10/20/2008	618	325	28.3	222.1	1193.4	--	--	--	--	--	1500	--	--	--	--	2693.4
	04/20/2009	638	305	28.8	217.7	1189.5	--	--	--	--	--	1430	--	--	--	--	2619.5
	10/07/2009	819	402	28.3	289	1538.3	--	--	--	--	--	1460	--	--	--	--	2998.3
	04/06/2010	680	298	32.5	220.4	1230.9	--	--	--	--	--	1240	--	--	--	--	2470.9
	10/04/2010	598	308	36.2	248	1190.2	--	--	--	--	--	1340	--	--	--	--	2530.2
	01/18/2011	732	365	33.2	242.2	1372.4	--	--	--	--	--	1210	--	--	--	--	2582.4
	04/11/2011	737	380	53.8	326	1496.8	--	--	--	--	--	2070	--	--	--	--	3566.8
	07/13/2011	528	196	30.4	91.7	846.1	--	--	--	--	--	1140	--	--	--	--	1986.1
	10/03/2011	602	278	30.4	205.8	1116.2	--	--	--	--	--	1150	--	--	--	--	2266.2
	01/04/2012	620	282	31.9	218.1	1152	--	--	--	--	--	1170	--	--	--	--	2322
	04/23/2012	568	267	29.4	180.6	1045	--	--	--	--	--	1070	--	--	--	--	2115
	Dup (QC-1)	04/23/2012	229	104	9.4	74.4	416.8	--	--	--	--	442	--	--	--	--	858.8
	06/26/2012	831	318	27.3	196.8	1373.1	--	--	--	--	--	1150	--	--	--	--	2523.1
	Dup (QC-1)	06/26/2012	847	353	29.4	249	1478.4	--	--	--	--	1170	--	--	--	--	2648.4
	09/12/2012	984	363	25.6	265	1637.6	--	--	--	--	--	1310	--	--	--	--	2947.6
	Dup (QC-1)	09/12/2012	719	375	23.6	274	1391.6	--	--	--	--	1220	--	--	--	--	2611.6
	01/28/2013	949	301	19.4	168.9	1438.3	--	--	--	--	--	1010	--	--	--	--	2448.3
	04/23/2013	578	269	37	205.2	1089.2	--	--	--	--	--	1240	--	--	--	--	2329.2
	07/16/2013	814	369	30.4	235.1	1448.5	--	--	--	--	--	1170	--	--	--	--	2618.5
10/15/2013	1500	493	36.3	349	2378.3	--	--	--	--	--	1540	--	--	--	--	3918.3	
04/29/2014	736	309	25.1	159.8	1229.9	--	--	--	--	--	805	--	--	--	--	2034.9	
10/13/2014	1040	446	17.1	221	1724.1	--	--	--	--	--	1110	--	--	--	--	2834.1	
04/21/2015	653	361	13.2	203.7	1230.9	--	--	--	--	--	668	--	--	--	--	1898.9	
10/19/2015	1030	433	20.7	251.6	1735.3	--	--	--	--	--	855	--	--	--	--	2590.3	
04/21/2016	422	223	28.7	163.5	837.2	--	--	--	--	--	784	--	--	--	--	1621.2	
10/04/2016	718	304	9.8	162.8	1194.6	--	--	--	--	--	621	--	--	--	--	1815.6	
04/19/2017	602	238	21.9	147.3	1009.2	--	--	--	--	--	503	--	--	--	--	1512.2	
04/19/2017	543	219	18.8	139.7	920.5	--	--	--	--	--	474	--	--	--	--	1394.5	
10/24/2017	890	305	10.8	143.3	1349.1	--	--	--	--	--	352	--	--	--	--	1701.1	
04/10/2018	35.0	<0.50	<0.50	4.3	39.3	--	--	--	--	--	6.3	--	--	--	--	45.6	
10/25/2018	398	197	23.5	134.2	752.7	--	--	--	--	--	490	--	--	--	--	1242.7	
04/22/2019	334	161	11.7	106.8	613.5	--	--	--	--	--	235	--	--	--	--	848.5	
10/31/2019	93.1	0.23	0.26	0.85	94.44	--	--	--	--	--	1.2	--	--	--	--	95.64	
04/21/2020	121	<0.32	<0.27	0.3	121.3	--	--	--	--	--	1.5	--	--	--	--	122.8	
04/27/2021	290	122	7.1	68.6	487.7	--	--	--	--	--	47.1	--	--	--	--	534.8	
04/22/2022	473	233	23.7	156	885.7	--	--	--	--	--	242	--	--	--	--	1127.7	
MW-08*	07/15/1996	<0.5	<0.5	<0.8	<1.9	<3.7	<1.4	<0.5	<0.4	<0.8	--	--	<0.6	--	--	<7.4	
	09/09/1997	<0.4	<0.4	<0.32	<1	<2.12	<3.3	<0.45	<0.29	<0.5	--	--	<0.23	--	--	<6.89	
	10/05/2010	<0.41	--	--	--	<0.41	--	--	--	--	<0.89	--	--	--	--	<1.3	
	01/18/2011	<0.41	--	--	--	<0.41	--	--	--	--	<0.89	--	--	--	--	<1.3	
	04/12/2011	<0.41	--	--	--	<0.41	--	--	--	--	<0.89	--	--	--	--	<1.3	
	07/13/2011	<0.41	--	--	--	<0.41	--	--	--	--	<0.89	--	--	--	--	<1.3	
	10/03/2011	<0.41	--	--	--	<0.41	--	--	--	--	<0.89	--	--	--	--	<1.3	
	01/04/2012	1.8	--	--	--	1.8	--	--	--	--	<0.89	--	--	--	--	1.8	
	04/23/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/20/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/21/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-09*	07/15/1996	<0.5	<0.5	<0.8	<1.9	<3.7	<1.4	<0.5	<0.4	<0.8	--	--	<0.6	--	--	<7.4	
	09/09/1997	<0.4	<0.4	<0.32	<1	<2.12	<3.3	<0.45	<0.29	<0.5	--	--	<0.23	--	--	<6.89	
	04/23/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/20/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/21/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

**TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs**

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)														
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS
<i>Enforcement Standard:</i>		5	700	800	2000	NS	9000	1000	NS	6	30	100	100	5	0.2	NS
MW-10*	07/15/1996	<0.5	<0.5	<0.8	<1.9	<3.7	<1.4	<0.5	<0.4	<b>11</b>	--	--	<0.6	--	--	11
	09/09/1997	<0.4	<0.4	<0.32	<1	<2.12	<3.3	<0.45	<0.29	<0.5	--	--	<0.23	--	--	<6.89
	04/23/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/20/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Well abandoned	07/16/2021	<0.30	<0.33	<0.29	<1.05	<1.97	--	--	--	--	--	<1.1	--	--	--
MW-12R	10/21/2004	<b>15</b>	66	6.3	61	148.3	4.6	<0.66	<0.41	<0.37	0.59	--	<0.86	<0.48	<0.18	153.49
	11/30/2004	<b>12</b>	47	3.9	39	101.9	9.8	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	111.7
	01/13/2005	<b>11</b>	39	3	33	86	6.6	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	92.6
	02/10/2005	<b>11</b>	43	4	34	92	<12	--	--	<1.8	<1.2	--	--	--	--	92
	03/08/2005	<b>8.9</b>	37	<3.4	30	75.9	--	--	--	--	--	--	--	--	--	75.9
	04/20/2005	<b>9.4</b>	29	<3.4	12	50.4	--	--	--	--	--	--	--	--	--	50.4
	07/07/2005	<b>7.2</b>	25	<3.4	11	43.2	--	--	--	--	--	--	--	--	--	43.2
	10/19/2005	<b>7</b>	21	<3.4	9.3	37.3	--	--	--	--	--	--	--	--	--	37.3
	01/12/2006	<b>5.9</b>	24	2	17.1	49	--	--	--	--	--	--	--	--	--	49
	04/20/2006	<b>9.8</b>	32	3.6	24.9	70.3	--	--	--	--	--	--	--	--	--	70.3
	07/20/2006	<b>8.7</b>	25	<3.4	9	42.7	--	--	--	--	--	--	--	--	--	42.7
	10/23/2006	<b>5.4</b>	--	--	--	5.4	--	--	--	--	--	--	--	--	--	5.4
	04/26/2007	<b>10</b>	--	--	--	10	--	--	--	--	--	--	--	--	--	10
	10/09/2007	<b>5</b>	--	--	--	5	--	--	--	--	--	--	--	--	--	5
	04/08/2008	<b>20.8</b>	--	--	--	20.8	--	--	--	--	--	--	--	--	--	20.8
	10/20/2008	<b>5.2</b>	--	--	--	5.2	--	--	--	--	--	--	--	--	--	5.2
	04/21/2009	<b>26</b>	--	--	--	26	--	--	--	--	--	<b>1130</b>	--	--	--	1156
	10/08/2009	<b>8.8</b>	--	--	--	8.8	--	--	--	--	--	<b>291</b>	--	--	--	299.8
	04/07/2010	<b>27.1</b>	75	9.9	57	169	--	--	--	--	--	<b>968</b>	--	--	--	1137
	10/04/2010	<b>27.2</b>	--	--	--	27.2	--	--	--	--	--	<b>790</b>	--	--	--	817.2
	01/18/2011	<b>22.2</b>	--	--	--	22.2	--	--	--	--	--	<b>568</b>	--	--	--	590.2
	04/12/2011	<b>56.4</b>	--	--	--	56.4	--	--	--	--	--	<b>2090</b>	--	--	--	2146.4
	07/13/2011	<b>46.6</b>	89.7	14.3	72.6	223.2	--	--	--	--	--	<b>1790</b>	--	--	--	2013.2
	07/13/2011	<b>52.3</b>	99.6	15.1	39.6	206.6	--	--	--	--	--	<b>1870</b>	--	--	--	2076.6
	10/03/2011	<b>19.4</b>	--	--	--	19.4	--	--	--	--	--	<b>554</b>	--	--	--	573.4
	01/04/2012	<b>30.6</b>	--	--	--	30.6	--	--	--	--	--	<b>799</b>	--	--	--	829.6
	04/24/2012	<b>36.4</b>	--	--	--	36.4	--	--	--	--	--	<b>885</b>	--	--	--	921.4
	06/26/2012	<b>22.9</b>	--	--	--	22.9	--	--	--	--	--	<b>588</b>	--	--	--	610.9
	09/12/2012	<b>19.7</b>	--	--	--	19.7	--	--	--	--	--	<b>357</b>	--	--	--	376.7
	01/28/2013	<b>19.6</b>	--	--	--	19.6	--	--	--	--	--	<b>453</b>	--	--	--	472.6
	04/24/2013	<b>36.3</b>	--	--	--	36.3	--	--	--	--	--	<b>1350</b>	--	--	--	1386.3
	07/16/2013	<b>24</b>	--	--	--	24	--	--	--	--	--	<b>673</b>	--	--	--	697
	10/15/2013	<b>16.3</b>	--	--	--	16.3	--	--	--	--	--	<b>402</b>	--	--	--	418.3
04/29/2014	<b>30.2</b>	68.7	9.6	46	154.5	--	--	--	--	--	<b>1000</b>	--	--	--	1154.5	
10/13/2014	<b>12.5</b>	28.3	<5.0	<10	40.8	--	--	--	--	--	<b>515</b>	--	--	--	555.8	
04/21/2015	<b>13.9</b>	44.1	6.2	31.8	96	--	--	--	--	--	<b>487</b>	--	--	--	583	
10/20/2015	<b>14.7</b>	43	6.6	34.1	98.4	--	--	--	--	--	<b>530</b>	--	--	--	628.4	
04/21/2016	<b>26.7</b>	73.2	10.8	57.2	167.9	--	--	--	--	--	<b>961</b>	--	--	--	1128.9	
10/04/2016	<b>11</b>	43.4	5.9	39.1	99.4	--	--	--	--	--	<b>758</b>	--	--	--	857.4	
04/19/2017	<b>44.3</b>	85	12.9	66.8	209	--	--	--	--	--	<b>1110</b>	--	--	--	1319	
10/24/2017	<b>14.8</b>	36.1	6.4	24.7	82	--	--	--	--	--	<b>604</b>	--	--	--	686	
10/24/2017	<b>12.2</b>	33.5	<5.0	28.8	74.5	--	--	--	--	--	<b>658</b>	--	--	--	732.5	
04/10/2018	<b>5.9</b>	24.9	3.1	20.6	54.5	--	--	--	--	--	<b>372</b>	--	--	--	426.5	
10/24/2018	<b>29.8</b>	70.6	12.8	60.1	173.3	--	--	--	--	--	<b>1070</b>	--	--	--	1243.3	
04/22/2019	<b>19.4</b>	67	10.5	60.4	157.3	--	--	--	--	--	<b>966</b>	--	--	--	1123.3	
10/31/2019	<b>30</b>	74.7	11.3	60.1	176.1	--	--	--	--	--	<b>1110</b>	--	--	--	1286.1	
04/20/2020	<b>37.8</b>	98.1	13.6	75.4	224.9	--	--	--	--	--	<b>1090</b>	--	--	--	1314.9	
04/26/2021	<b>30.1</b>	67.9	9.8	54.9	162.7	--	--	--	--	--	<b>950</b>	--	--	--	1112.7	
04/21/2022	<b>29.9</b>	68.4	12.3	53.8	164.4	--	--	--	--	--	<b>1050</b>	--	--	--	1214.4	

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Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)															
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>	
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS	
<i>Enforcement Standard:</i>		<b>5</b>	<b>700</b>	<b>800</b>	<b>2000</b>	NS	<b>9000</b>	<b>1000</b>	NS	<b>6</b>	<b>30</b>	<b>100</b>	<b>100</b>	<b>5</b>	<b>0.2</b>	NS	
MW-13R	10/20/2004	<b>2500</b>	350	54	300	3204	<58	<16	<10	<9.2	<6.0	--	<22	<b>22</b>	<4.5	3226	
	12/02/2004	<b>2700</b>	410	48	340	3498	<58	<16	<10	<9.2	<6.0	--	<22	<12	<4.5	3498	
	01/12/2005	<b>3000</b>	430	42	340	3812	<58	<16	<10	<9.2	<6	--	<22	<12	<4.5	3812	
	02/09/2005	<b>2200</b>	350	<34	258	2808	<120	--	--	<18	<12	--	--	<24	<9	2808	
	03/10/2005	<b>2300</b>	360	29	270	2959	--	--	--	--	--	--	--	--	--	2959	
	04/19/2005	<b>2200</b>	310	<34	237	2747	--	--	--	--	--	--	--	--	--	2747	
	07/06/2005	<b>2200</b>	320	<34	228	2748	--	--	--	--	--	--	--	--	--	2748	
	10/19/2005	<b>2100</b>	290	17	153	2560	--	--	--	--	--	--	--	--	--	2560	
	01/10/2006	<b>2400</b>	340	42	227	3009	--	--	--	--	--	--	--	--	--	3009	
	04/19/2006	<b>3700</b>	500	160	560	4920	--	--	--	--	--	--	--	--	--	4920	
	07/19/2006	<b>3300</b>	440	100	360	4200	--	--	--	--	--	--	--	--	--	4200	
	10/24/2006	<b>1700</b>	250	28	144	2122	--	--	--	--	--	--	--	--	--	2122	
	Dup (QC-1)	04/25/2007	<b>3700</b>	580	240	820	5340	--	--	--	--	--	--	--	--	--	5340
		04/25/2007	<b>3600</b>	560	230	780	5170	--	--	--	--	--	--	--	--	--	5170
		10/08/2007	<b>2000</b>	290	29	186	2505	--	--	--	--	--	--	--	--	--	2505
		04/08/2008	<b>2260</b>	362	234	552	3408	--	--	--	--	--	<b>3180</b>	--	--	--	6588
	10/20/2008	<b>1800</b>	334	29.7	238	2401.7	--	--	--	--	--	<b>1850</b>	238	--	--	4251.7	
	04/21/2009	<b>2020</b>	406	253	643	3322	--	--	--	--	--	<b>2930</b>	--	--	--	6252	
	10/07/2009	<b>2190</b>	399	34.8	304	2927.8	--	--	--	--	--	<b>2120</b>	--	--	--	5047.8	
	04/06/2010	<b>3440</b>	492	245	707	4884	--	--	--	--	--	<b>3270</b>	--	--	--	8154	
	10/04/2010	<b>2710</b>	536	293	759	4298	--	--	--	--	--	<b>3890</b>	--	--	--	8188	
	Dup (QC-1)	01/18/2011	<b>3920</b>	<b>724</b>	372	1080	6096	--	--	--	--	<b>4710</b>	--	--	--	10806	
		01/18/2011	<b>3680</b>	664	332	981	5657	--	--	--	--	<b>4840</b>	--	--	--	10497	
		04/11/2011	<b>2010</b>	504	408	931	3853	--	--	--	--	<b>4750</b>	--	--	--	8603	
		07/13/2011	<b>3100</b>	514	441	825	4880	--	--	--	--	<b>5500</b>	--	--	--	10380	
	10/03/2011	<b>1970</b>	406	140	516	3032	--	--	--	--	<b>3440</b>	--	--	--	6472		
	Dup (QC-1)	01/04/2012	<b>3150</b>	632	452	1046	5280	--	--	--	--	<b>4950</b>	--	--	--	10230	
		01/04/2012	<b>3070</b>	605	432	1016	5123	--	--	--	--	<b>4840</b>	--	--	--	9963	
		04/23/2012	<b>4240</b>	668	590	1175	6673	--	--	--	--	<b>6520</b>	--	--	--	13193	
		06/26/2012	<b>4710</b>	690	418	1175	6993	--	--	--	--	<b>4600</b>	--	--	--	11593	
	09/13/2012	<b>2640</b>	417	78.2	460	3595.2	--	--	--	--	<b>3070</b>	--	--	--	6665.2		
	01/28/2013	<b>4450</b>	570	477	669	6166	--	--	--	--	<b>5600</b>	--	--	--	11766		
	Dup (QC-1)	04/23/2013	<b>2180</b>	511	469	989	4149	--	--	--	--	<b>4900</b>	--	--	--	9049	
		04/23/2013	<b>1200</b>	276	277	523	2276	--	--	--	--	<b>2760</b>	--	--	--	5036	
		07/16/2013	<b>3150</b>	557	496	<b>3792</b>	7995	--	--	--	--	<b>4820</b>	--	--	--	12815	
		10/15/2013	<b>3230</b>	530	103	589	4452	--	--	--	--	<b>4250</b>	--	--	--	8702	
	Dup (QC-1)	04/29/2014	<b>1780</b>	403	381	775	3339	--	--	--	--	<b>4630</b>	--	--	--	7969	
		04/29/2014	<b>1430</b>	435	376	837	3078	--	--	--	--	<b>4540</b>	--	--	--	7618	
		10/13/2014	<b>2740</b>	438	112	341.9	3631.9	--	--	--	--	<b>4390</b>	--	--	--	8021.9	
		04/21/2015	<b>1190</b>	424	280	746	2640	--	--	--	--	<b>4330</b>	--	--	--	6970	
	10/20/2015	<b>1930</b>	463	135	601	3129	--	--	--	--	<b>4700</b>	--	--	--	7829		
	04/21/2016	<b>1090</b>	345	251	553	2239	--	--	--	--	<b>3240</b>	--	--	--	5479		
	10/04/2016	<b>1130</b>	353	107	446	2036	--	--	--	--	<b>4300</b>	--	--	--	6336		
	04/19/2017	<b>2390</b>	459	438	922	4209	--	--	--	--	<b>4900</b>	--	--	--	9109		
	10/24/2017	<b>1320</b>	277	97.5	300	1994.5	--	--	--	--	<b>2970</b>	--	--	--	4964.5		
	Dup (QC-1)	04/10/2018	<b>1070</b>	300	85.9	324	1779.9	--	--	--	--	<b>2520</b>	--	--	--	4299.9	
		04/10/2018	<b>1050</b>	290	80.4	315	1735.4	--	--	--	--	<b>2630</b>	--	--	--	4365.4	
		10/24/2018	<b>1530</b>	411	360	711	3012	--	--	--	--	<b>4650</b>	--	--	--	7662	
	Dup (QC-2)	10/24/2018	<b>2010</b>	505	461	897	3873	--	--	--	--	<b>5030</b>	--	--	--	8903	
		04/23/2019	<b>1640</b>	398	347	664	3049	--	--	--	--	<b>3960</b>	--	--	--	7009	
	Dup (QC-2)	04/23/2019	<b>1920</b>	446	404	774	3544	--	--	--	--	<b>4170</b>	--	--	--	7714	
		10/31/2019	<b>1260</b>	423	298	629	2610	--	--	--	--	<b>5620</b>	--	--	--	8230	
Dup (QC-2)	10/31/2019	<b>1270</b>	431	281	633	2615	--	--	--	--	<b>5180</b>	--	--	--	7795		
	04/20/2020	<b>1250</b>	413	302	644	2609	--	--	--	--	<b>3840</b>	--	--	--	6449		
Dup (QC-2)	04/20/2020	<b>1310</b>	418	304	644	2676	--	--	--	--	<b>3870</b>	--	--	--	6546		
	04/26/2021	<b>6480</b>	<b>1030</b>	<b>1120</b>	<b>2012</b>	10642	--	--	--	--	<b>8380</b>	--	--	--	19022		
Dup (QC-2)	04/26/2021	<b>6940</b>	<b>1110</b>	<b>1260</b>	<b>2116</b>	11426	--	--	--	--	<b>8990</b>	--	--	--	20416		
	04/21/2022	<b>2390</b>	545	470	946	4351	--	--	--	--	<b>4900</b>	--	--	--	9251		
Dup (QC-2)	04/21/2022	<b>2480</b>	565	522	1030	4597	--	--	--	--	<b>5310</b>	--	--	--	9907		



**TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs**

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)															
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>	
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS	
<b>Enforcement Standard:</b>		<b>5</b>	<b>700</b>	<b>800</b>	<b>2000</b>	NS	<b>9000</b>	<b>1000</b>	NS	<b>6</b>	<b>30</b>	<b>100</b>	<b>100</b>	<b>5</b>	<b>0.2</b>	NS	
MW-20	10/20/2004	490	680	170	860	2200	<12	<3.3	<2.0	<1.8	<1.2	--	<4.3	<2.4	<0.90	2200	
	11/30/2004	1900	690	370	870	3830	<58	<16	<10	<9.2	<6	--	<22	<12	<4.5	3830	
	01/11/2005	2100	640	580	840	4160	<58	<16	<10	<9.2	<6	--	<22	<12	<4.5	4160	
	02/08/2005	1500	650	450	860	3460	<120	--	--	<18	<12	--	--	--	--	3460	
	03/09/2005	2000	720	600	880	4200	<230	--	--	--	--	--	--	--	--	4200	
	04/18/2005	2500	700	850	910	4960	--	--	--	--	--	--	--	--	--	4960	
	07/05/2005	890	500	280	550	2220	--	--	--	--	--	--	--	--	--	2220	
	10/17/2005	1300	470	310	510	2590	--	--	--	--	--	--	--	--	--	2590	
	01/10/2006	3700	710	1200	1000	6610	--	--	--	--	--	--	--	--	--	6610	
	04/19/2006	3400	660	1200	1160	6420	--	--	--	--	--	--	--	--	--	6420	
	07/20/2006	3000	470	1200	830	5500	--	--	--	--	--	--	--	--	--	5500	
	10/24/2006	2800	610	630	840	4880	--	--	--	--	--	--	--	--	--	4880	
	Dup (QC-1)	10/24/2006	2700	650	700	990	5040	--	--	--	--	--	--	--	--	5040	
		04/25/2007	3400	880	880	1120	6280	--	--	--	--	--	--	--	--	6280	
		10/08/2007	3100	880	800	1170	5950	--	--	--	--	--	--	--	--	5950	
	04/07/2008	3020	779	1040	1179	6018	--	--	--	--	--	6720	--	--	--	12738	
	10/20/2008	2740	866	956	1243	5805	--	--	--	--	--	7350	--	--	--	13155	
	Dup (QC-1)	04/20/2009	3280	872	837	1163	6152	--	--	--	--	--	6620	--	--	--	12772
		04/20/2009	2920	771	742	1020	5453	--	--	--	--	--	5670	--	--	--	11123
		10/07/2009	2890	878	841	1139	5748	--	--	--	--	--	6290	--	--	--	12038
	Dup (QC-1)	04/06/2010	3660	1020	997	1299	6976	--	--	--	--	--	7510	--	--	--	14486
		04/06/2010	3510	982	953	1260	6705	--	--	--	--	--	7300	--	--	--	14005
	Dup (QC-1)	10/04/2010	3250	957	1050	1191	6448	--	--	--	--	--	6770	--	--	--	13218
		10/04/2010	3150	837	958	987	5932	--	--	--	--	--	6660	--	--	--	12592
	Dup (QC-1)	04/11/2011	3140	1020	1100	1329	6589	--	--	--	--	--	8270	--	--	--	14859
		10/03/2011	2500	759	807	1033	5099	--	--	--	--	--	6170	--	--	--	11269
		10/03/2011	2500	767	807	956	5030	--	--	--	--	--	6000	--	--	--	11030
		04/23/2012	2460	794	899	1076	5229	--	--	--	--	--	7280	--	--	--	12509
	06/26/2012	2650	702	846	789	4987	--	--	--	--	--	5260	--	--	--	10247	
	09/12/2012	3000	870	810	1139	5819	--	--	--	--	--	6900	--	--	--	12719	
	01/28/2013	2950	785	963	584	5282	--	--	--	--	--	7760	--	--	--	13042	
	04/23/2013	2430	823	975	643	4871	--	--	--	--	--	6540	--	--	--	11411	
	07/16/2013	2050	698	872	955	4575	--	--	--	--	--	5680	--	--	--	10255	
	10/15/2013	2250	715	795	568	4328	--	--	--	--	--	5520	--	--	--	9848	
	04/29/2014	2470	841	986	1100	5397	--	--	--	--	--	7420	--	--	--	12817	
	10/13/2014	2810	878	1150	1088	5926	--	--	--	--	--	7290	--	--	--	13216	
	04/21/2015	2160	791	971	943	4865	--	--	--	--	--	6290	--	--	--	11155	
	10/19/2015	2180	822	950	1132	5084	--	--	--	--	--	7310	--	--	--	12394	
	04/21/2016	1780	616	822	853	4071	--	--	--	--	--	4730	--	--	--	8801	
	10/04/2016	1560	537	767	844	3708	--	--	--	--	--	5260	--	--	--	8968	
04/19/2017	2080	606	930	939	4555	--	--	--	--	--	5660	--	--	--	10215		
10/24/2017	1750	457	787	695	3689	--	--	--	--	--	4370	--	--	--	8059		
04/10/2018	1750	712	752	957	4171	--	--	--	--	--	4760	--	--	--	8931		
10/25/2018	1890	693	1030	1060	4673	--	--	--	--	--	5450	--	--	--	10123		
04/23/2019	1550	480	850	858	3738	--	--	--	--	--	3650	--	--	--	7388		
10/31/2019	1690	582	1000	960	4232	--	--	--	--	--	5170	--	--	--	9402		
04/21/2020	1450	494	1010	911	3865	--	--	--	--	--	2860	--	--	--	6725		
04/27/2021	861	350	646	650	2507	--	--	--	--	--	2110	--	--	--	4617		
04/22/2022	890	321	580	551	2342	--	--	--	--	--	1060	--	--	--	3402		





**TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs**

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 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)															
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>	
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS	
<b>Enforcement Standard:</b>		<b>5</b>	<b>700</b>	<b>800</b>	<b>2000</b>	<b>NS</b>	<b>9000</b>	<b>1000</b>	<b>NS</b>	<b>6</b>	<b>30</b>	<b>100</b>	<b>100</b>	<b>5</b>	<b>0.2</b>	<b>NS</b>	
MW-22	10/18/2004	2700	480	<17	190	3370	<58	<16	<10	<9.2	<6.0	--	<22	<12	<4.5	3370	
	12/01/2004	2600	440	<34	160	3200	<120	<33	<20	<18	<12	--	<43	<24	<9	3200	
	01/11/2005	2700	480	<34	170	3350	<120	<33	<20	<18	<12	--	<43	<24	<9	3350	
	02/08/2005	2600	480	<17	158	3238	<58	--	--	<9.2	<6.0	--	--	--	--	3238	
	03/09/2005	2600	510	16	169	3295	--	--	--	--	--	--	--	--	--	3295	
	04/19/2005	2900	490	<34	160	3550	--	--	--	--	--	--	--	--	--	3550	
	07/06/2005	2900	570	<34	210	3680	--	--	--	--	--	--	--	--	--	3680	
	10/18/2005	3300	600	<34	220	4120	--	--	--	--	--	--	--	--	--	4120	
	01/10/2006	3300	680	<17	250	4230	--	--	--	--	--	--	--	--	--	4230	
	04/19/2006	3400	680	<34	230	4310	--	--	--	--	--	--	--	--	--	4310	
	07/19/2006	3700	760	<34	242	4702	--	--	--	--	--	--	--	--	--	4702	
	10/24/2006	3500	690	<67	100	4290	--	--	--	--	--	--	--	--	--	4290	
	04/25/2007	2900	580	<17	187	3667	--	--	--	--	--	--	--	--	--	3667	
	Dup (QC-1)	10/09/2007	3000	590	<34	175	3765	--	--	--	--	--	--	--	--	3765	
		10/09/2007	2800	550	<34	174	3524	--	--	--	--	--	--	--	--	3524	
	Dup (QC-1)	04/09/2008	2300	512	20.2	165.9	2998.1	--	--	--	--	2370	--	--	--	5368.1	
		04/09/2008	2460	542	45.4	190.4	3237.8	--	--	--	--	2680	--	--	--	5917.8	
	Dup (QC-1)	10/21/2008	2050	543	<67	<180	2593	--	--	--	--	3930	--	--	--	6523	
		10/21/2008	2150	564	<33.5	206.2	2920.2	--	--	--	--	2800	--	--	--	5720.2	
	04/20/2009	1980	524	<13.4	177.7	2681.7	--	--	--	--	2220	--	--	--	4901.7		
	10/07/2009	1960	538	<16.8	162.9	2660.9	--	--	--	--	2340	--	--	--	5000.9		
	04/06/2010	2040	532	<16.8	146.7	2718.7	--	--	--	--	2290	--	--	--	5008.7		
	10/04/2010	2190	524	<16.8	120.4	2834.4	--	--	--	--	2670	--	--	--	5504.4		
	Dup (QC-1)	04/11/2011	1920	601	<16.8	160.3	2681.3	--	--	--	--	3270	--	--	--	5951.3	
		04/11/2011	1730	535	<16.8	149.6	2414.6	--	--	--	--	2650	--	--	--	5064.6	
	10/03/2011	1970	445	<16.8	87.9	2502.9	--	--	--	--	2220	--	--	--	4722.9		
	04/23/2012	1600	458	<16.8	33.3	2091.3	--	--	--	--	2110	--	--	--	4201.3		
	06/26/2012	1820	474	<16.8	23	2317	--	--	--	--	1470	--	--	--	3787		
	09/13/2012	2070	452	<16.8	33.1	2555.1	--	--	--	--	1750	--	--	--	4305.1		
	01/28/2013	2230	481	<16.8	25.9	2736.9	--	--	--	--	2320	--	--	--	5056.9		
	04/23/2013	1840	509	<11.0	47.5	2396.5	--	--	--	--	1850	--	--	--	4246.5		
	Dup (QC-1)	07/16/2013	1810	524	<11.0	43.1	2377.1	--	--	--	--	2400	--	--	--	4777.1	
		07/16/2013	1670	520	<8.8	78.5	2268.5	--	--	--	--	2400	--	--	--	4668.5	
	10/15/2013	2630	574	<11.0	105.4	3309.4	--	--	--	--	2890	--	--	--	6199.4		
	04/30/2014	1860	454	<12.5	26.5	2340.5	--	--	--	--	2500	--	--	--	4840.5		
	10/13/2014	2450	522	<12.5	<25	2972	--	--	--	--	3440	--	--	--	6412		
04/21/2015	1690	444	<12.5	<25.0	2134	--	--	--	--	2170	--	--	--	4304			
10/19/2015	1450	432	<12.5	35.4	1917.4	--	--	--	--	2570	--	--	--	4487.4			
Dup (QC-1)	04/21/2016	1310	399	<12.5	32.5	1741.5	--	--	--	--	1710	--	--	--	3451.5		
	04/21/2016	1430	472	<10	70.1	1972.1	--	--	--	--	2220	--	--	--	4192.1		
10/04/2016	1380	409	<12.5	38.1	1827.1	--	--	--	--	2070	--	--	--	3897.1			
04/19/2017	1770	489	<12.5	77.7	2336.7	--	--	--	--	2660	--	--	--	4996.7			
10/24/2017	1860	368	<12.5	26.5	2254.5	--	--	--	--	2050	--	--	--	4304.5			
04/10/2018	1690	405	<12.5	30.0	2125	--	--	--	--	1930	--	--	--	4055			
10/25/2018	1370	332	<6.9	54	1756	--	--	--	--	1810	--	--	--	3566			
04/23/2019	1690	417	5.5	56.9	2169.4	--	--	--	--	1930	--	--	--	4099.4			
10/31/2019	1400	349	<4.3	45.4	1794.4	--	--	--	--	1910	--	--	--	3704.4			
04/21/2020	1280	206	<6.7	30.7	1516.7	--	--	--	--	897	--	--	--	2413.7			
04/27/2021	1120	358	<7.2	63	1541	--	--	--	--	2870	--	--	--	4411			
04/22/2022	1100	372	8.6	71.6	1552.2	--	--	--	--	2720	--	--	--	4272.2			
MW-23	10/21/2008	<0.41	<0.54	0.94	<1.8	0.94	--	--	--	--	3.3	--	--	--	4.24		
	02/19/2009	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	1.1	--	--	--	1.1		
	04/21/2009	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	1.2	--	--	--	1.2		
	Dup (QC-1)	10/08/2009	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	<0.41	<1.3	<0.24	0.097	<0.86	<0.48	<0.18	0.097
		10/08/2009	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	<0.41	<1.3	<0.24	1.1	<0.86	<0.48	<0.18	1.1
	11/12/2009	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	<0.41	<1.3	<0.24	<0.89	<0.86	<0.48	<0.18	<7.78	
	04/07/2010	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	<0.89	--	--	--	--	<4.31	
	04/24/2012	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	<0.89	--	--	--	--	<4.31	
	10/24/2018	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	<1.2	--	--	--	--	<2.57	
	04/23/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/20/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/21/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	



TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs

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WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
APPLETON, WI

Table with columns: Sample Location, Sample Date, and Volatile Organic Compounds (VOCs-µg/L). Rows include data for MW-24, MW-25, and MW-26 across various dates from 2013 to 2022. Includes preventive action and enforcement standards.



**TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs**

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)														
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS
<i>Enforcement Standard:</i>		5	700	800	2000	NS	9000	1000	NS	6	30	100	100	5	0.2	NS
MW-27	04/22/2015	207	47.8	2.1	13.5	270.4	--	--	--	--	382	--	--	--	--	652.4
	07/14/2015	474	91.2	2.2	20.5	587.9	--	--	<2.0	<10.0	<2.0	633	<2.0	<1.3	<0.70	1220.9
	07/14/2015	436	80.1	<5.0	9.2	525.3	--	--	<5.0	<25.0	<5.0	615	<5.0	<3.3	<1.8	1140.3
	10/20/2015	404	63.1	2.1	15.8	485	--	--	<2.0	<10.0	<2.0	691	<2.0	<1.3	<0.70	1176
	01/07/2016	526	113	3.8	27	669.8	--	--	--	--	--	734	--	--	--	1403.8
	04/22/2016	556	107	4.1	24	691.1	--	--	--	--	--	605	--	--	--	1296.1
	07/14/2016	597	115	2.8	26.7	741.5	--	--	--	--	--	894	--	--	--	1635.5
	07/14/2016	597	121	<5	31.8	749.8	--	--	--	--	--	998	--	--	--	1747.8
	10/05/2016	560	111	<2.5	22.9	693.9	--	--	--	--	--	1100	--	--	--	1793.9
	01/18/2017	529	118	2.8	25.8	675.6	--	--	--	--	--	828	--	--	--	1503.6
	04/20/2017	569	94.4	2.8	23.3	689.5	--	--	--	--	--	620	--	--	--	1309.5
	07/12/2017	420	88.5	<2.5	21.4	529.9	--	--	--	--	--	727	--	--	--	1256.9
	01/22/2018	359	72.3	<2.5	17.6	448.9	--	--	--	--	--	599	--	--	--	1047.9
	04/12/2018	342	54.6	<2.5	14.7	411.3	--	--	--	--	--	467	--	--	--	878.3
	07/26/2018	458	64.9	1.5	17.3	553.84	--	--	--	--	--	671	--	--	--	1224.8
	07/26/2018	450	62.9	1.5	16	530.4	--	--	--	--	--	660	--	--	--	1190.4
	10/24/2018	357	48.3	<1.7	7.1	412.4	--	--	--	--	--	468	--	--	--	880.4
	04/22/2019	258	43.3	2.1	12.1	315.5	--	--	--	--	--	339	--	--	--	654.5
	10/30/2019	437	78.9	1.7	18.4	536	--	--	--	--	--	853	--	--	--	1389
	04/20/2020	335	67.2	1.8	13.4	417.4	--	--	--	--	--	381	--	--	--	798.4
	04/26/2021	285	70.2	1.9	17.1	374.2	--	--	--	--	--	523	--	--	--	897.2
	04/21/2022	13.6	2.8	<0.29	0.41	16.81	--	--	--	--	--	14.9	--	--	--	31.71
MW-28	04/22/2015	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	<2.5	--	--	--	--	<5
	07/14/2015	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	<0.50	<0.50	<2.5	<0.50	<0.33	<0.18	--	<9.51
	10/20/2015	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	<0.50	<2.5	<0.50	<2.5	<0.33	<0.18	--	<9.51
	01/07/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	01/07/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	04/22/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	07/14/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	10/04/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	01/18/2017	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	01/18/2017	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	04/20/2017	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	07/12/2017	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	10/23/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/22/2018	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5.0
	01/22/2018	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5.0
	04/12/2018	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5.0
	07/26/2018	<0.25	<0.22	<0.17	<0.73	<1.4	--	--	--	--	--	<1.2	--	--	--	<3.97
	10/24/2018	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	04/22/2019	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	10/30/2019	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	04/20/2020	<0.25	<0.32	<0.27	<0.73	<1.57	--	--	--	--	--	<1.2	--	--	--	<2.77
	04/26/2021	<0.30	<0.33	<0.29	<1.05	<1.97	--	--	--	--	--	<1.1	--	--	--	<3.07
04/21/2022	<0.30	<0.33	<0.29	<1.05	<1.97	--	--	--	--	--	<1.1	--	--	--	<3.07	

**TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs**

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)															
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbondsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>	
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS	
<i>Enforcement Standard:</i>		5	700	800	2000	NS	9000	1000	NS	6	30	100	100	5	0.2	NS	
PZ-12B	10/21/2004	0.99	0.56	<0.67	<2.6	1.55	<2.3	<0.66	<0.41	1.4	0.54	--	<0.86	<0.48	<0.18	3.49	
	11/30/2004	0.77	<0.54	<0.67	<2.6	0.77	<2.3	<0.66	<0.41	1.3	<0.24	--	<0.86	<0.48	<0.18	2.07	
	01/13/2005	0.86	<0.54	<0.67	<2.6	0.86	2.7	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	3.56	
	02/10/2005	0.93	<0.54	<0.67	<1.8	0.93	<2.3	--	--	<0.37	<0.24	--	--	--	--	0.93	
	02/10/2005	0.93	<0.54	<0.67	<1.8	0.93	<2.3	--	--	<0.37	<0.24	--	--	--	--	0.93	
	03/08/2005	0.58	<0.54	<0.67	<1.8	0.58	--	--	--	--	--	--	--	--	--	--	0.58
	04/20/2005	0.86	<0.54	<0.67	<1.8	0.86	--	--	--	--	--	--	--	--	--	--	0.86
	07/07/2005	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	--	<3.42
	07/07/2005	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	--	<3.42
	10/19/2005	0.54	<0.54	<0.67	<1.8	0.54	--	--	--	--	--	--	--	--	--	--	0.54
	01/12/2006	0.68	<0.54	<0.67	<1.8	0.68	--	--	--	--	--	--	--	--	--	--	0.68
	04/20/2006	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	--	<3.42
	07/20/2006	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	--	<3.42
	04/26/2007	1.2	--	--	--	1.2	--	--	--	--	--	--	--	--	--	--	1.2
	04/08/2008	1.5	--	--	--	1.5	--	--	--	--	--	<0.74	--	--	--	--	1.5
	04/21/2009	0.44	--	--	--	0.44	--	--	--	--	--	<2.5	--	--	--	--	0.44
	04/07/2010	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	--	<3.42
	04/24/2012	<0.41	--	--	--	<0.41	--	--	--	--	--	<0.89	--	--	--	--	<1.3
	04/24/2013	<0.50	--	--	--	<0.5	--	--	--	--	--	<2.5	--	--	--	--	<3
	04/29/2014	<0.50	<2.5	--	--	<3	--	--	--	--	--	<2.5	--	--	--	--	<5.5
	04/21/2015	<0.50	--	--	--	<0.5	--	--	--	--	--	<2.5	--	--	--	--	<3
	04/21/2016	<0.5	--	--	--	<0.5	--	--	--	--	--	<2.5	--	--	--	--	<3
	04/19/2017	<0.50	--	--	--	<0.5	--	--	--	--	--	<2.5	--	--	--	--	<3
	04/10/2018	<0.50	--	--	--	<0.50	--	--	--	--	--	<2.5	--	--	--	--	<3.0
04/22/2019	<0.25	--	--	--	<0.25	--	--	--	--	--	1.3	--	--	--	--	1.3	
10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/20/2020	<0.25	--	--	--	<0.25	--	--	--	--	--	<1.2	--	--	--	--	<1.45	
04/26/2021	<0.30	--	--	--	<0.30	--	--	--	--	--	<1.1	--	--	--	--	<1.40	
04/21/2022	<0.30	--	--	--	<0.30	--	--	--	--	--	<1.1	--	--	--	--	<1.40	
PZ-20B	10/20/2004	<b>110</b>	15	2.2	21	148.2	<2.3	<0.66	<0.41	<0.37	0.36	--	<0.86	<0.48	<0.18	148.56	
	11/30/2004	<b>100</b>	19	2.3	27	148.3	<2.3	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	148.3	
	01/11/2005	<b>62</b>	15	1.9	21	99.9	<2.3	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	99.9	
	02/08/2005	<b>47</b>	14	1.7	18.6	81.3	<2.3	--	--	<0.37	<0.24	--	--	--	--	81.3	
	03/09/2005	<b>43</b>	14	1.6	17.2	75.8	--	--	--	--	--	--	--	--	--	--	75.8
	04/18/2005	<b>28</b>	7.6	1	8.8	45.4	--	--	--	--	--	--	--	--	--	--	45.4
	07/05/2005	<b>18</b>	6.6	<0.67	7.1	31.7	--	--	--	--	--	--	--	--	--	--	31.7
	10/17/2005	<b>14</b>	6.1	<0.67	5.6	25.7	--	--	--	--	--	--	--	--	--	--	25.7
	01/10/2006	<b>15</b>	6	<0.67	5.8	26.8	--	--	--	--	--	--	--	--	--	--	26.8
	04/19/2006	<b>10</b>	3.9	<0.67	2.6	16.5	--	--	--	--	--	--	--	--	--	--	16.5
	07/20/2006	<b>8.4</b>	4	<0.67	2.2	14.6	--	--	--	--	--	--	--	--	--	--	14.6
	04/25/2007	<b>13</b>	--	--	--	13	--	--	--	--	--	--	--	--	--	--	13
	04/07/2008	2.8	--	--	--	2.8	--	--	--	--	--	23.8	--	--	--	--	26.6
	04/20/2009	1.2	--	--	--	1.2	--	--	--	--	--	12.6	--	--	--	--	13.8
	04/06/2010	0.85	<0.54	<0.67	<1.8	0.85	--	--	--	--	--	5.3	--	--	--	--	6.15
	04/12/2011	<0.41	--	--	--	<0.41	--	--	--	--	--	2.4	--	--	--	--	2.4
	04/23/2012	0.47	--	--	--	0.47	--	--	--	--	--	1.4	--	--	--	--	1.87
	04/23/2013	0.51	--	--	--	0.51	--	--	--	--	--	5.3	--	--	--	--	5.81
	04/29/2014	0.84	--	--	--	0.84	--	--	--	--	--	16	--	--	--	--	16.84
	04/21/2015	<0.50	--	--	--	<0.5	--	--	--	--	--	11.4	--	--	--	--	11.4
	04/21/2016	<0.5	--	--	--	<0.5	--	--	--	--	--	15.9	--	--	--	--	15.9
	04/19/2017	0.640	--	--	--	0.640	--	--	--	--	--	11.40	--	--	--	--	12
	04/10/2018	0.70	--	--	--	0.70	--	--	--	--	--	19.7	--	--	--	--	20.4
	04/23/2019	0.73	--	--	--	0.73	--	--	--	--	--	20.0	--	--	--	--	20.73
10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/21/2020	<0.25	--	--	--	<0.25	--	--	--	--	--	<1.2	--	--	--	--	<1.45	
04/27/2021	0.70	--	--	--	0.70	--	--	--	--	--	9.4	--	--	--	--	10.1	
04/22/2022	0.67	--	--	--	0.67	--	--	--	--	--	8.2	--	--	--	--	8.87	

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Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)															
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>	
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS	
<i>Enforcement Standard:</i>		5	700	800	2000	NS	9000	1000	NS	6	30	100	100	5	0.2	NS	
PZ-21B <i>Dup (QC-1)</i>	10/20/2004	38	10	1.7	12	61.7	<2.3	<0.66	<0.41	<0.37	0.42	--	<0.86	<0.48	<0.18	62.12	
	10/20/2004	39	9.8	1.7	12	62.5	<2.3	<0.66	<0.41	<0.37	0.73	--	<0.86	<0.48	<0.18	63.23	
	12/02/2004	32	10	1.7	13	56.7	<2.3	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	56.7	
	01/12/2005	24	12	1.6	13	50.6	<2.3	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	50.6	
	02/09/2005	15	7.2	1.1	7.8	31.1	<2.3	--	--	<0.37	<0.24	--	--	--	--	31.1	
	03/09/2005	13	7	0.84	7.4	28.24	--	--	--	--	--	--	--	--	--	--	28.24
	04/19/2005	9.7	4.1	<0.67	4.2	18	--	--	--	--	--	--	--	--	--	--	18
	04/19/2005	9.8	4.3	<0.67	2.2	16.3	--	--	--	--	--	--	--	--	--	--	16.3
	07/06/2005	6.4	3.4	<0.67	1.9	11.7	--	--	--	--	--	--	--	--	--	--	11.7
	10/18/2005	5.3	2.2	<0.67	1.4	8.9	--	--	--	--	--	--	--	--	--	--	8.9
	01/10/2006	6.2	2.3	<0.67	3.5	12	--	--	--	--	--	--	--	--	--	--	12
	01/11/2006	6.5	2.4	<0.67	1.7	10.6	--	--	--	--	--	--	--	--	--	--	10.6
	04/20/2006	2.2	1.2	<0.67	0.9	4.3	--	--	--	--	--	--	--	--	--	--	4.3
	04/20/2006	2.2	1.2	<0.67	0.94	4.34	--	--	--	--	--	--	--	--	--	--	4.34
	07/19/2006	1.5	1.2	<0.67	<1.8	2.7	--	--	--	--	--	--	--	--	--	--	2.7
	07/19/2006	1.6	1.2	<0.67	<1.8	2.8	--	--	--	--	--	--	--	--	--	--	2.8
	04/26/2007	2.3	--	--	--	2.3	--	--	--	--	--	--	--	--	--	--	2.3
	04/09/2008	1.3	1.6	<0.67	0.9	3.8	--	--	--	--	--	52.1	--	--	--	--	55.9
	04/20/2009	0.5	--	--	--	0.5	--	--	--	--	--	22.6	--	--	--	--	23.1
	04/06/2010	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	24	--	--	--	--	24
	04/12/2011	<0.41	--	--	--	<0.41	--	--	--	--	--	15.3	--	--	--	--	15.3
	04/24/2012	<0.41	--	--	--	<0.41	--	--	--	--	--	5.6	--	--	--	--	5.6
	04/23/2013	<0.50	--	--	--	<0.5	--	--	--	--	--	4.5	--	--	--	--	4.5
	04/29/2014	<0.50	--	--	--	<0.5	--	--	--	--	--	22.6	--	--	--	--	22.6
	04/21/2015	<0.50	--	--	--	<0.5	--	--	--	--	--	10.9	--	--	--	--	10.9
	04/21/2016	<0.5	--	--	--	<0.5	--	--	--	--	--	23.6	--	--	--	--	23.6
04/19/2017	<0.50	--	--	--	<0.5	--	--	--	--	--	4.40	--	--	--	--	4.40	
04/10/2018	<0.50	--	--	--	<0.50	--	--	--	--	--	64.7	--	--	--	--	64.7	
04/23/2019	<0.25	--	--	--	<0.25	--	--	--	--	--	32.9	--	--	--	--	32.9	
10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/21/2020	0.4	--	--	--	0.4	--	--	--	--	--	48.4	--	--	--	--	48.8	
04/27/2021	0.35	--	--	--	0.35	--	--	--	--	--	52.2	--	--	--	--	52.55	
04/22/2022	0.31	--	--	--	0.31	--	--	--	--	--	31.6	--	--	--	--	31.91	
PZ-22B <i>Dup (QC-1)</i>	10/18/2004	25	19	2.6	19	65.6	<2.3	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	65.6	
	12/01/2004	35	23	3.1	22	83.1	<2.3	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	83.1	
	01/11/2005	55	26	3.5	25	109.5	3.8	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	113.3	
	02/08/2005	48	23	<6.7	12	83	<2.3	--	--	<3.7	<2.4	--	--	--	--	83	
	03/09/2005	59	27	4.3	28	118.3	--	--	--	--	--	--	--	--	--	--	118.3
	03/09/2005	53	26	3.9	26	108.9	--	--	--	--	--	--	--	--	--	--	108.9
	04/19/2005	41	14	<6.7	<18	55	--	--	--	--	--	--	--	--	--	--	55
	07/06/2005	61	15	<6.7	<18	76	--	--	--	--	--	--	--	--	--	--	76
	10/18/2005	38	12	<3.4	5.5	55.5	--	--	--	--	--	--	--	--	--	--	55.5
	10/18/2005	37	12	<3.4	5.4	54.4	--	--	--	--	--	--	--	--	--	--	54.4
	01/10/2006	34	10	<3.4	4.8	48.8	--	--	--	--	--	--	--	--	--	--	48.8
	04/19/2006	36	24	<6.7	9.2	69.2	--	--	--	--	--	--	--	--	--	--	69.2
	07/19/2006	22	6.9	<3.4	<9.0	28.9	--	--	--	--	--	--	--	--	--	--	28.9
	04/25/2007	20	--	--	--	20	--	--	--	--	--	--	--	--	--	--	20
	04/09/2008	10.9	7.9	<3.4	<9	18.8	--	--	--	--	--	314	--	--	--	--	332.8
	04/20/2009	7.4	--	--	--	7.4	--	--	--	--	--	530	--	--	--	--	537.4
	04/06/2010	6.7	12.1	<3.4	5.2	24	--	--	--	--	--	--	--	--	--	--	24
	04/12/2011	6.1	--	--	--	6.1	--	--	--	--	--	816	--	--	--	--	822.1
	04/23/2012	2.9	--	--	--	2.9	--	--	--	--	--	364	--	--	--	--	366.9
	04/23/2013	2.8	--	--	--	2.8	--	--	--	--	--	420	--	--	--	--	422.8
	04/30/2014	5.1	--	--	--	5.1	--	--	--	--	--	530	--	--	--	--	535.1
	04/21/2015	3.2	--	--	--	3.2	--	--	--	--	--	493	--	--	--	--	496.2
	04/21/2016	4	--	--	--	4	--	--	--	--	--	481	--	--	--	--	485
	04/19/2017	4.8	--	--	--	4.8	--	--	--	--	--	678	--	--	--	--	682.8
	04/10/2018	3.7	--	--	--	3.7	--	--	--	--	--	699	--	--	--	--	699
	04/23/2019	3.1	--	--	--	3.1	--	--	--	--	--	669	--	--	--	--	672.1
10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/21/2020	3.5	--	--	--	3.5	--	--	--	--	--	623	--	--	--	--	626.5	
04/27/2021	2.9	--	--	--	2.9	--	--	--	--	--	879	--	--	--	--	881.9	
04/22/2022	3.1	--	--	--	3.1	--	--	--	--	--	889	--	--	--	--	892.1	

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 APPLETON, WI

Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)															
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbondsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>	
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS	
<i>Enforcement Standard:</i>		5	700	800	2000	NS	9000	1000	NS	6	30	100	100	5	0.2	NS	
PZ-23 Well Installed 10/5/2009	10/08/2009	189	22	<3.4	33.8	244.8	--	--	<2.0	<6.5	<1.2	537	<4.3	<2.4	<0.90	781.8	
	11/12/2009	292	28.6	4.3	38	362.9	--	--	<2.0	<6.5	<1.2	672	<4.3	<2.4	<0.90	1034.9	
	04/07/2010	551	45.3	11.6	49.3	657.2	--	--	--	--	--	895	--	--	--	1552.2	
	10/05/2010	1090	63	<6.7	36.1	1189.1	--	--	--	--	--	1260	--	--	--	2449.1	
	01/18/2011	655	60.5	<6.7	13	728.5	--	--	--	--	--	962	--	--	--	1690.5	
	04/12/2011	1030	88.2	26.7	48.4	1193.3	--	--	--	--	--	1190	--	--	--	2383.3	
	07/13/2011	1160	86.4	<6.7	12.1	1258.5	--	--	--	--	--	1600	--	--	--	2858.5	
	10/04/2011	537	52.1	<6.7	9.2	598.3	--	--	--	--	--	899	--	--	--	1497.3	
	01/04/2012	1160	83.3	18.6	20.6	1282.5	--	--	--	--	--	944	--	--	--	2226.5	
	04/24/2012	1200	90.3	<6.7	21.8	1312.1	--	--	--	--	--	1070	--	--	--	2382.1	
	06/26/2012	1110	69.2	<6.7	11.3	1190.5	--	--	--	--	--	886	--	--	--	2076.5	
	09/12/2012	934	71.7	<6.7	16	1021.7	--	--	--	--	--	957	--	--	--	1978.7	
	01/29/2013	889	52.8	8.2	13.3	963.3	--	--	--	--	--	854	--	--	--	1817.3	
	04/24/2013	1050	85.5	26.3	46.8	1208.6	--	--	--	--	--	1160	--	--	--	2368.6	
	07/16/2013	971	81.3	5	39.1	1096.4	--	--	--	--	--	1180	--	--	--	2276.4	
	10/16/2013	806	70.1	<4.4	34.5	910.6	--	--	--	--	--	1030	--	--	--	1940.6	
	04/30/2014	893	73.7	18.2	33.3	1018.2	--	--	--	--	--	1000	--	--	--	2018.2	
	07/21/2014	952	82.2	5.6	35.6	1075.4	--	--	--	--	--	1160	--	--	--	2235.4	
	10/13/2014	931	62.1	<5.0	<15.0	993.1	--	--	--	--	--	1210	--	--	--	2203.1	
	Dup (QC-1)	04/22/2015	512	55.9	5.3	23.6	596.8	--	--	--	--	--	619	--	--	--	1215.8
		04/22/2015	452	50.3	5.5	11.1	518.9	--	--	--	--	--	508	--	--	--	1026.9
		07/14/2015	567	48.4	<5.0	10.6	626	--	--	--	--	--	488	--	--	--	1114
		10/20/2015	542	55.4	<5.0	10.7	608.1	--	--	--	--	--	838	--	--	--	1446.1
		01/07/2016	840	74.5	8.8	15.8	939.1	--	--	--	--	--	721	--	--	--	1660.1
		04/21/2016	728	59.1	6.4	10.9	804.4	--	--	--	--	--	488	--	--	--	1292.4
		07/14/2016	783	75.8	<5	14.3	873.1	--	--	--	--	--	831	--	--	--	1704.1
		10/04/2016	693	61.2	<5	10.1	764.3	--	--	--	--	--	854	--	--	--	1618.3
		01/18/2017	694	58.5	2.4	9.5	764.4	--	--	--	--	--	669	--	--	--	1433.4
		04/20/2017	819	55.4	<5.0	10.9	885.3	--	--	--	--	--	507	--	--	--	1392.3
	07/12/2017	702	69.4	<5.0	23.8	795.2	--	--	--	--	--	720	--	--	--	1515.2	
	10/23/2017	498	36.5	<5.0	8.1	542.6	--	--	--	--	--	669	--	--	--	1211.6	
	01/22/2018	396	34.1	<5.0	8.2	438.3	--	--	--	--	--	572	--	--	--	1010.3	
Dup (QC-2)	04/12/2018	519	38.5	<5.0	6.2	563.7	--	--	--	--	--	525	--	--	--	1088.7	
	04/12/2018	524	38.7	2.8	13.3	578.8	--	--	--	--	--	654	--	--	--	1232.8	
	07/26/2018	763	56.6	1.8	21.1	842.5	--	--	--	--	--	863	--	--	--	1705.5	
Dup (QC-1)	10/24/2018	505	37.9	2.1	15.7	560.7	--	--	--	--	--	514	--	--	--	1074.7	
	10/24/2018	492	34.1	1.8	7.9	535.8	--	--	--	--	--	524	--	--	--	1059.8	
Dup (QC-1)	04/22/2019	459	41.4	2.3	13.7	516.4	--	--	--	--	--	432	--	--	--	948.4	
	04/22/2019	521	47.7	2.5	15.8	587	--	--	--	--	--	529	--	--	--	1116	
Dup (QC-1)	10/30/2019	563	39.8	<1.7	12.4	615.2	--	--	--	--	--	631	--	--	--	1246.2	
	10/30/2019	510	37	1.2	9.2	557.4	--	--	--	--	--	644	--	--	--	1201.4	
Dup (QC-1)	04/20/2020	461	36.1	<2.7	7.3	504.4	--	--	--	--	--	254	--	--	--	758.4	
	04/20/2020	563	44.3	2.8	14.6	624.7	--	--	--	--	--	363	--	--	--	987.7	
Dup (QC-1)	04/26/2021	290	21.1	<2.9	5.3	316.4	--	--	--	--	--	425	--	--	--	741.4	
	04/26/2021	261	18.7	1.4	7.4	288.5	--	--	--	--	--	266	--	--	--	554.5	
Dup (QC-1)	04/21/2022	<0.30	<0.33	<0.29	<1.05	<1.97	--	--	--	--	--	<1.1	--	--	--	3.07	
	04/21/2022	<0.30	<0.33	<0.29	<1.05	<1.97	--	--	--	--	--	<1.1	--	--	--	3.07	
PZ-26 Well Installed 04/15/2014	04/30/2014	6890	814	1020	1032	9756	--	--	<50.0	<250	<50.0	6480	<15.3	<33.1	<17.6	16236	
	05/12/2014	14700	1150	2440	1493	19783	--	--	<50.0	<250	<50.0	7630	<15.3	<33.1	<17.6	27413	
	10/13/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/21/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	07/14/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/19/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	Product in well, not sampled	04/23/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		04/20/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		04/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/21/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

**TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs**

2021-2022 ANNUAL REPORT  
WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
APPLETON, WI

Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)														
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS
<i>Enforcement Standard:</i>		5	700	800	2000	NS	9000	1000	NS	6	30	100	100	5	0.2	NS
PZ-27  <i>Dup (QC-1)</i>  <i>Dup (QC-1)</i>	04/22/2015	259	40.4	3.4	19	321.8	--	--	--	--	527	--	--	--	--	848.8
	07/14/2015	439	46.5	2.2	17.9	505.6	--	--	<2.0	<10.0	<2.0	543	<2.0	<1.3	<0.70	1048.6
	10/20/2015	381	48.2	2.1	20.3	451.6	--	--	<2.0	<10.0	<2.0	812	<2.0	<1.3	<0.70	1263.6
	10/20/2015	425	39.7	<5.0	9.1	473.8	--	--	<5.0	<25.0	<5.0	700	<5.0	<3.3	<1.8	1173.8
	01/07/2016	455	49.1	<5	12.2	516.3	--	--	--	--	--	598	--	--	--	1114.3
	04/22/2016	512	47.5	6.3	9.9	575.7	--	--	--	--	--	401	--	--	--	976.7
	07/14/2016	537	52.5	<5	17.3	606.8	--	--	--	--	--	547	--	--	--	1153.8
	10/05/2016	487	53	<5	11.3	551.3	--	--	--	--	--	687	--	--	--	1238.3
	01/18/2017	252	23	1.4	14.1	290.5	--	--	--	--	--	227	--	--	--	517.5
	04/20/2017	506	45.7	<5.0	11.5	563.2	--	--	--	--	--	438	--	--	--	1001.2
	07/12/2017	398	48.5	<5.0	12.9	459.4	--	--	--	--	--	485	--	--	--	944.4
	07/12/2017	394	46	<5.0	11	451	--	--	--	--	--	473	--	--	--	924
	10/23/2017	469	34	<5.0	7.4	510.4	--	--	--	--	--	398	--	--	--	908.4
	01/22/2018	209	27.8	2.7	17.6	257.1	--	--	--	--	--	367	--	--	--	624.4
	04/12/2018	334	28.8	<2.5	15.2	378	--	--	--	--	--	495	--	--	--	873
	07/26/2018	406	37.6	1.7	19.3	464.6	--	--	--	--	--	535	--	--	--	999.6
	10/24/2018	334	34.3	1.7	16.9	386.9	--	--	--	--	--	536	--	--	--	922.9
	04/22/2019	315	33.6	2.2	15	365.8	--	--	--	--	--	435	--	--	--	800.8
	10/30/2019	328	33.3	1.4	16.2	378.9	--	--	--	--	--	521	--	--	--	899.9
	04/20/2020	298	30.3	2	13.5	343.8	--	--	--	--	--	276	--	--	--	619.8
	04/26/2021	154	19.5	1.8	14.7	190	--	--	--	--	--	233	--	--	--	423
04/21/2022	143	16.9	<1.4	12.3	172.2	--	--	--	--	--	224	--	--	--	396.2	
PZ-28  Product in well, not sampled	04/22/2015	4880	748	721	1025	7374	--	--	--	--	3720	--	--	--	--	11094
	07/14/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/23/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/20/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3 Lawrence University Property Well Abandoned in 2022	09/10/2020	29.8	95	6.7	57.8	189.3	--	--	<0.39	<0.44	<0.8	210	--	<0.47	<0.2	399.3
	05/26/2021	109	181	12.7	123	425.7	--	--	<3.8	<4	<8.4	330	--	<4.7	<1.7	755.7
	04/22/2022	59.8	119	4.57	66.9	250.27	--	--	--	--	--	225	<0.404	--	--	475.27
QCFB	02/20/2002	<0.44	<0.5	<0.4	<1.2	<2.54	<3.1	<0.4	<0.43	<0.41	--	--	<0.37	<0.49	<0.17	<7.91
	05/13/2002	<0.44	<0.5	<0.4	<1.2	<2.54	6.5	<0.4	<0.43	<0.41	--	--	<0.37	<0.49	<0.17	6.5
	08/20/2002	<0.44	<0.5	<0.4	<1.2	<2.54	3.8	<0.4	<0.43	<0.41	--	--	<0.37	<0.49	<0.17	3.8
	11/14/2002	<0.25	<0.53	<0.84	<1.9	<3.52	<3.3	<0.5	<0.58	<0.45	--	--	<0.62	<0.39	<0.11	<9.47
	02/20/2003	<0.25	<0.53	<0.84	<1.9	<3.52	<3.3	<0.5	<0.58	<0.45	--	--	<0.62	<0.39	<0.11	<9.47
	10/19/2004	<0.41	<0.54	<0.67	<2.6	<4.22	4.3	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	4.3
	12/02/2004	<0.41	<0.54	<0.67	<2.6	<4.22	3.1	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	3.1
	01/13/2005	<0.41	<0.54	<0.67	<2.6	<4.22	3.4	<0.66	<0.41	<0.37	<0.24	--	<0.86	<0.48	<0.18	3.4
	02/10/2005	<0.41	<0.54	<0.67	<1.8	<3.42	<2.3	--	--	<0.37	<0.24	--	--	--	--	<6.33
	03/10/2005	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	04/20/2005	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	07/07/2005	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	10/19/2005	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	01/12/2006	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	04/19/2006	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	07/20/2006	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	10/24/2006	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	04/26/2007	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	10/09/2007	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	--	--	--	--	<3.42
	04/09/2008	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.74	--	--	--	<4.16
	10/21/2008	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	04/21/2009	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	10/08/2009	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	<0.41	<1.3	<0.24	<0.89	<0.86	<0.45	<0.18	<7.75
	04/07/2010	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	10/05/2010	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	01/18/2011	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	04/12/2011	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	07/13/2011	<0.41	<0.54	<0.67	<1.9	<3.52	--	--	--	--	--	<0.89	--	--	--	<4.41
	10/03/2011	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	01/04/2012	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	04/24/2012	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	06/26/2012	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	09/13/2012	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	--	--	--	<0.89	--	--	--	<4.31
	01/29/2013	<0.41	<0.54	<0.67	<1.8	<3.42	--	--	<0.41	<1.3	<0.24	<0.89	<0.86	<0.48	<0.18	<7.78
	04/23/2013	<0.50	<0.50	<0.44	<0.50	<1.94	--	--	<0.36	<0.69	<0.39	<2.5	<0.35	<0.43	<0.18	<6.84
	07/16/2013	<0.50	<0.50	<0.44	<0.82	<2.26	--	--	--	--	--	<2.5	--	--	--	<4.76
10/15/2013	<0.50	<0.50	<0.44	<0.82	<2.26	--	--	--	--	--	<2.5	--	--	--	<4.76	
04/30/2014	<0.50	<0.50	<0.50	<1	<2.5	--	--	<0.50	<2.5	<0.50	--	<0.15	<0.33	<0.18	<6.66	
10/14/2014	<0.50	<0.50	<0.50	<1.5	<3	--	--	<0.50	<2.5	<0.50	<2.5	<0.05	<0.33	<0.18	<9.56	

**TABLE 2. GROUNDWATER ANALYTICAL RESULTS - VOCs**

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Volatile Organic Compounds (VOCs-µg/L)														
		Benzene	Ethylbenzene	Toluene	Xylenes, Total <sup>3</sup>	Total BTEX <sup>1,4</sup>	Acetone	Carbonylsulfide	Chlorobenzene	Chloroform	Chloromethane	Naphthalene <sup>2</sup>	Styrene	Trichloroethene	Vinyl Chloride	Total VOCs <sup>1,5</sup>
<i>Preventive Action Limit:</i>		0.5	140	160	400	NS	1800	200	NS	0.6	3	10	10	0.5	0.02	NS
<b>Enforcement Standard:</b>		<b>5</b>	<b>700</b>	<b>800</b>	<b>2000</b>	NS	<b>9000</b>	<b>1000</b>	NS	<b>6</b>	<b>30</b>	<b>100</b>	<b>100</b>	<b>5</b>	<b>0.2</b>	NS
QCFB, continued	04/21/2015	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	07/14/2015	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	<0.50	<2.5	<0.50	<2.5	<0.50	<0.33	<0.18	<9.51
	10/19/2015	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	<0.50	<2.5	<0.50	<2.5	<0.50	<0.33	<0.18	<9.51
	01/07/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	04/21/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	07/14/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	10/04/2016	<0.5	<0.5	<0.5	<1	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	01/18/2017	1.2	<0.50	<0.50	<1.0	1.2	--	--	--	--	--	<2.5	--	--	--	1.2
	07/12/2017	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	10/23/2017	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	10/24/2017	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5
	01/22/2018	<0.50	<0.50	<0.50	<1.0	<2.5	--	--	--	--	--	<2.5	--	--	--	<5.0
	07/26/2018	<0.25	<0.22	<0.17	<0.73	<1.4	--	--	--	--	--	<1.2	--	--	--	<3.97
	10/24/2018	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	10/25/2018	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	04/22/2019	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	04/23/2019	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	10/30/2019	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	10/31/2019	<0.25	<0.22	<0.17	<0.73	<1.37	--	--	--	--	--	<1.2	--	--	--	<2.57
	04/21/2020	<0.25	<0.32	<0.27	<0.73	<1.57	--	--	--	--	--	<1.2	--	--	--	<2.77
04/27/2021	<0.30	--	--	--	<0.30	--	--	--	--	--	<1.1	--	--	--	<1.40	

[JTB/RH 5/05; PAR/JTB 11/05; PAR/JTB 9/06; RJG/JTB 10/07; BGH/RMW 6/08; RMW/KRM 1/09; BGH/RJG 3/09; RMW/BGH 5/10; AMM/KJB 2/11; KJB/RJG 5/11; ndk/BGH 8/11; CJM/AMM 1/12; AMM/JJW 5/12; AMM/ANS 7/12; AMM/RJG 10/12; ETE/RJG 3/13; ETO/RJG 5/13; EPK/ndk 9/13; ETE/ndk 10/13; U-ECK 6/14; U-KLT 1/30/2015, C-PMH 2/15; U-AJS 12/10/15, C-PMH 12/14/15; Format:ECK 4/11/16; U-ECK 1/30/17; C-SGW 1/31/17 U-KJS 2/7/17; U-KLT 1/29/17, C: TWL 12/15/17; U: JQW 3/20/19, C: KLT 3/21/19; U: KLT 3/21/19, C: JQW 3/21/19, C: ASM 3/27/2019; U: KLT 4/16/20, C:MIK 4/17/20; U:CMD 6/24/21, C:KJS 8/23/21; U:MGP 6/22/22, C:KJS 7/27/22]

**Notes:**

- Italic*: Constituent concentrations that attain or exceed a preventive action limit (PAL) are italicized.
  - BOLD**: Constituent concentrations that attain or exceed an enforcement standard (ES) are bold.
  - < : Constituent was not identified above the limit of detection shown.
  - : Analysis was not performed.
  - Dup (QA/QC): Field Duplicate sample, field identification indicated in parentheses.
  - µg/L : Micrograms per liter.
  - VOC: Volatile Organic Compound
  - \*: Laboratory data for wells MW-8, MW-9, and MW-10 were originally presented in the March 25, 2002 URS SI report
  - nd : all components of total calculation were non-detects
  - NS : NR 140 groundwater quality standard has not been established.
  - 1) Non-detects were not included in the calculated sums.
  - 2) Naphthalene data 2007 and earlier were analyzed as a SVOC and appear on the SVOCs table in previous reports.
  - 3) When not calculated by the lab, Total Xylenes were calculated by Ramboll as follows:
    - a. Where no detections were observed, the sum of the reporting limits is presented.
    - b. Where detections were observed, the detected results were added together for the total summation.
    - c. The list of analytes used for the calculation are:Xylene-o and Xylenes-m+p.
  - 4) Total BTEX were calculated by Ramboll as follows:
    - a. Where no detections were observed, the sum of the reporting limits is presented.
    - b. Where detections were observed, the detected results were added together for the total summation.
    - c. The list of analytes used for the calculation are:Benzene, Toluene, Ethylbenzene and Total Xylene.
  - 5) Total VOCs were calculated by Ramboll as follows:
    - a. Where no detections were observed, the sum of the reporting limits is presented.
    - b. Where detections were observed, the detected results were added together for the total summation.
    - c. Analytes as shown on this VOC table were used for the calculations.
- 
- Nitrite + Nitrate, Total was analyzed 2009 to 2016 as "Nitrate as N" (analytic method EPA 300.0)  
 See lab reports for data qualifiers.
- NR 140 groundwater quality standards revised effective January 2020. Data prior to this date are also compared to revised 2020 standards.



**TABLE 3. GROUNDWATER ANALYTICAL RESULTS - INORGANICS**

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Inorganic Compounds (mg/L)													
		Arsenic <sup>1</sup>	Barium <sup>1</sup>	Cadmium, total	Chloride, total	Chromium, total	Cyanide, total	Cyanide, weak acid dissociable	Cyanide, available (Untreated)	Cyanide, available (PbCO3 Treated)	Iron, total	Lead, total	Mercury	Selenium, total	Silver, total
	Preventive Action Limit:	0.001	0.4	0.0005	125	0.01	0.04	NS	0.04	0.15	0.0015	0.0002	0.01	0.01	
	Enforcement Standard:	0.01	2	0.005	250	0.1	0.2	NS	0.2	0.3	0.015	0.002	0.05	0.05	
MW-02R	10/19/2004	<0.0035	0.57	<0.00030	--	0.00075	--	--	0.071	--	0.68	<0.0011	<0.00028	<0.0048	<0.00076
	11/30/2004	--	--	--	--	--	--	--	0.082	--	0.47	--	--	--	--
	01/11/2005	--	--	--	--	--	0.6	0.018	0.055	0.013	0.6	--	--	--	--
	02/08/2005	<0.0035	0.56	--	--	--	0.54	<0.0053	0.18	0.0065	0.64	--	--	--	--
	03/08/2005	--	--	--	--	--	--	--	--	0.013	0.69	--	--	--	--
	04/18/2005	<0.0035	0.64	--	--	--	0.51	--	--	0.011	0.78	--	--	--	--
	07/05/2005	--	--	--	--	--	0.6	--	--	0.017	--	--	--	--	--
	10/17/2005	0.00084	0.92	--	--	--	0.62	--	--	0.0079	1	--	--	--	--
	01/10/2006	--	--	--	--	--	0.53	--	--	<0.0050	--	--	--	--	--
	04/19/2006	0.0013	0.84	--	--	--	0.92	--	--	0.0054	1.2	--	--	--	--
	07/19/2006	--	--	--	--	--	0.8	--	--	0.0136	--	--	--	--	--
	10/24/2006	0.00096	0.96	--	--	--	0.87	--	--	<0.0050	--	--	--	--	--
	04/25/2007	0.0019	0.9	--	--	--	1.2	--	--	0.00776	--	--	--	--	--
	10/08/2007	--	--	--	--	--	1.3	--	--	0.0085	--	--	--	--	--
	04/07/2008	0.0077	1.12	--	--	--	1.6	--	--	1.2	--	--	--	--	--
	10/20/2008	0.0048	0.895	--	--	--	1	--	--	--	0.89	--	--	--	--
	04/20/2009	0.0082	0.86	--	--	--	1.4	--	--	<0.002	1.03	--	--	--	--
	10/07/2009	0.006	0.848	--	--	--	1.7	--	--	<0.002	--	--	--	--	--
	04/06/2010	0.0073	0.812	--	--	--	1.8	--	--	0.003	--	--	--	--	--
	10/04/2010	0.0105	0.588	--	--	--	1.7	--	--	0.0053	--	--	--	--	--
	04/11/2011	0.0089	0.59	--	--	--	0.31	--	--	<0.002	--	--	--	--	--
	10/03/2011	0.0084	0.415	--	--	--	1.8	--	--	<0.0030	--	--	--	--	--
	04/23/2012	0.0046	0.462	--	--	--	1.5	--	--	32	--	--	--	--	--
	04/23/2012	0.0044	0.448	--	--	--	1.5	--	--	38	--	--	--	--	--
	06/26/2012	--	--	--	--	--	0.38	--	--	11	--	--	--	--	--
	06/26/2012	--	--	--	--	--	1.6	--	--	2.9	--	--	--	--	--
	09/12/2012	0.0039	0.208	--	--	--	1.8	--	--	0.03	--	--	--	--	--
	09/12/2012	0.0038	0.204	--	--	--	1.6	--	--	0.14	--	--	--	--	--
	04/23/2013	0.0063	--	--	--	--	1.7	--	--	0.002	--	--	--	--	--
	10/15/2013	--	--	--	--	--	1.4	--	--	0.0038	--	--	--	--	--
	04/29/2014	<0.0072	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/21/2015	0.0084	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/21/2016	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--
04/19/2017	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/19/2017	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/10/2018	0.0012	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/22/2019	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	
10/31/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/21/2020	0.0015	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/27/2021	0.0011	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/22/2022	0.0016	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-08	10/31/2001	--	--	--	29	--	0.018	<0.0022	--	--	--	--	--	--	--
	02/20/2002	--	--	--	21	--	0.11	<0.0022	--	--	--	--	--	--	--
	05/13/2002	--	--	--	22	--	0.14	<0.0022	--	--	--	--	--	--	--
	08/20/2002	--	--	--	21	--	0.82	<0.0084	--	--	--	--	--	--	--
	11/14/2002	--	--	--	18	--	0.066	0.006	--	--	--	--	--	--	--
	02/19/2003	--	--	--	19	--	0.072	0.012	--	--	--	--	--	--	--
	05/22/2003	--	--	--	--	--	0.098	<0.002	--	--	--	--	--	--	--
	08/01/2003	--	--	--	--	--	0.044	<0.002	--	--	--	--	--	--	--
	10/18/2004	--	--	--	--	--	--	--	0.56	--	--	--	--	--	--
	02/10/2005	--	--	--	--	--	0.086	<0.0053	0.53	<0.0053	--	--	--	--	--
	04/19/2005	--	--	--	--	--	0.066	--	--	<0.0050	--	--	--	--	--
	07/07/2005	--	--	--	--	--	0.071	--	--	<0.0050	--	--	--	--	--
	10/19/2005	--	--	--	--	--	--	--	--	<0.0050	--	--	--	--	--
	01/11/2006	--	--	--	--	--	0.041	--	--	<0.0050	--	--	--	--	--
	04/23/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/20/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/21/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW-09	10/31/2001	--	--	--	457	--	0.01	<0.0022	--	--	--	--	--	--
02/20/2002		--	--	--	486	--	0.0064	<0.0022	--	--	--	--	--	--	--
05/13/2002		--	--	--	348	--	0.0047	<0.0022	--	--	--	--	--	--	--
08/20/2002		--	--	--	331	--	0.01	<0.0084	--	--	--	--	--	--	--
11/14/2002		--	--	--	295	--	0.009	<0.0027	--	--	--	--	--	--	--
02/19/2003		--	--	--	273	--	0.0083	0.0075	--	--	--	--	--	--	--
05/22/2003		--	--	--	--	--	0.008	<0.002	--	--	--	--	--	--	--
08/01/2003		--	--	--	--	--	0.005	<0.002	--	--	--	--	--	--	--
04/23/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/30/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/20/2020		--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/26/2021		--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/21/2022		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-10	10/31/2001	--	--	--	20	--	0.011	<0.0022	--	--	--	--	--	--	--
	02/20/2002	--	--	--	20	--	0.0086	0.0023	--	--	--	--	--	--	--
	05/13/2002	--	--	--	22	--	0.0078	<0.0022	--	--	--	--	--	--	--
	08/20/2002	--	--	--	20	--	<0.0023	<0.0084	--	--	--	--	--	--	--
	11/14/2002	--	--	--	18	--	0.003	<0.0027	--	--	--	--	--	--	--
	02/19/2003	--	--	--	21	--	0.01	0.0046	--	--	--	--	--	--	--
	05/22/2003	--	--	--	--	--	0.005	0.002	--	--	--	--	--	--	--
	08/01/2003	--	--	--	--	--	0.003	<0.002	--	--	--	--	--	--	--
	04/23/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/30/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/20/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/16/2021	0.00067	--	--	--	--	--	--	--	--	--	--	--	--	--
	MW-12R	10/21/2004	<0.0035	--	<0.00030	--	0.00097	--	--	2.3	0.19	<0.0011	<0.000028	0.0012	<0.00076
11/30/2004		--	--	--	--	--	--	--	1.2	0.12	--	--	--	--	
01/13/2005		--	--	--	--	--	0.45	0.053	2.1	0.011	0.17	--	--	--	
02/10/2005		--	--	--	--	--	0.33	0.044	5.4	0.0088	0.16	--	--	--	
03/08/2005		--	--	--	--	--	--	--	--	<0.0050	0.16	--	--	--	
04/20/2005		--	--	--	--	--	0.35	--	--	<0.0050	0.18	--	--	--	
07/07/2005		--	--	--	--	--	0.26	--	--	<0.0050	--	--	--	--	
10/19/2005		--	--	--	--	--	0.19	--	--	<0.0050	0.15	--	--	--	
01/12/2006		--	--	--	--	--	0.37	--	--	<0.0050	--	--	--	--	
04/20/2006		--	--	--	--	--	0.31	--	--	<0.0050	0.27	--	--	--	
07/20/2006		--	--	--	--	--	0.3	--	--	<0.00500	--	--	--	--	
10/23/2006		0.00083	--	--	--	--	0.12H	--							







**TABLE 3. GROUNDWATER ANALYTICAL RESULTS - INORGANICS**

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Inorganic Compounds (mg/L)													
		Arsenic <sup>1</sup>	Barium <sup>1</sup>	Cadmium, total	Chloride, total	Chromium, total	Cyanide, total	Cyanide, weak acid dissociable	Cyanide, available (Untreated)	Cyanide, available (PbCO3 Treated)	Iron, total	Lead, total	Mercury	Selenium, total	Silver, total
<i>Preventive Action Limit:</i>		<i>0.001</i>	<i>0.4</i>	<i>0.0005</i>	<i>125</i>	<i>0.01</i>	<i>0.04</i>	NS	<i>0.04</i>	<i>0.04</i>	<i>0.15</i>	<i>0.0015</i>	<i>0.0002</i>	<i>0.01</i>	<i>0.01</i>
<b>Enforcement Standard:</b>		<b>0.01</b>	<b>2</b>	<b>0.005</b>	<b>250</b>	<b>0.1</b>	<b>0.2</b>	NS	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.015</b>	<b>0.002</b>	<b>0.05</b>	<b>0.05</b>
MW-3	09/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lawrence University Property Well Abandoned in 2022	05/26/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/22/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--
QCFB	02/20/2002	0.0009	--	<0.00012	--	<0.0018	<0.0021	<0.0022	--	--	0.0028	0.0014	<0.00018	<0.0011	<0.0001
	05/13/2002	0.0008	--	<0.00012	--	<0.0011	0.0025	<0.0022	--	--	<0.0012	<0.0007	<0.00019	<0.0055	<0.0001
	08/20/2002	<0.0008	--	<0.00012	--	<0.00021	0.0076	<0.0084	--	--	0.002	<0.0007	<0.00019	<0.0011	<0.0001
	11/14/2002	<0.0008	--	<0.00012	--	0.00027	<0.0027	<0.0027	--	--	0.0029	<0.0007	<0.00019	<0.0015	<0.0001
	02/20/2003	<0.0012	--	<0.00004	--	0.00074	<0.0014	0.0029	--	--	0.012	<0.00083	<0.00019	<0.0015	<0.00004
	10/19/2004	<0.0035	--	<0.00030	--	<0.00065	--	--	<0.0050	--	0.057	<0.0011	<0.000028	<0.0048	<0.00076
	12/02/2004	--	--	--	--	--	--	--	<0.0050	--	<0.018	--	--	--	--
	01/13/2005	--	--	--	--	--	--	--	<0.0037	<0.0053	<0.0050	<0.0050	<0.018	--	--
	02/10/2005	<0.0035	--	--	--	--	<0.0037	0.0079	<0.0050	--	<0.0050	<0.018	--	--	--
	03/10/2005	--	--	--	--	--	--	--	<0.0050	--	<0.018	--	--	--	--
	04/20/2005	<0.0035	--	--	--	--	<0.0037	--	<0.0050	--	<0.018	--	--	--	--
	07/07/2005	--	--	--	--	--	<0.0037	--	<0.0050	--	--	--	--	--	--
	10/19/2005	<0.00040	--	--	--	--	<0.0037	--	<0.0050	0.22	--	--	--	--	--
	01/12/2006	--	--	--	--	--	<0.0037	--	<0.0050	--	--	--	--	--	--
	04/19/2006	<0.00040	--	--	--	--	<0.0094	--	<0.0050	<0.05	--	--	--	--	--
	07/20/2006	--	--	--	--	--	<0.0094	--	<0.0050	--	--	--	--	--	--
	10/24/2006	<b>0.32</b>	--	--	--	--	<0.0094	--	<0.0050	--	--	--	--	--	--
	04/26/2007	0.0004	--	--	--	--	<0.006	--	<0.0050	<0.05	--	--	--	--	--
	10/09/2007	--	--	--	--	--	<0.006	--	<0.002	--	--	--	--	--	--
	04/09/2008	0.00024	--	--	--	--	<0.006	--	<0.002	--	--	--	--	--	--
	10/21/2008	<0.00017	--	--	--	--	<0.006	--	--	0.007	--	--	--	--	--
	04/21/2009	<0.00017	--	--	--	--	<0.0060	--	<0.002	<0.005	--	--	--	--	--
	10/08/2009	0.00038	--	--	--	--	<0.0080	--	0.0032	<0.004	--	--	--	--	--
	04/07/2010	<0.0019	--	--	--	--	<0.0061	--	--	--	--	--	--	--	--
	10/05/2010	<0.0013	--	--	--	--	<0.0061	--	<0.002	--	--	--	--	--	--
	01/18/2011	<0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/12/2011	<0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/13/2011	<0.002	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/03/2011	<0.002	--	--	--	--	<0.0061	--	<0.0003	--	--	--	--	--	--
	04/24/2012	<0.00019	--	--	--	--	<0.0061	--	<b>0.002</b>	--	--	--	--	--	--
	06/26/2012	--	--	--	--	--	0.007	--	<b>0.0037</b>	--	--	--	--	--	--
	09/13/2012	<0.00019	--	--	--	--	<0.0043	--	0.002	--	--	--	--	--	--
	04/24/2013	<0.0044	--	--	--	--	<0.0038	--	<0.002	--	--	--	--	--	--
10/15/2013	--	--	--	--	--	0.0056	--	<0.002	--	--	--	--	--	--	
10/14/2014	<0.0072	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/21/2015	<0.0072	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/21/2016	<0.00073	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/20/2017	<0.000099	--	--	--	--	--	--	--	--	--	--	--	--	--	
07/12/2017	<0.00028	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/10/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
04/11/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
10/31/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

(0-PAW/MJR 4/03; U-PAW/JTB 12/04; JTB/EPR 01/05; JTB/PPR 3/05; JTB/PAK 4/05; JTB/PH 5/05; PAW/JTB 11/05; PAW/JTB 9/06; KIQ/JTB 10/07; BGR/MW 6/08; BHW/KRH 1/09; BGR/JOB 3/09; BHW/BGH 5/10; AMH/JOB 7/11; KIB/JOB 5/11; CBJ/AMH 01/12; AMH/ANS 7/12; CAR 9/12; AMH/JOB 10/12; CAR 12/12 cyanide update; ETC/JOB 5/13; ETC/MJK 10/13; U-ECK 06/14; U-KLT 1/30/15; C-PMH 2/15; U-AIS 12/10/15; C-PMH 12/14/15; Format ECK 4/11/16; U-ECK 2/1/17; C-SGW 2/2/17; C-KIS 2/7/17; U-KLT 11/29/17; C-TWL 11/29/17; U-KLT 3/20/18; C-ASM 3/20/18; U-KLT 4/16/20; C-MIK 4/17/20; U-CHO 6/24/21; C-KIS 8/23/21; U-MGP 6/22/22; C-KIS 7/22/22)

**Notes:**

- Italic:* Constituent concentrations that attain or exceed a preventive action limit (PAL) are italicized.
- BOLD:** Constituent concentrations that attain or exceed an enforcement standard (ES) are bold.
- < : Constituent was not identified above the limit of detection shown.
- : Analysis was not performed.

Dup (QA/QC): Field Duplicate sample, field identification indicated in parentheses.  
 mg/L : milligrams per liter

\*: Laboratory data for wells MW-8, MW-9, and MW-10 were originally presented in the March 25, 2002 URS SI report  
 nd : all components of total calculation were non-detects

NS : NR 140 groundwater quality standard has not been established.

Results within a red shaded cell indicate the result was not valid, and was assigned an N/A. Available cyanide reported at concentration greater than total cyanide, which is not valid by definition. The laboratory has listed the reason for the discrepancy in the reporting September 2012 cyanide and available cyanide results.

Reference 2017 Annual Report dated December 14, 2017 for complete results.  
 1) Arsenic and Barium were initially analyzed for Total concentration. Starting in 2007, Arsenic and Barium were analyzed for Dissolved concentration.

See lab reports for data qualifiers  
 NR 140 groundwater quality standards revised effective January 2020. Data prior to this date are also compared to revised 2020 standards.





TABLE 4. GROUNDWATER ANALYTICAL RESULTS - NA PARAMETERS

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Laboratory Parameters (mg/L)						Field Parameters				
		Alkalinity, total	Iron, dissolved	Manganese, dissolved	Nitrite + Nitrate, total	Sulfate, total	Methane	pH (standard units)	Temperature (°C)	Specific Conductance (µmhos/cm)	Dissolved Oxygen (mg/L)	Oxidation / Reduction Potential (mV)
<i>Preventive Action Limit:</i>		NS	0.15	0.06	2	125	NS	NS	NS	NS	NS	NS
<b>Enforcement Standard:</b>		NS	<b>0.3</b>	<b>0.3</b>	<b>10</b>	<b>250</b>	NS	NS	NS	NS	NS	NS
MW-12R	10/21/2004	170	0.13	0.065	0.15	42	0.27	9.2	15.6	365	0.45	-15
	11/30/2004	190	0.14	--	<0.031	44	0.48	8.8	11.5	592	0.48	--
	01/13/2005	180	0.17	0.049	<0.087	71	0.63	8.9	9.9	533	0.56	-34
	02/10/2005	170	0.15	0.048	<0.031	76	0.56	8.8	8.7	480	0.39	-11
	03/08/2005	140	0.14	0.038	<0.031	74	0.49	8.9	8.1	819	0.96	8
	04/20/2005	130	0.16	0.035	0.17	70	0.43	9.1	10.6	554	0.39	8
	07/07/2005	--	--	--	--	--	--	8.9	14.6	501	0.43	48
	10/19/2005	180	0.18	0.035	<0.078	26	1.2	12.9	14.1	463	0.37	-91
	01/12/2006	--	--	--	--	--	--	8.5	9.5	696	0.57	-90
	04/20/2006	160	0.28	0.043	<0.088	140	0.38	8.5	12.8	798	0.48	-74
	07/20/2006	--	--	--	--	--	--	8.7	17	1016	0.32	-48
	10/23/2006	200	0.078	0.039	<0.20	69	1.9	8.6	13.4	638	0.33	-18
	04/26/2007	180	--	0.057	<0.085	190	1.3	8.7	9.3	903	0.43	-26
	10/09/2007	180	<0.026	--	<0.085	260	1.2	8.6	14	1054	0.33	-94
	04/08/2008	279	0.386	0.0836	<0.085	112	1.04	7.9	9.2	935	0.3	-50
	10/20/2008	253	0.118	0.069	4.1	251	1.23	8.6	14	1210	0.36	-48
	04/21/2009	335	0.175	0.0833	<0.085	90.7	1.65	9.3	7.5	1080	0.35	-88
	10/08/2009	286	0.115	0.0839	0.25	305	--	8.1	13.5	1298	0.34	-5
	04/07/2010	376	0.199	0.102	<0.20	190	2.03	8.4	11.2	1354	0.27	8
	10/04/2010	428	0.14	0.113	<0.20	226	2.55	6.7	14.7	1610	0.37	-54
	01/18/2011	--	--	--	--	--	--	7.9	9.7	1500	0.32	61
	04/12/2011	195	0.3	0.0939	<0.20	86.4	2	7.8	10.2	1215	4.4	32
	07/13/2011	--	--	--	--	--	--	7.9	12.7	1475	3.03	-112
	10/03/2011	351	0.234	0.0859	<0.20	202	2.75	8	15.1	1372	1.58	-15
	01/04/2012	--	--	--	--	--	--	8.4	7.7	1560	3.25	41
	04/24/2012	448	0.24	0.0854	<0.20	128	2.26	8	10.1	1470	0.32	-94
	09/12/2012	270	0.156	0.0348	<0.20	35.4	1.94	8.5	16.5	877	0.32	20
	01/28/2013	--	--	--	--	--	--	9	10	1000	0.55	31
	04/24/2013	384	0.236	0.0524	<0.75	21	2.33	8.3	9.7	1081	0.47	61
	07/16/2013	--	--	--	--	--	--	8.6	17.2	1183	0.52	-15
	10/15/2013	--	--	--	--	--	--	9.2	14.1	780	0.94	45
	04/29/2014	285	0.23	0.0083	<0.15	107	5.91	8.9	9.1	990	0.44	-161
	10/13/2014	--	--	--	--	--	--	10	13.5	801	0.74	-228
	04/21/2015	222	0.534	0.0025	<1.5	85.7	4.41	10.2	8.9	1098	1.08	-162
	10/20/2015	--	--	--	--	--	--	11.2	13.2	748	0.38	-223
	04/21/2016	285	0.273	0.0082	<0.15	118	4.32	8.7	11.5	1160	0.22	--
	10/04/2016	--	--	--	--	--	--	10.6	14.8	1007	0.12	-294
	04/19/2017	272	0.26	0.003	<0.075	105	4.11	9.8	10.2	1119	0.22	-311
	10/24/2017	--	--	--	--	--	--	10.53	12.4	974	0.08	-274
10/24/2017	--	--	--	--	--	--	10.53	12.4	974	0.08	-274	
04/10/2018	203	0.117	<0.0027	<0.095	21.5	1.930	10.10	8.41	609	0.23	-299.8	
10/24/2018	280	0.234	0.0032	0.12	72.3	5.25	9.03	13.5	1068	0.11	-309	
04/22/2019	247	0.191	<0.0027	<0.095	119	4.84	9.85	9.44	1147.9	0.08	-372.6	
10/31/2019	--	--	--	--	--	--	6.38	10.08	1254.9	0.15	-144.4	
04/20/2020	351	0.176	0.0101	<0.059	69	2.36	8.44	9.44	1347.5	0.09	-236.1	
04/26/2021	372	0.197	0.0076	<0.059	125	1.95	8.63	9.68	1475.2	0.02	-262.5	
04/21/2022	376	0.215	0.0097	<0.059	88.7	1.98	8.71	10.77	1114	0.02	-189.5	
MW-13R	10/20/2004	450	0.5	0.65	<0.031	210	4.6	7.9	17.1	1112	0.28	-109
	12/02/2004	470	0.5	0.49	<0.031	200	4.3	7.6	12.5	1594	0.35	-81
	01/12/2005	490	0.42	0.31	0.25	220	5.8	7.7	11.7	1730	0.26	-94
	02/09/2005	480	0.4	0.31	<0.031	180	3.7	7.7	10.6	1234	0.38	-79
	03/10/2005	440	0.41	0.25	<0.031	160	2.6	7.8	7.5	671	0.4	-71
	04/19/2005	400	0.4	0.19	0.31	140	2.3	7.8	12.4	1121	0.34	-104
	07/06/2005	--	--	--	--	--	--	7.9	14.7	1457	0.3	0
	10/19/2005	410	0.52	0.13	<0.078	53	2	12.1	15.3	835	0.37	-104
	01/10/2006	--	--	--	--	--	--	7.6	10.7	1510	0.48	-152
	04/19/2006	560	0.53	0.13	<0.088	270	7	7.5	11.5	2380	0.34	-167
	07/19/2006	--	--	--	--	--	--	7.6	14.9	2420	0.27	-170
	10/24/2006	350	0.66	0.077	<0.20	130	3.7	7.7	14.4	1770	0.26	-86
	04/25/2007	500	0.52	0.085	<0.085	350	5.5	7.5	10.5	25	0.16	-139
	04/25/2007	500	0.49	0.087	<0.085	350	6	7.5	10.5	25	0.16	-139
	10/08/2007	430	0.12	--	<0.085	350	4.4	8	16.9	2340	0.17	-180
	04/08/2008	206	1.24	0.112	<4.2	1030	3.26	7.5	10.1	3380	0.66	-161
	10/20/2008	427	0.461	0.0751	14	378	4.66	7.7	15.1	2510	0.31	-98
	04/21/2009	317	0.55	0.0779	<0.085	1090	3	8.9	9.4	3590	0.4	-185
	10/07/2009	586	0.641	0.0719	<0.20	654	--	7.6	14.2	3020	0.34	-99
	04/06/2010	395	0.604	0.075	<0.20	917	3.06	8	11.2	3180	0.37	-86
	10/04/2010	423	0.746	0.0629	0.22	902	4.14	6.5	15.1	3270	0.22	-87
	01/18/2011	--	--	--	--	--	--	7.7	9.6	3020	2.04	-69
	04/11/2011	180	0.626	0.0701	<4.0	1180	1.47	7.9	16.7	2710	3.36	-94
	07/13/2011	--	--	--	--	--	--	7.6	12.8	3040	2.29	-153
	10/03/2011	315	0.674	0.0616	<0.20	872	2.32	7.6	16.4	2840	1.6	-126
	01/04/2012	--	--	--	--	--	--	8.2	11.1	2640	3.19	-58
	01/04/2012	--	--	--	--	--	--	8.2	11.1	2640	3.19	-58
	04/23/2012	291	0.582	0.0515	<2.0	874	2.58	7.8	11.5	2610	0.15	-154
	06/26/2012	--	--	--	--	--	--	7.5	14.6	2710	0.21	-113
	09/12/2012	277	0.373	0.0457	<0.20	519	2.04	7.8	14.6	2070	0.42	-58
	01/28/2013	--	--	--	--	--	--	7.9	10.6	2630	0.43	-83
	04/23/2013	163	0.718	0.066	<1.5	1080	1.65	8.1	8.5	2730	0.48	-122
	04/23/2013	173	0.704	0.0669	<1.5	1070	0.654	8.1	8.5	2730	0.48	-122
	07/16/2013	--	--	--	--	--	--	7.8	14.7	2710	0.67	-111
	10/15/2013	--	--	--	--	--	--	7.8	14.1	2490	1.03	-85
	04/29/2014	176	0.518	0.0488	<0.30	2270	1.38	8.1	8.6	2490	0.55	-262
	04/29/2014	190	0.523	0.0499	<1.5	1050	1.05	8.1	8.6	2490	0.55	-262
	10/13/2014	--	--	--	--	--	--	7.9	13.8	2280	4.58	-303
	04/21/2015	216	0.522	0.0477	<1.5	961	0.548	8.2	8.4	2800	1.80	-287
	10/20/2015	--	--	--	--	--	--	8.6	13.8	2230	0.48	-345
	04/21/2016	136	0.764	0.052	<0.15	1080	1.1	7.6	10.7	2350	0.20	--
	10/04/2016	--	--	--	--	--	--	8.0	14.7	2540	0.21	-327
	04/19/2017	209	0.61	0.0492	<1.5	1030	0.536	8.2	9.5	2320	0.19	-338
	10/24/2017	--	--	--	--	--	--	7.94	13.0	2572	0.09	-343
	04/10/2018	184	0.646	0.0352	<0.095	1030	0.469	7.71	7.88	2402	0.16	-318.8
	04/10/2018	175	0.612	0.033	<0.095	1280	0.484	7.71	7.88	2402	0.16	-318.8
10/24/2018	206	0.769	0.0458	<0.12	1140	1.5	7.89	13.5	2616	0.31	-355	
10/24/2018	244	0.759	0.0457	<0.12	1150	2.01	7.89	13.5	2616	0.31	-355	
04/23/2019	201	0.602	0.036									





**TABLE 4. GROUNDWATER ANALYTICAL RESULTS - NA PARAMETERS**

2021-2022 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Sample Location	Sample Date	Laboratory Parameters (mg/L)					Field Parameters						
		Alkalinity, total	Iron, dissolved	Manganese, dissolved	Nitrite + Nitrate, total	Sulfate, total	Methane	pH (standard units)	Temperature (°C)	Specific Conductance (µmhos/cm)	Dissolved Oxygen (mg/L)	Oxidation / Reduction Potential (mV)	
Preventive Action Limit:		NS	0.15	0.06	2	125	NS	NS	NS	NS	NS	NS	
Enforcement Standard:		NS	0.3	0.3	10	250	NS	NS	NS	NS	NS	NS	
MW-21	10/20/2004	190	0.14	0.027	<0.031	75	2.3	8.6	18.1	1067	0.25	-75	
	12/02/2004	490	0.28	0.011	0.96	300	1.3	9.9	14	2530	0.53	-124	
	01/12/2005	700	<b>0.33</b>	0.0022	3.9	99	0.37	10.5	13.4	3040	0.21	-121	
	02/09/2005	730	<b>0.33</b>	0.0011	2.2	450	0.78	10.6	11.5	3020	0.19	-168	
	03/09/2005	920	<b>0.3</b>	0.0013	3.9	410	0.46	10.9	10.1	2980	0.15	-181	
	04/19/2005	620	0.29	0.002	0.76	460	0.41	10.9	13.2	3520	0.17	-138	
	07/06/2005	--	--	--	--	--	--	10.7	15.9	3870	0.21	-50	
	10/18/2005	460	<0.04	0.00052	0.16	320	0.23	13.7	16.8	4050	0.22	-129	
	01/11/2006	--	--	--	--	--	--	10.7	12.5	3450	0.6	-134	
	04/20/2006	600	<b>0.72</b>	0.017	0.77	520	0.045	11.1	12.6	3350	0.33	-159	
	07/19/2006	--	--	--	--	--	--	11	15.6	3250	0.08	-47	
	10/24/2006	500	<b>0.38</b>	0.00047	<0.20	340	0.27	10.6	14.8	3480	0.18	1	
	04/26/2007	--	--	--	--	--	--	11.4	9.7	3200	0.13	-121	
	10/09/2007	560	0.2	--	<0.085	330	0.099	11	14.8	3330	0.23	-87	
	04/09/2008	368	<b>1.25</b>	0.0058	<4.2	979	0.0411	10.9	8.9	3240	0.35	-64	
	10/21/2008	375	<b>0.41</b>	<0.00024	<0.085	561	0.213	10.9	14	2960	0.24	-89	
	04/20/2009	294	<b>0.331</b>	0.0071	0.16	894	0.084	12.1	10.9	3170	0.24	-112	
	10/07/2009	290	<b>0.427</b>	0.0028	<0.20	648	--	10.5	13.2	3030	0.3	-23	
	04/06/2010	262	<b>0.365</b>	0.00015	<0.20	946	0.115	11.2	11	3270	0.26	12	
	10/04/2010	310	<b>0.505</b>	<0.00014	<0.20	653	0.162	9.7	15.6	2360	0.36	100	
	04/11/2011	143	0.203	0.0012	<2.0	891	0.0392	10.9	10.9	2370	2.94	39	
	10/03/2011	156	<b>0.418</b>	<0.000098	<0.20	675	0.144	10.5	15.6	2370	1.58	44	
	04/24/2012	164	0.293	0.0018	<0.203	646	0.122	11	11.6	1970	0.26	-21	
	06/26/2012	--	--	--	--	--	--	10.7	15.6	2170	0.17	28	
	09/12/2012	169	<b>0.436</b>	0.0027	<0.20	585	0.135	10.7	14.3	2470	0.42	51	
	01/28/2013	--	--	--	--	--	--	11.6	11.1	2180	0.45	79	
	04/23/2013	102	0.193	0.0013	9.1	662	0.0576	11.4	9.2	2270	0.42	104	
	07/16/2013	--	--	--	--	--	--	10.6	16.9	1860	0.69	29	
	10/15/2013	--	--	--	--	--	--	10.5	13.9	2230	0.85	-4	
	10/15/2013	--	--	--	--	--	--	10.5	13.9	2230	0.85	-4	
	04/29/2014	126	0.248	<0.0014	2.2	715	0.0586	10.6	8.6	2360	0.76	-109	
	10/13/2014	--	--	--	--	--	--	10.4	13.9	1870	0.82	-248	
	04/21/2015	113	<b>0.33</b>	<0.0014	<0.15	682	0.0742	11.2	9.1	2400	0.58	-227	
	10/19/2015	--	--	--	--	--	--	11.5	14.0	1800	5.07	-242	
	04/21/2016	97.6	0.22	<0.098	<0.15	500	0.0515	10.9	11.0	1470	0.33	--	
	10/04/2016	--	--	--	--	--	--	11.1	14.9	1580	0.16	-266	
	04/19/2017	130	0.25	0.00062	<1.5	549	0.031	11.9	10.1	1510	0.23	-253	
	10/24/2017	--	--	--	--	--	--	10.54	13.6	1408	2.39	-282	
04/10/2018	117	<b>0.486</b>	<0.0027	<0.095	426	0.0717	10.17	9.03	1736	0.00	-333.9		
10/25/2018	141	0.235	<0.0027	<0.12	520	0.0427	10.8	13.0	1513	0.27	-253		
04/23/2019	137	0.191	<0.0027	2	484	0.018	10.87	11.63	1522.9	0.31	-234.5		
10/31/2019	--	--	--	--	--	--	8.18	7.53	1382.6	0.21	-147.9		
04/21/2020	96.6	0.123	<0.0012	1.9	392	0.0301	10.91	7.91	1291.6	0.09	-187.4		
04/27/2021	137	0.228	0.0024	1.6	397	0.0232	10.93	9.15	1636.8	0	-281.8		
04/22/2022	120	0.214	<0.0012	3.8	414	0.069	10.78	9.2	1483.6	0.04	-201.1		
MW-22	10/18/2004	420	0.29	0.21	<0.031	5.7	1.9	7.3	16.9	1870	0.81	50	
	12/01/2004	500	<b>0.37</b>	--	<0.031	17	3.8	7.4	19.8	1110	0.35	12	
	01/11/2005	500	<b>0.39</b>	0.14	0.16	14	3.6	7.5	12.5	2130	0.37	9	
	02/08/2005	470	<b>0.36</b>	0.12	0.38	20	5.5	7.4	11.8	1870	0.44	-13	
	03/09/2005	420	<b>0.4</b>	0.1	0.2	12	3.4	7.1	10.4	1254	0.35	-18	
	04/19/2005	440	<b>0.46</b>	0.11	<0.078	9.5	4.9	7.6	14.9	740	0.37	37	
	07/06/2005	--	--	--	--	--	--	7.5	15.5	2020	0.38	53	
	10/18/2005	410	<b>0.66</b>	0.063	<0.078	4.1	4.5	11.1	15.8	1044	0.24	-5	
	01/10/2006	--	--	--	--	--	--	7.3	9.8	1870	0.6	-84	
	04/19/2006	430	<b>0.42</b>	0.051	<0.088	6	6.4	7.5	13.2	1990	0.38	-90	
	07/19/2006	--	--	--	--	--	--	7.5	19.2	1530	0.82	73	
	10/24/2006	420	<b>0.53</b>	0.061	<0.20	3	5	7.5	13.2	1980	0.29	16	
	04/25/2007	420	<b>0.33</b>	0.056	<0.085	8	4.6	7.4	12.6	2150	0.21	-37	
	10/09/2007	440	<0.026	--	<0.085	4.3	4	7.8	14.5	2210	0.34	-40	
	10/09/2007	430	<0.026	--	<0.085	4.2	3.1	7.8	14.5	2210	0.34	-40	
	04/09/2008	438	<b>0.822</b>	0.0607	0.98	4.8	2.89	7.2	10.2	2740	0.32	-52	
	Dup (QC-1)	04/09/2008	443	<b>0.78</b>	0.05	7.5	4.5	3.4	7.2	10.2	2740	0.32	-52
	Dup (QC-1)	10/21/2008	428	<b>0.469</b>	0.0663	<0.085	4.2	4.14	7.5	12.1	2780	0.5	-7
	Dup (QC-1)	10/21/2008	427	<b>0.466</b>	0.0655	<0.085	3.9	4.4	7.5	12.1	2780	0.5	-7
		04/20/2009	450	<b>0.462</b>	0.0526	<0.085	4.6	3.9	8.6	10.6	2950	0.29	-82
		10/07/2009	450	<b>0.551</b>	0.0545	<0.20	3.2	--	7.3	13	2790	0.39	72
		04/06/2010	458	<b>0.541</b>	0.0536	<0.20	3.9	3.33	7.6	12.1	2790	0.25	59
		10/04/2010	443	<b>0.455</b>	0.0449	<0.20	3.7	3.75	6.2	14.9	2770	0.53	99
	Dup (QC-1)	04/11/2011	353	<b>0.36</b>	0.0472	<0.20	5.2	2.33	7.4	12.7	2520	3.07	43
	Dup (QC-1)	04/11/2011	358	<b>0.363</b>	0.0469	<0.20	5.2	2.22	--	--	--	--	--
		10/03/2011	445	<b>0.329</b>	0.0519	<0.20	3.5	3.08	7.3	15	2670	2.13	84
		04/23/2012	439	0.256	0.0412	<0.20	31.8	2.47	7.3	12.9	2640	0.7	-20
		06/26/2012	--	--	--	--	--	7.1	16.2	2550	0.55	-21	
		09/13/2012	391	0.246	0.0503	0.51	2.7	4.13	7.5	12.9	2670	0.48	112
		01/28/2013	--	--	--	--	--	7.4	11.4	2420	0.47	105	
		04/23/2013	443	0.261	0.0421	<1.5	3.6	4.62	7.4	10.3	2430	0.51	97
		07/16/2013	--	--	--	--	--	7.3	16.5	2640	0.91	60	
		10/15/2013	--	--	--	--	--	7.4	13.5	2500	0.94	82	
		04/29/2014	463	0.291	0.0366	0.34	23.5	5.33	7.3	10.6	2550	1.07	-123
		10/13/2014	--	--	--	--	--	7.3	15.7	2480	0.56	-152	
		04/21/2015	434	<b>0.413</b>	0.0424	<0.15	3.3	2.3	7.6	10.0	510	0.51	-184
		10/19/2015	--	--	--	--	--	7.7	13.2	2740	6.01	-220	
	Dup (QC-1)	04/21/2016	446	<b>0.398</b>	0.0422	<0.15	3.1	1.4	7.0	12.0	2810	0.30	--
Dup (QC-1)	04/21/2016	477	<b>0.376</b>	0.04	<0.15	3.1	2	7.0	12.0	2810	0.30	--	
	10/04/2016	--	--	--	--	--	7.3	14.0	3040	0.20	-213		
	04/19/2017	410	0.25	0.0403	<0.075	4.5	2.26	7.3	11.3	2710	0.21	-203	
	10/24/2017	--	--	--	--	--	7.34	12.7	1354	0.18	-260		
	04/10/2018	431	0.161	0.0361	<0.095	5.6	1.310	7.06	10.39	2428	0.21	-256.1	
	10/25/2018	428	0.122	0.0345	1.2	5.0	2.55	7.36	13.6	2264	0.10	-220	
	04/23/2019	416	0.131	0.0331	<0.095	12.5	1.94	7.3	15.3	2424.4	0.06	-235.5	
	10/31/2019	--	--	--	--	--	4.64	9.56	2495.8	0.11	-128.1		
	04/21/2020	389	0.0864	0.0448	<0.059	10.9	2.14	7.54	7.44	1967.8	0.11	-9	

TABLE 4. GROUNDWATER ANALYTICAL RESULTS - NA PARAMETERS

2021-2022 ANNUAL REPORT  
WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
APPLETON, WI

Table with columns: Sample Location, Sample Date, Laboratory Parameters (mg/L) [Alkalinity, total; Iron, dissolved; Manganese, dissolved; Nitrite + Nitrate, total; Sulfate, total; Methane], and Field Parameters [pH (standard units), Temperature (°C), Specific Conductance (µmhos/cm), Dissolved Oxygen (mg/L), Oxidation / Reduction Potential (mV)]. Rows include MW-25, MW-26, MW-27, MW-28, and PZ-12B with various sample dates and values.

**TABLE 4. GROUNDWATER ANALYTICAL RESULTS - NA PARAMETERS**

2021-2022 ANNUAL REPORT  
WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
APPLETON, WI

Sample Location	Sample Date	Laboratory Parameters (mg/L)					Field Parameters						
		Alkalinity, total	Iron, dissolved	Manganese, dissolved	Nitrite + Nitrate, total	Sulfate, total	Methane	pH (standard units)	Temperature (°C)	Specific Conductance (µmhos/cm)	Dissolved Oxygen (mg/L)	Oxidation / Reduction Potential (mV)	
<i>Preventive Action Limit:</i>		NS	0.15	0.06	2	125	NS	NS	NS	NS	NS	NS	
<i>Enforcement Standard:</i>		NS	0.3	0.3	10	250	NS	NS	NS	NS	NS	NS	
PZ-20B	10/20/2004	200	0.04	0.081	<0.031	1.1	0.59	8	13	390	0.51	31	
	11/30/2004	220	0.021	--	<0.031	1.7	1.1	7.7	12.3	389	0.76	128	
	01/11/2005	220	<0.018	0.08	<0.087	2.3	0.8	7.9	12.7	386	0.65	95	
	02/08/2005	200	<0.018	0.095	<0.031	9.3	0.25	7.6	11.8	411	0.75	70	
	03/09/2005	190	<0.018	0.09	0.18	14	0.14	7.7	13	411	0.75	71	
	04/18/2005	450	<0.018	0.1	<0.078	17	0.067	7.9	19.9	415	0.78	100	
	07/05/2005	--	--	--	--	--	--	7.8	19.5	399	0.77	101	
	10/17/2005	190	0.11	0.097	<0.078	1.7	1.5	10	17.6	400	0.64	72	
	01/10/2006	--	--	--	--	--	--	7.6	11.4	427	0.83	-83	
	04/19/2006	170	<0.05	0.11	<0.088	23	0.04	7.5	14.1	421	0.84	-18	
	07/20/2006	--	--	--	--	--	--	7.8	18.9	460	0.64	-17	
	04/25/2007	210	--	0.11	<0.085	5.1	0.46	7.8	13.3	435	0.49	-18	
	04/07/2008	205	0.134	0.136	<0.085	5.2	0.628	7.7	9.4	429	0.67	-89	
	04/20/2009	208	<0.005	0.15	<0.085	13.5	0.127	8.9	12	478	0.48	-106	
	04/06/2010	209	0.0086	0.159	<0.20	9.9	0.346	7.8	12.4	466	0.53	76	
	04/12/2011	--	--	--	--	--	--	7.6	13.85	404	3.52	50	
	04/23/2012	204	0.0285	0.128	<0.20	4.7	0.135	7.7	14.8	460	0.52	-26	
	04/23/2013	208	<0.014	0.15	<0.15	2.4	0.746	7.7	11.8	434	0.74	98	
	04/29/2014	--	--	--	--	--	--	7.6	11.2	1900	0.54	-199	
	04/21/2015	194	<0.0129	0.131	<0.15	3.3	--	7.5	10.2	509	1.70	-147	
	04/21/2016	--	--	--	--	--	--	7.4	12.9	413	0.38	--	
	10/04/2016	--	--	--	--	--	--	--	--	--	--	--	
04/19/2017	--	--	--	--	--	--	7.8	12.4	406	0.27	-208		
04/10/2018	--	--	--	--	--	--	7.41	11.82	451	0.09	-274.6		
04/23/2019	--	--	--	--	--	--	7.67	11.71	474.8	0.34	-255		
10/30/2019	--	--	--	--	--	--	--	--	--	--	--		
04/21/2020	--	--	--	--	--	--	8.05	10.59	375	7.94	92.9		
04/27/2021	--	--	--	--	--	--	7.72	12.03	535.6	0.11	-219.8		
04/22/2022	--	--	--	--	--	--	7.75	11.45	371.65	0.12	-207.3		
PZ-21B	Dup (QC-1)	10/20/2004	200	0.037	0.085	<0.031	1	1	8	16.9	376	0.57	20
		10/20/2004	380	0.038	0.085	0.14	1	0.96	--	--	--	--	--
		12/02/2004	220	0.041	0.091	0.19	1.9	1.2	7.6	10.7	365	0.72	58
		01/12/2005	210	<0.018	0.092	<0.087	4.3	0.8	7.9	12	278	0.42	32
		02/09/2005	210	<0.018	0.11	<0.031	4.3	0.62	7.7	10.9	402	0.64	26
		03/09/2005	180	<0.018	0.11	<0.031	18	0.16	7.7	10.6	404	0.51	9
		04/19/2005	190	<0.018	0.13	0.44	18	0.21	7.9	14.9	421	0.62	59
		04/19/2005	190	<0.018	0.13	0.31	17	0.17	7.9	14.9	421	0.62	59
		07/06/2005	--	--	--	--	--	--	7.8	16.1	411	0.53	86
		10/18/2005	200	0.09	0.13	<0.078	1.9	2.1	10.7	15	394	0.53	41
	Dup (QC-1)	01/10/2006	--	--	--	--	--	7.6	12	426	0.55	-66	
		01/10/2006	--	--	--	--	--	7.6	12	426	0.55	-66	
		04/20/2006	170	<0.05	0.13	<0.088	22	0.029	7.4	13.7	412	0.68	-16
		04/20/2006	170	<0.05	0.14	<0.088	22	0.017	7.4	13.7	412	0.68	-16
		07/19/2006	--	--	--	--	--	7.8	16.5	415	0.58	19	
	Dup (QC-1)	07/19/2006	--	--	--	--	--	7.8	16.5	415	0.58	19	
		04/26/2007	200	--	0.15	<0.085	5.7	0.59	8	11.4	442	0.39	-47
	04/09/2008	202	0.0994	0.1	1.1	5.4	0.362	7.5	10	448	0.5	-37	
	04/20/2009	211	<0.005	0.164	<0.085	15.1	0.236	8.9	11.4	483	0.38	-73	
	04/06/2010	209	0.0101	0.167	<0.20	11.2	0.119	7.9	13.5	475	0.43	62	
	04/12/2011	190	<0.0083	0.143	0.28	17.2	0.0512	7.6	13.7	388	3.85	105	
	04/24/2012	197	0.0133	0.135	<0.20	2.9	0.135	7.8	12.5	425	0.37	51	
04/23/2013	205	0.0159	0.161	<0.15	2.4	0.711	7.8	10.6	434	0.53	136		
04/29/2014	--	--	--	--	--	--	7.6	10.1	426	0.61	-101		
04/21/2015	190	<0.0129	0.139	<0.15	4.8	--	7.6	10.9	473	0.48	-153		
04/21/2016	--	--	--	--	--	--	7.3	12.4	415	0.32	--		
10/04/2016	--	--	--	--	--	--	--	--	--	--	--		
04/19/2017	--	--	--	--	--	--	7.8	11.0	408	0.25	-202		
04/10/2018	--	--	--	--	--	--	7.43	10.78	453	0.23	-273.8		
04/23/2019	--	--	--	--	--	--	7.64	11.9	471.9	0.17	-225.7		
10/30/2019	--	--	--	--	--	--	--	--	--	--	--		
04/21/2020	--	--	--	--	--	--	7.79	9.26	423	0.07	-185.3		
04/27/2021	--	--	--	--	--	--	7.69	10.33	539	0.15	-213.3		
04/22/2022	--	--	--	--	--	--	7.74	10.37	421.87	0.13	-201.5		
PZ-22B	Dup (QC-1)	10/18/2004	220	0.024	0.073	<0.031	1.3	0.35	7.8	14.3	394	0.34	-29
		12/01/2004	220	0.028	--	<0.031	1.4	1.6	7.7	12.6	385	0.76	48
		01/11/2005	200	<0.018	0.072	<0.087	2	1.1	7.9	12.4	400	0.49	25
		02/08/2005	210	<0.018	0.077	<0.031	1.9	0.89	7.7	11.1	410	0.66	2
		03/09/2005	190	<0.018	0.073	<0.031	5.9	0.35	7.7	11	421	0.51	-14
		03/09/2005	190	<0.018	0.075	0.65	5.7	0.39	7.7	11	421	0.51	-14
		04/19/2005	190	<0.018	0.086	0.26	9	0.24	7.9	13.9	419	0.61	62
		07/06/2005	--	--	--	--	--	--	7.8	15	411	0.56	66
		10/18/2005	190	0.097	0.084	<0.078	1.5	1.5	10.5	14.7	395	0.49	75
		10/18/2005	200	0.096	<0.00040	<0.078	1.4	1.1	--	--	--	--	--
	Dup (QC-1)	01/10/2006	--	--	--	--	--	7.6	10	421	0.48	-112	
		04/19/2006	190	<0.05	0.086	<0.088	19	0.16	7.5	13.1	445	0.6	-66
		07/19/2006	--	--	--	--	--	7.8	15.3	419	0.51	19	
		04/25/2007	200	<0.050	0.094	<0.085	5.3	0.59	8	12.3	438	0.37	-55
		04/09/2008	189	0.127	0.154	<0.085	6.3	0.469	7.5	11.2	309	0.5	-43
		04/20/2009	211	<0.005	0.1	0.17	11.7	0.36	8.8	11.7	476	0.38	-87
		04/06/2010	214	0.0046	0.104	<0.20	5.2	0.211	7.8	12.6	459	0.38	75
		04/12/2011	193	<0.0083	0.101	<0.20	12	0.14	7.5	13.1	390	3.36	29
		04/23/2012	186	0.0259	0.102	<0.20	6.8	0.147	7.6	12.9	416	0.43	-51
		04/23/2013	228	<0.014	0.11	<0.15	5.6	0.376	7.7	11.2	436	0.53	82
		04/29/2014	--	--	--	--	--	--	7.6	11.7	449	1.41	-263
		04/21/2015	193	<0.0129	0.096	<0.15	4.7	--	7.6	10.7	510	0.51	-184
04/21/2016	--	--	--	--	--	--	7.3	12.4	429	0.35	--		
10/04/2016	--	--	--	--	--	--	--	--	--	--	--		
04/19/2017	--	--	--	--	--	--	7.8	11.7	406	0.23	-228		
04/10/2018	--	--	--	--	--	--	7.38	10.61	432.94	0.22	-271.4		
04/23/2019	--	--	--	--	--	--	7.58	15.85	434.3	0.12	-241		
10/30/2019	--	--	--	--	--	--	--	--	--	--	--		
04/21/2020	--	--	--	--	--	--	7.79	8.48	386.9	0.09	-155.8		
04/27/2021	--	--	--	--	--	--	7.65	9.99	508.7	0.09	-227.3		
04/22/2022	--	--	--	--	--	--	7.63	10.47	330.74	0.19	-166		
PZ-23	Well Installed 10/5/2009	10/08/2009	238	0.0139	0.25	<0.20	3	--	7.3	16.4	521	0.39	1
		11/12/2009	240	<b>0.855</b>	0.0921	<0.20	2.1	--	7.4	14.6	533	0.34	169
		04/07/2010	231	<b>1.18</b>	0.0765	<0.20	3	5.52	7.8	8.4	580	0.45	105
		10/05/2010	242	<b>0.704</b>	0.066	<0.20	3.3	6.57	6.1	17.4	613	0.67	167

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2021-2022 ANNUAL REPORT  
WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
APPLETON, WI

Sample Location	Sample Date	Laboratory Parameters (mg/L)						Field Parameters				
		Alkalinity, total	Iron, dissolved	Manganese, dissolved	Nitrite + Nitrate, total	Sulfate, total	Methane	pH (standard units)	Temperature (°C)	Specific Conductance (µmhos/cm)	Dissolved Oxygen (mg/L)	Oxidation / Reduction Potential (mV)
<b>Preventive Action Limit:</b>		NS	0.15	0.06	2	125	NS	NS	NS	NS	NS	NS
<b>Enforcement Standard:</b>		NS	<b>0.3</b>	<b>0.3</b>	<b>10</b>	<b>250</b>	NS	NS	NS	NS	NS	NS
PZ-26	04/30/2014	278	0.018	0.188	<0.15	6.5	14.9	7.1	9.5	764	1.16	50
	10/14/2014	--	--	--	--	--	--	--	--	--	--	--
	04/21/2015	--	--	--	--	--	--	--	--	--	--	--
	04/22/2015	--	--	--	--	--	--	--	--	--	--	--
	10/19/2015	--	--	--	--	--	--	--	--	--	--	--
	01/07/2016	--	--	--	--	--	--	--	--	--	--	--
	04/21/2016	--	--	--	--	--	--	--	--	--	--	--
	07/14/2016	--	--	--	--	--	--	--	--	--	--	--
	10/05/2016	--	--	--	--	--	--	--	--	--	--	--
	01/22/2018	--	--	--	--	--	--	--	--	--	--	--
	04/10/2018	--	--	--	--	--	--	--	--	--	--	--
	07/26/2018	--	--	--	--	--	--	--	--	--	--	--
	10/24/2018	--	--	--	--	--	--	--	--	--	--	--
	04/23/2019	--	--	--	--	--	--	--	--	--	--	--
PZ-27	04/22/2015	229	0.152	0.16	<0.15	3.1	2.82	7.4	8.4	743	0.50	-58
	07/14/2015	233	<b>0.681</b>	0.165	<0.15	2.4	3.38	7.5	16.2	738	0.50	-141
	10/20/2015	252	<b>1.08</b>	0.144	<0.15	<2.0	--	7.6	16.0	570	0.36	-168
	10/20/2015	253	<b>1.01</b>	0.139	<0.15	<2.0	--	7.6	16.0	570	0.36	-168
	01/07/2016	241	<b>0.935</b>	0.123	<0.15	3.9	3.94	8.7	10.2	656	2.35	-143
	04/22/2016	220	<b>0.831</b>	0.118	<0.15	8.8	3.2	7.2	8.9	641	0.31	--
	07/14/2016	239	<b>0.785</b>	0.0982	<0.15	2.4	2.98	7.2	15.5	627	0.44	--
	10/05/2016	233	<b>0.887</b>	0.106	<0.15	<2	3.53	7.3	17.0	653	0.28	-203
	01/18/2017	188	<b>1.5</b>	0.296	<0.075	35.9	2.48	7.51	8.1	10037	0.11	-70
	04/20/2017	224	<b>0.84</b>	0.109	<0.075	2.9	2.15	7.6	8.6	614	0.31	-149
	07/12/2017	236	<b>0.82</b>	0.105	<0.075	<1.0	3.73	7.4	16.3	541	0.49	--
	07/12/2017	235	<b>0.83</b>	0.106	<0.075	<1.0	3.12	7.4	16.3	541	0.49	--
	10/23/2017	233	<b>1.19</b>	0.121	<0.075	<1.0	3.1	7.37	15.7	564	0.16	-129
	01/22/2018	222	<b>1.04</b>	0.113	<0.075	<1.0	--	7.38	10.33	608.98	0.10	-123.0
	04/11/2018	223	<b>1.09</b>	0.11	<0.095	<1.0	4.41	7.29	8.46	582	0.32	-138.0
	07/26/2018	224	<b>1.060</b>	0.105	<0.12	<1.0	2.730	7.22	17.0	556	0.08	-214.0
	10/24/2018	218	<b>1.020</b>	0.107	0.14	<1.0	6.61	7.35	15.1	0.6	0.13	-152
	04/22/2019	221	<b>0.898</b>	0.0939	<0.095	1	4.67	7.68	11.66	582.2	0.72	-104.1
	10/30/2019	217	<b>0.671</b>	0.0846	<0.095	0.78	1.27	7.44	13.56	526.3	0.2	-114.8
	04/20/2020	207	<b>0.84</b>	0.0953	<0.059	1.2	2.53	7.5	11.15	527.2	0.13	-116.2
	04/26/2021	224	<b>1.33</b>	0.113	<0.059	0.59	1.45	7.52	9.8	568.7	0.01	-124.9
	04/21/2022	243	<b>1.24</b>	0.104	<0.059	1	4.43	7.54	9.84	734.35	0.04	-113.1
	PZ-28	04/22/2015	302	0.224	0.059	<0.15	4.8	5.48	7.8	7.9	900	0.42
07/14/2015		--	--	--	--	--	--	--	--	--	--	--
10/19/2015		--	--	--	--	--	--	--	--	--	--	--
01/07/2016		--	--	--	--	--	--	--	--	--	--	--
04/21/2016		--	--	--	--	--	--	--	--	--	--	--
07/14/2016		--	--	--	--	--	--	--	--	--	--	--
10/05/2016		--	--	--	--	--	--	--	--	--	--	--
01/22/2018		--	--	--	--	--	--	--	--	--	--	--
04/10/2018		--	--	--	--	--	--	--	--	--	--	--
07/26/2018		--	--	--	--	--	--	--	--	--	--	--
10/24/2018		--	--	--	--	--	--	--	--	--	--	--
04/23/2019		--	--	--	--	--	--	--	--	--	--	--
10/30/2019		--	--	--	--	--	--	--	--	--	--	--
04/20/2020		--	--	--	--	--	--	--	--	--	--	--
QCFB	02/20/2002	--	--	<0.00042	0.44	--	--	--	--	--	--	--
	05/13/2002	--	--	<0.00035	0.1	--	--	--	--	--	--	--
	08/20/2002	--	--	<0.00035	0.31	--	--	--	--	--	--	--
	11/14/2002	--	--	<0.00035	0.27	--	--	--	--	--	--	--
	02/20/2003	--	--	<0.00045	<0.135	--	--	--	--	--	--	--
	10/19/2004	<8.3	<0.018	0.0013	<0.031	<0.36	<0.01	--	--	--	--	--
	12/01/2004	--	--	--	--	--	8.7	3.4	1.0	9.1	26	26
	12/02/2004	<8.3	<0.018	0.0012	<0.031	<0.36	<0.010	--	--	--	--	--
	01/13/2005	<8.3	<0.018	<0.00028	<0.087	<0.4	<0.010	9.3	4.8	3.0	9.62	82
	02/10/2005	<8.3	<0.018	<0.00028	<0.031	<0.36	<0.01	8.7	4	2.0	12.7	137
	03/10/2005	<8.3	<0.018	<0.00028	<0.031	<0.36	<0.010	8.4	24.7	3.0	8.74	62
	04/20/2005	<6.3	<0.018	<0.00028	0.18	<0.83	<0.010	8.7	19.3	2.0	8.4	176
	07/07/2005	--	--	--	--	--	--	8.1	23.8	2.0	6.1	73
	10/19/2005	<6.3	<0.04	0.00097	<0.078	<0.83	<0.01	11.2	16.6	1.0	6.33	40
	01/12/2006	--	--	--	--	--	--	9	6.8	1.0	8.17	70
	04/19/2006	<9.7	<0.05	<0.00022	<0.088	<0.77	<0.01	5.9	17.2	1.0	7.6	211
	07/20/2006	--	--	--	--	--	--	8.1	26.9	2.0	6.35	25
	10/24/2006	<9.7	<50	<0.22	<0.20	<0.77	<10	9.1	11.4	1.0	6.23	132
	04/26/2007	--	--	--	--	--	--	9.3	12.8	1.0	7.14	125
	10/09/2007	<0	<0.026	--	<0.085	<0.51	<10	9.7	28.6	2.0	5.36	124
	04/09/2008	<0	0.009	0.00055	<0.085	<0.51	<2	8.1	11.4	3.0	8.23	107
	10/21/2008	<10	0.0076	0.00035	<0.085	<0.51	<0.002	8.7	16.5	1.0	8.7	42
	04/21/2009	<10	<0.005	<0.00024	<0.085	<0.51	<0.002	9.5	11.7	2.0	7.35	-52
	10/08/2009	<10	<0.0062	<0.000074	<0.20	2	--	7.5	15.3	1.0	7.81	159
	04/07/2010	<10	0.0042	0.00012	<0.20	<2.0	--	7.6	13.7	1.0	8.6	141
	10/05/2010	<10	<0.0083	<0.00014	<0.20	<2.0	<0.00093	6.2	17	2.0	8.05	250
	01/18/2011	<10	<0.0083	<0.00014	<0.20	<2.0	--	7.5	11.2	4.0	9.94	157
	04/12/2011	6360	<0.0083	<0.00014	<0.20	<2.0	<0.00093	7.8	6.2	2.0	11.05	136
	07/13/2011	<10	<0.0033	<0.000098	<0.20	<2.0	<0.00093	8.6	25	2.0	7.58	-54
	10/03/2011	<10	<0.0033	<0.000098	<0.20	<2.0	<0.00064	7.8	29.1	2.0	6.1	149
	01/04/2012	<10	<0.0033	<0.000098	<0.20	<2.0	<0.00064	9.3	16.1	0.5	8.02	112
	04/24/2012	<10	0.0197	<0.00032	<0.20	<2.0	<0.00064	7.4	17.9	4.0	6.8	105
	06/26/2012	<10	<0.0226	<0.00014	<0.20	<2.0	<0.00064	--	--	--	--	--
	09/13/2012	<10	0.0142	0.00063	<0.20	<2.0	<0.00064	5.5	21.5	7.0	8.01	202
	01/29/2013	<8.6	<0.0226	0.0002	<0.20	<2.0	<0.00064	6.1	6.2	3.0	9	116
	04/24/2013	8.7	<0.014	<0.0006	<0.15	<2.0	<0.00064	7.7	13.2	4.0	7.6	161
	07/16/2013	<8.6	<0.014	0.0016	<0.15	<2.0	<0.00064	7.2	27.4	3.0	7.6	150
	10/15/2013	<8.6	0.00078	<0.00011	<0.15	<2.0	<0.64	7.2	19.4	3.0	7.9	148
	04/30/2014	<7.5	<0.0129	<0.0014	<0.15	<2.0	<0.0014	7.3	13.4	4.0	5.68	74
	04/21/2015	<7.5	<0.0129	<0.0014	<0.15	<2.0	<0.0014	7.1	24.5	5.0	3.45	-150
	07/14/2015	<7.5	<0.010	<0.00018	<0.15	<2.0	<0.0014	8.6	18.0	5.0	9.80	--
	10/19/2015	<7.5	<0.0137	<0.00024	<0.15	<2.0	<0.0014	7.9	19.5	5.0	15.25	-95
	01/07/2016	<7.5	<0.0137	<0.00024	<0.15	<2	<0.0014	8.5	6.1	3.0	2.66	--
	04/21/2016	<7	<0.0066	<0.00011	<0.15	<2	<0.0014	7.7	18.7	16.0	6.74	--
	07/14/2016	<7	<0.01	<0.00018	<0.15	<2	<0.0014	7.9	27.5	32.0	7.21	--
	10/04/2016	<7	0.018	0.00019	<0.15	<2	<0.0014	9.5	21.1	2.0	5.71	-117
01/18/2017	9.1	0.061	0.00087									



**TABLE 5. NAPL OBSERVATIONS**

2020-2021 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Location	Date	NAPL Thickness <sup>1</sup> (ft)	NAPL Recovered After Measurement (gal.)	Method of NAPL Observation				
				Visual inspection of purge water and groundwater sample	Visual inspection of tubing used for sample collection	Oil / Water Interface Probe (surface reading)	Oil / Water Interface Probe (bottom reading)	Bailer sent to bottom of well
MW-02R	04/23/2012	0.00	--	--	--	--	--	--
	04/23/2013	0.00	--	--	--	--	--	--
	04/29/2014	0.00	--	--	--	--	--	--
	04/21/2015	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	04/10/2018	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/31/2019	0.00	--	--	--	--	--	--
	04/21/2020	0.00	--	--	--	--	--	--
	04/27/2021	0.00	--	--	--	--	--	--
04/22/2022	0.00	--	--	--	--	--	--	
MW-12R	10/14/2011	--	--	--	--	ND,N	ND,N	--
	04/23/2012	0.00	--	--	--	--	--	--
	04/24/2013	0.00	--	--	--	--	--	--
	04/29/2014	0.00	--	--	--	--	--	--
	04/21/2015	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	04/10/2018	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/31/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
04/26/2021	0.00	--	--	--	--	--	--	
04/21/2022	0.00	--	--	--	--	--	--	
PZ-12B	10/14/2011	--	--	--	--	ND,N	ND,N	--
	04/21/2016	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
	04/26/2021	0.00	--	--	--	--	--	--
04/21/2022	0.00	--	--	--	--	--	--	
MW-13R	04/23/2012	0.00	--	--	--	--	--	--
	04/23/2013	0.00	--	--	--	--	--	--
	04/29/2014	0.00	--	--	--	--	--	--
	04/21/2015	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	04/10/2018	0.00	--	--	--	--	--	--
	04/23/2019	0.00	--	--	--	--	--	--
	10/31/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
	04/26/2021	0.00	--	--	--	--	--	--
04/21/2022	0.00	--	--	--	--	--	--	
MW-19	04/23/2012	0.00	--	--	--	--	--	--
	04/23/2013	0.00	--	--	--	--	--	--
	04/29/2014	0.00	--	--	--	--	--	--
	04/21/2015	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	04/10/2018	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
	04/26/2021	0.00	--	--	--	--	--	--
04/21/2022	0.00	--	--	--	--	--	--	
MW-20	10/14/2011	--	--	--	--	ND,N	ND,N	--
	04/23/2012	0.20	--	--	--	--	--	--
	06/26/2012	0.20	--	--	--	--	--	--
	09/12/2012	0.10	--	--	--	--	--	--
	01/28/2013	0.20	--	--	--	--	--	--
	04/23/2013	0.10	--	--	--	--	--	--
	07/16/2013	0.10	--	--	--	--	--	--
	10/15/2013	0.05	--	--	--	--	--	--
	04/29/2014	0.10	--	--	--	--	--	--
	04/29/2014	0.00	--	--	--	--	--	--
	04/21/2015	0.00	--	--	--	--	--	--
	10/19/2015	0.15	--	--	--	--	--	--
	04/21/2016	0.20	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	04/19/2017	0.25	--	--	oil/tar present	--	--	--
	10/23/2017	0.01	--	--	--	--	--	--
	04/10/2018	0.00	--	trace NAPL	--	--	--	--
	10/25/2018	0.00	--	--	--	--	--	--
	04/23/2019	0.00	--	--	--	--	--	--
	10/31/2019	0.00	--	--	--	--	--	--
04/21/2020	0.00	--	--	--	--	--	--	
04/27/2021	0.00	--	--	--	--	--	--	
04/22/2022	0.00	--	--	--	--	--	--	

**TABLE 5. NAPL OBSERVATIONS**

2020-2021 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Location	Date	NAPL Thickness <sup>1</sup> (ft)	NAPL Recovered After Measurement (gal.)	Method of NAPL Observation				
				Visual inspection of purge water and groundwater sample	Visual inspection of tubing used for sample collection	Oil / Water Interface Probe (surface reading)	Oil / Water Interface Probe (bottom reading)	Bailer sent to bottom of well
PZ-20B	04/21/2016	0.00	--	--	--	--	--	--
	04/23/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/21/2020	0.00	--	--	--	--	--	--
	04/27/2021	0.00	--	--	--	--	--	--
	04/22/2022	0.00	--	--	--	--	--	--
MW-21	10/14/2011	--	--	--	--	ND,N	less than 1-foot	--
	10/20/2011	--	--	--	--	oil present, no meas.	--	--
	04/23/2012	0.25	--	--	--	--	--	--
	06/26/2012	0.25	--	--	--	--	--	--
	09/12/2012	0.35	--	--	--	--	--	--
	01/28/2013	0.20	--	--	--	--	--	--
	04/23/2013	0.25	--	--	--	--	--	--
	07/06/2013	0.20	--	--	--	--	--	--
	07/16/2013	0.20	--	--	--	--	--	--
	10/15/2013	0.25	--	--	--	--	--	--
	04/29/2014	0.38	--	--	--	--	--	--
	10/13/2014	0.35	--	--	--	--	--	--
	04/21/2015	0.25	--	--	--	--	--	--
	10/19/2015	0.25	--	--	--	--	--	--
	04/21/2016	0.25	--	--	--	--	--	--
	10/04/2016	0.25	--	--	--	--	--	--
	04/19/2017	0.25	--	--	oil/tar present	--	--	--
	10/23/2017	0.00	--	--	--	--	--	--
	04/10/2018	0.00	--	--	trace NAPL	--	--	--
	10/25/2018	0.00	--	--	--	--	--	--
04/23/2019	0.00	--	--	trace NAPL	--	--	--	
10/31/2019	0.00	--	--	trace NAPL	--	--	--	
04/21/2020	0.00	--	--	--	trace NAPL	--	--	
04/27/2021	0.00	--	--	--	--	--	--	
04/22/2022	0.00	--	--	--	--	--	--	
PZ-21B	10/14/2011	--	--	--	--	ND,N	ND,N	--
	04/21/2016	0.00	--	--	--	--	--	--
	04/23/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/21/2020	0.00	--	--	--	--	--	--
	04/27/2021	0.00	--	--	--	--	--	--
MW-22	04/22/2022	0.00	--	--	--	--	--	--
	10/14/2011	--	--	--	--	ND,N	ND,N	--
	04/23/2012	0.00	--	--	--	--	--	--
	04/23/2013	0.00	--	--	--	--	--	--
	04/29/2014	0.00	--	--	--	--	--	--
	04/21/2015	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	04/10/2018	0.00	--	--	--	--	--	--
	04/23/2019	0.00	--	--	--	--	--	--
	10/31/2019	0.00	--	--	--	--	--	--
	04/21/2020	0.00	--	--	--	--	--	--
04/27/2021	0.00	--	--	--	--	--	--	
PZ-22B	10/14/2011	--	--	--	--	ND,N	ND,N	--
	04/21/2016	0.00	--	--	--	--	--	--
	04/23/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/21/2020	0.00	--	--	--	--	--	--
	04/27/2021	0.00	--	--	--	--	--	--
MW-23	04/22/2022	0.00	--	--	--	--	--	--
	04/23/2012	0.00	--	--	--	--	--	--
	01/07/2016	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
PZ-23	04/26/2021	0.00	--	--	--	--	--	--
	04/21/2022	0.00	--	--	--	--	--	--
	10/08/2009	--	--	N	N	--	--	--
	11/12/2009	--	--	N	N	--	--	--
	02/02/2010	--	--	--	--	ND, N	ND, N	N
	04/07/2010	--	--	N	N	ND, N	ND, N	--
	10/05/2010	--	--	N	N	ND, N	ND, N	--
	01/18/2011	--	--	N	N	--	--	--
	04/11/2011	--	--	N	N	ND, N	ND, N	--
	07/13/2011	--	--	N	N	ND, N	ND, N	--
	10/04/2011	--	--	N	N	ND, N	ND, N	--
	10/14/2011	--	--	--	--	ND, N	ND, N	--
	01/04/2012	--	--	--	--	ND, N	ND, N	--
	04/23/2012	0.00	--	--	--	--	--	--
06/26/2012	0.00	--	--	--	--	--	--	
09/12/2012	0.00	--	--	--	--	--	--	
04/24/2013	0.00	--	--	--	--	--	--	
04/29/2014	0.00	--	--	--	--	--	--	

**TABLE 5. NAPL OBSERVATIONS**

2020-2021 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Location	Date	NAPL Thickness <sup>1</sup> (ft)	NAPL Recovered After Measurement (gal.)	Method of NAPL Observation				
				Visual inspection of purge water and groundwater sample	Visual inspection of tubing used for sample collection	Oil / Water Interface Probe (surface reading)	Oil / Water Interface Probe (bottom reading)	Bailer sent to bottom of well
PZ-23 cont.	04/21/2015	0.00	--	--	--	--	--	--
	01/07/2016	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	07/14/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	01/22/2018	0.00	--	--	--	--	--	--
	04/11/2018	0.00	--	--	--	--	--	--
	07/26/2018	0.00	--	--	--	--	--	--
	10/24/2018	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
	04/26/2021	0.00	--	--	--	--	--	--
04/21/2022	0.00	--	--	--	--	--	--	
MW-24	01/29/2013	0.00	--	--	--	--	--	--
	04/24/2013	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	10/05/2016	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
	04/26/2021	0.00	--	--	--	--	--	--
04/21/2022	0.00	--	--	--	--	--	--	
MW-25	01/28/2013	0.00	--	--	--	--	--	--
	04/24/2013	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/31/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
	04/26/2021	0.00	--	--	--	--	--	--
04/21/2022	0.00	--	--	--	--	--	--	
MW-26	04/21/2015	0.00	--	--	--	--	--	--
	07/14/2015	0.00	--	--	--	--	--	--
	10/19/2015	0.00	--	--	--	--	--	--
	01/07/2016	0.00	--	--	--	--	--	--
	04/22/2016	0.00	--	--	--	--	--	--
	07/14/2016	0.00	--	--	--	--	--	--
	10/05/2016	0.00	--	--	--	--	--	--
	01/18/2017	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	07/12/2017	0.00	--	--	--	--	--	--
	10/23/2017	0.00	--	--	--	--	--	--
	01/22/2018	0.00	--	--	--	--	--	--
	04/11/2018	0.00	--	--	--	--	--	--
	07/26/2018	0.00	--	--	--	--	--	--
	10/24/2018	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
10/30/2019	0.00	--	--	--	--	--	--	
04/20/2020	0.00	--	--	--	--	--	--	
04/26/2021	0.00	--	--	--	--	--	--	
04/21/2022	0.00	--	--	--	--	--	--	
PZ-26	04/29/2014	0.30	--	--	--	--	--	--
	07/21/2014	NM	--	--	--	--	--	--
	10/13/2014	4.8	--	--	--	--	--	--
	01/28/2015	10.55	--	--	--	--	--	--
	04/21/2015	4.5	1.0	--	--	--	--	--
	07/14/2015	6.5	1.0	--	--	--	--	--
	10/19/2015	3.6	0.8	--	--	--	--	--
	01/07/2016	4.5	0.5	--	--	--	--	--
	04/21/2016	4.5	0.75	--	--	--	--	--
	07/14/2016	4.5	0.75	--	--	--	--	--
	10/05/2016	4.5	0.75	--	--	--	--	--
	01/18/2017	2	1	--	--	--	--	--
	04/19/2017	4.5	-- <sup>2</sup>	--	--	--	--	--
	07/12/2017	14**	0.13	--	--	--	--	--
	08/04/2017	5.3	0.5	--	--	--	--	--
	10/23/2017	4.5	-- <sup>2</sup>	--	--	--	--	--
	01/22/2018	2.91	1	--	--	--	--	--
	04/10/2018	2.5	--	--	--	--	--	--
	07/26/2018	2.5	--	--	--	--	--	--
	10/23/2018	2.20	--	trace LNAPL	--	--	--	--
04/22/2019	1.45	--	trace DNAPL	--	--	--	--	
10/30/2019	1.35	--	trace DNAPL	--	--	--	--	
04/20/2020	2.25	--	DNAPL	--	--	--	--	
04/26/2021	2.40	--	DNAPL	--	--	--	--	
04/21/2022	2.11	--	DNAPL	--	--	--	--	
MW-27	04/21/2015	0.00	--	--	--	--	--	--
	07/14/2015	0.00	--	--	--	--	--	--
	10/19/2015	0.00	--	--	--	--	--	--
	01/07/2016	0.00	--	--	--	--	--	--
	04/21/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--

**TABLE 5. NAPL OBSERVATIONS**

2020-2021 ANNUAL REPORT  
 WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Location	Date	NAPL Thickness <sup>1</sup> (ft)	NAPL Recovered After Measurement (gal.)	Method of NAPL Observation				
				Visual inspection of purge water and groundwater sample	Visual inspection of tubing used for sample collection	Oil / Water Interface Probe (surface reading)	Oil / Water Interface Probe (bottom reading)	Bailer sent to bottom of well
MW-27 cont.	01/18/2017	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	07/12/2017	0.00	--	--	--	--	--	--
	10/23/2017	0.00	--	--	--	--	--	--
	01/22/2018	0.00	--	--	--	--	--	--
	04/11/2018	0.00	--	--	--	--	--	--
	07/26/2018	0.00	--	--	--	--	--	--
	10/24/2018	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
	04/20/2020	0.00	--	--	--	--	--	--
	04/26/2021	0.00	--	--	--	--	--	--
	04/21/2022	0.00	--	--	--	--	--	--
PZ-27	04/21/2015	0.00	--	--	--	--	--	--
	07/14/2015	0.00	--	--	--	--	--	--
	10/19/2015	0.00	--	--	--	--	--	--
	01/07/2016	0.00	--	--	--	--	--	--
	04/22/2016	0.00	--	--	--	--	--	--
	07/14/2016	0.00	--	--	--	--	--	--
	10/05/2016	0.00	--	--	--	--	--	--
	01/18/2017	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	07/12/2017	0.00	--	--	--	--	--	--
	10/23/2017	0.00	--	--	--	--	--	--
	01/22/2018	0.00	--	--	--	--	--	--
	04/11/2018	0.00	--	--	--	--	--	--
	07/26/2018	0.00	--	--	--	--	--	--
	10/24/2018	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
04/20/2020	0.00	--	--	--	--	--	--	
04/26/2021	0.00	--	--	--	--	--	--	
04/21/2022	0.00	--	--	--	--	--	--	
MW-28	04/21/2015	0.00	--	--	--	--	--	--
	07/14/2015	0.00	--	--	--	--	--	--
	10/19/2015	0.00	--	--	--	--	--	--
	01/07/2016	0.00	--	--	--	--	--	--
	04/22/2016	0.00	--	--	--	--	--	--
	07/14/2016	0.00	--	--	--	--	--	--
	10/04/2016	0.00	--	--	--	--	--	--
	01/18/2017	0.00	--	--	--	--	--	--
	04/19/2017	0.00	--	--	--	--	--	--
	07/12/2017	0.00	--	--	--	--	--	--
	10/23/2017	0.00	--	--	--	--	--	--
	01/22/2018	0.00	--	--	--	--	--	--
	04/11/2018	0.00	--	--	--	--	--	--
	07/26/2018	0.00	--	--	--	--	--	--
	10/24/2018	0.00	--	--	--	--	--	--
	04/22/2019	0.00	--	--	--	--	--	--
	10/30/2019	0.00	--	--	--	--	--	--
04/20/2020	0.00	--	--	--	--	--	--	
04/26/2021	0.00	--	--	--	--	--	--	
04/21/2022	0.00	--	--	--	--	--	--	
PZ-28	04/21/2015	0.00	--	--	--	--	--	--
	07/14/2015	0.35	--	--	--	--	--	--
	10/19/2015	0.45	--	--	--	--	--	--
	01/07/2016	0.45	--	--	--	--	--	--
	04/21/2016	0.25	--	--	--	--	--	--
	07/14/2016	0.30	--	--	--	--	--	--
	10/04/2016	0.25	--	--	--	--	--	--
	01/18/2017	0.5	--	--	--	--	--	--
	04/19/2017	1	-- <sup>2</sup>	--	--	--	--	--
	07/12/2017	1.75	0.40	--	--	--	--	--
	08/04/2017	0.6	--	--	--	--	--	--
	10/23/2017	0.25	-- <sup>2</sup>	--	--	--	--	--
	01/22/2018	0.88	--	--	--	--	--	--
	04/10/2018	NM	--	trace DNAPL	--	--	--	--
	07/26/2018	0.75	--	--	--	--	--	--
	10/23/2018	1.0	--	trace DNAPL	--	--	--	--
	04/22/2019	1.05	--	trace DNAPL	--	--	--	--
10/30/2019	0.90	--	trace DNAPL	--	--	--	--	
04/20/2020	0.85	--	trace DNAPL	--	--	--	--	
04/26/2021	0.18	--	trace DNAPL	--	--	--	--	
04/21/2022	NM	--	trace DNAPL	--	--	--	--	

[BGH/RMN 5/10][AMM/KJB 02/11][NDK/BGH 08/11][CJM/AMM 01/12][AMM/JJW 5/12][AMM/ANS 7/12][AMM/NDK10/12][ETE/RJG 3/13] [ETO/RJG 5/13] [NDK/RJG 9/13][ETE/NDK 10/13][U-AIS 6/14]

2/15][U-PMH 11/15, C-KLT 12/8/15 U:KJS 2/9/17; C: EMS 2/10/17][U: KLT 11/27/17, C: 11/27/17][U: KLT 2/20/17, C: KJK 2/20/18] [U: JQW 2/27/19, C: KLT 3/13/19][U: KLT 4/15/20, C:MIK 4/20/20, U:KJS 8/12/21, C: AGC 8/13/21, U:KJS 7/27/22]

**Notes:**

- 1: Starting in April 2012, NAPL thickness was measured with weighted tape sent to bottom of well.
- 2: Pump broken
- \*\* : NAPL remeasured during well repair on August 4, 2017.
- N: No Visible Evidence in water or on equipment (e.g., tubing, probe, bailer).
- No reading
- ND: No detectible NAPL
- NM: Not Measured



**TABLE 6. GROUNDWATER MONITORING PLAN**

2022 ANNUAL REPORT

WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE  
 APPLETON, WI

Monitoring Well Location	Analytical Parameters				RNA Parameters			
	BTEX (USEPA 8260B)	Benzene (USEPA 8260B)	Naphthalene (USEPA 8260B)	Arsenic, Dissolved (USEPA 6020)	Geochemical Parameters <sup>1</sup> (Various)	Field Parameters <sup>2</sup>	DNAPL Measurement	Water Levels
<b>Site Monitoring Wells (Area 1 North of Fox River Canal)</b>								
MW-02R	A		A	A	A	A	A	A
MW-08								A
MW-09								A
MW-10								A
MW-12R	A		A	A	A	A	A	A
MW-13R	A		A	A	A	A	A	A
MW-19	A		A	A	A	A	A	A
MW-19S								A
MW-20	A		A	A	A	A	A	A
MW-21	A		A	A	A	A	A	A
MW-22	A		A	A	A	A	A	A
MW-24	A		A	A	A	A		A
MW-25	A		A	A	A	A		A
<b>Site Bedrock Piezometers (Area 1 North of Fox River Canal)</b>								
PZ-12B		A	A			A		A
PZ-20B		A	A			A		A
PZ-21B		A	A			A		A
PZ-22B		A	A			A		A
<b>Fox River Apartment Wells (Area 2 South of Fox River Canal)</b>								
MW-23								A
PZ-23	A		A	A	A	A	A	A
PZ-26 <sup>3</sup>	A		A	A	A	A	A <sup>3</sup>	A
MW-26	A		A	A	A	A	A	A
MW-27	A		A	A	A	A	A	A
PZ-27	A		A	A	A	A	A	A
MW-28	A		A	A	A	A	A	A
PZ-28 <sup>3</sup>	A		A	A	A	A	A <sup>3</sup>	A
<b>Staff Gauges</b>								
SG-3								A
SG-4								A

(BGH 3/4/14)(PMH 3/20/14)(U-PMH 2/15)(U-BGH 3/17)(U-KLT 4/25/18)[U: KLT 3/25/19]

**Notes:**

BTEX = Benzene, ethylbenzene, toluene, xylenes (total)

RNA = Remediation by Natural Attenuation

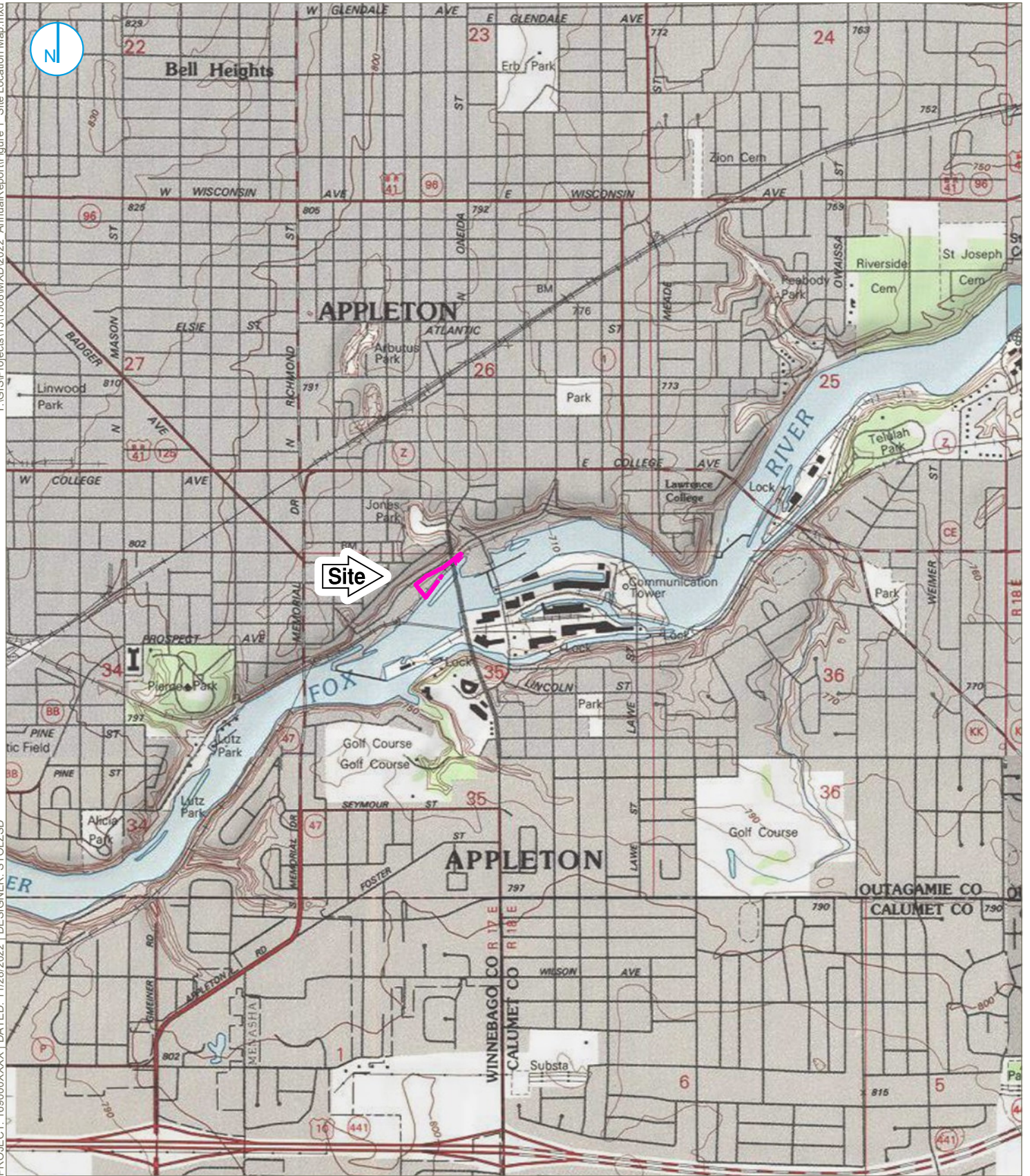
A = Annual Sampling Frequency (Apr)

Well not monitored for designated parameters.

1. Geochemical parameters include: nitrogen (NO<sub>2</sub>+NO<sub>3</sub>), methane, dissolved iron and manganese, sulfate, and
2. Field parameters include: pH, dissolved oxygen, temperature, specific conductance, and oxidation/reduction po
3. Water quality sampling will not be conducted at this location as long as NAPL remains present.

## FIGURES





KEY MAP

Map Scale: 1:1,19,130,106;  
Map Center: 88°24'12"W 44°15'25"N

— FORMER MGP SITE

0 500 1,000 2,000 Feet

### SITE LOCATION 2022 ANNUAL REPORT

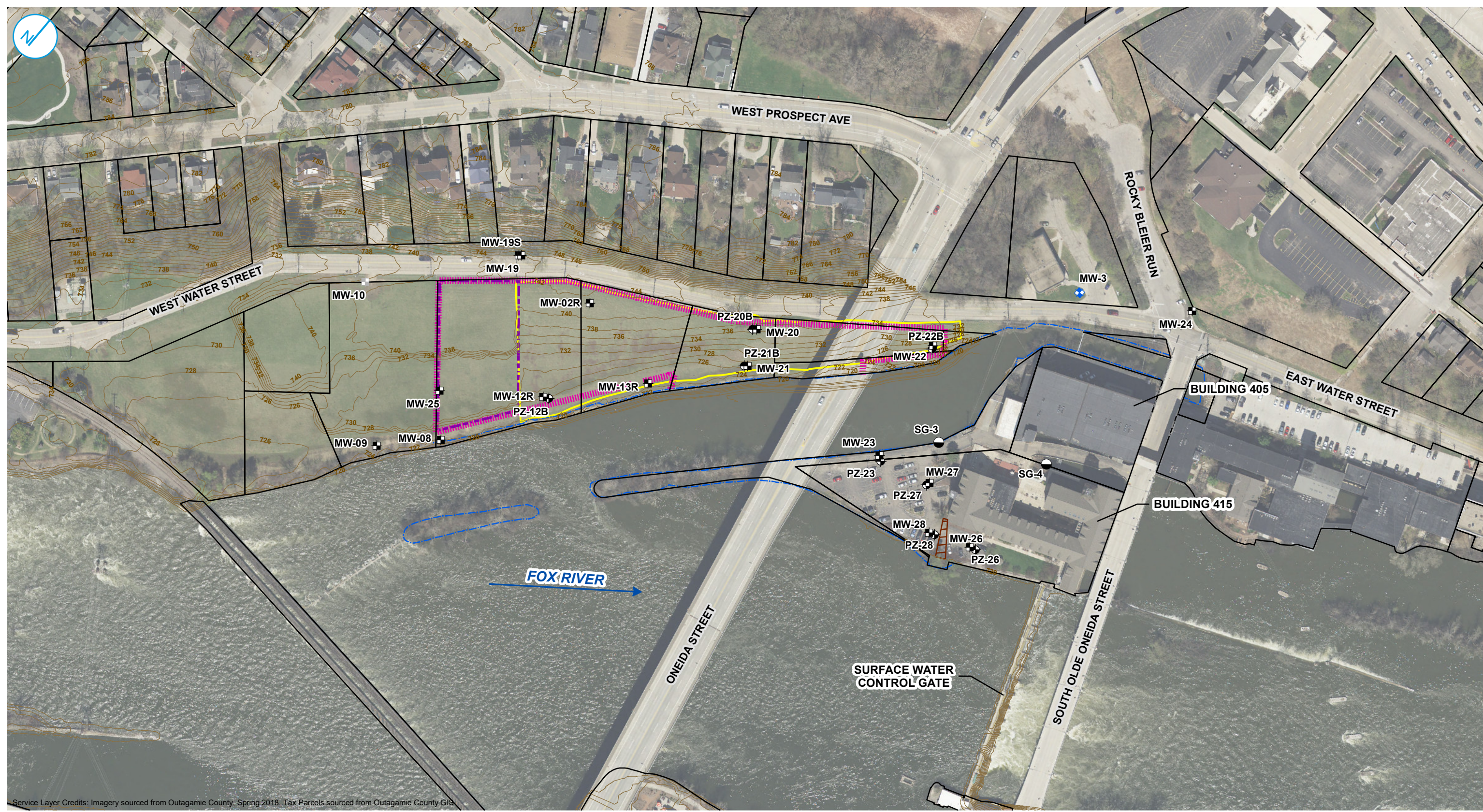
**WE ENERGIES  
FORMER APPLETON  
MANUFACTURED GAS PLANT (MGP)  
APPLETON, WISCONSIN**

**FIGURE 1**

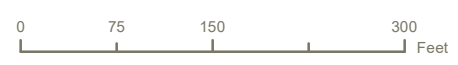
RAMBOLL AMERICAS  
ENGINEERING SOLUTIONS, INC.







- MONITORING WELL LOCATION
- LAWRENCE UNIVERSITY PROPERTY WELL (ABANDONED)
- ABANDONED MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- STAFF GAUGE LOCATION
- GROUND SURFACE ELEVATION CONTOURS (2-FT INTERVAL)
- FOX RIVER FLOW DIRECTION
- SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT
- FORMER WASTE WATER TREATMENT PLANT STRUCTURES DEMOLISHED IN THIS AREA
- HISTORICAL NEEDLE DAM STRUCTURE
- 2019 TAX PARCEL



**Notes**  
- PLAN NORTH IS N39° 11' 42" OF TRUE NORTH

**SITE FEATURES**  
2022 ANNUAL REPORT

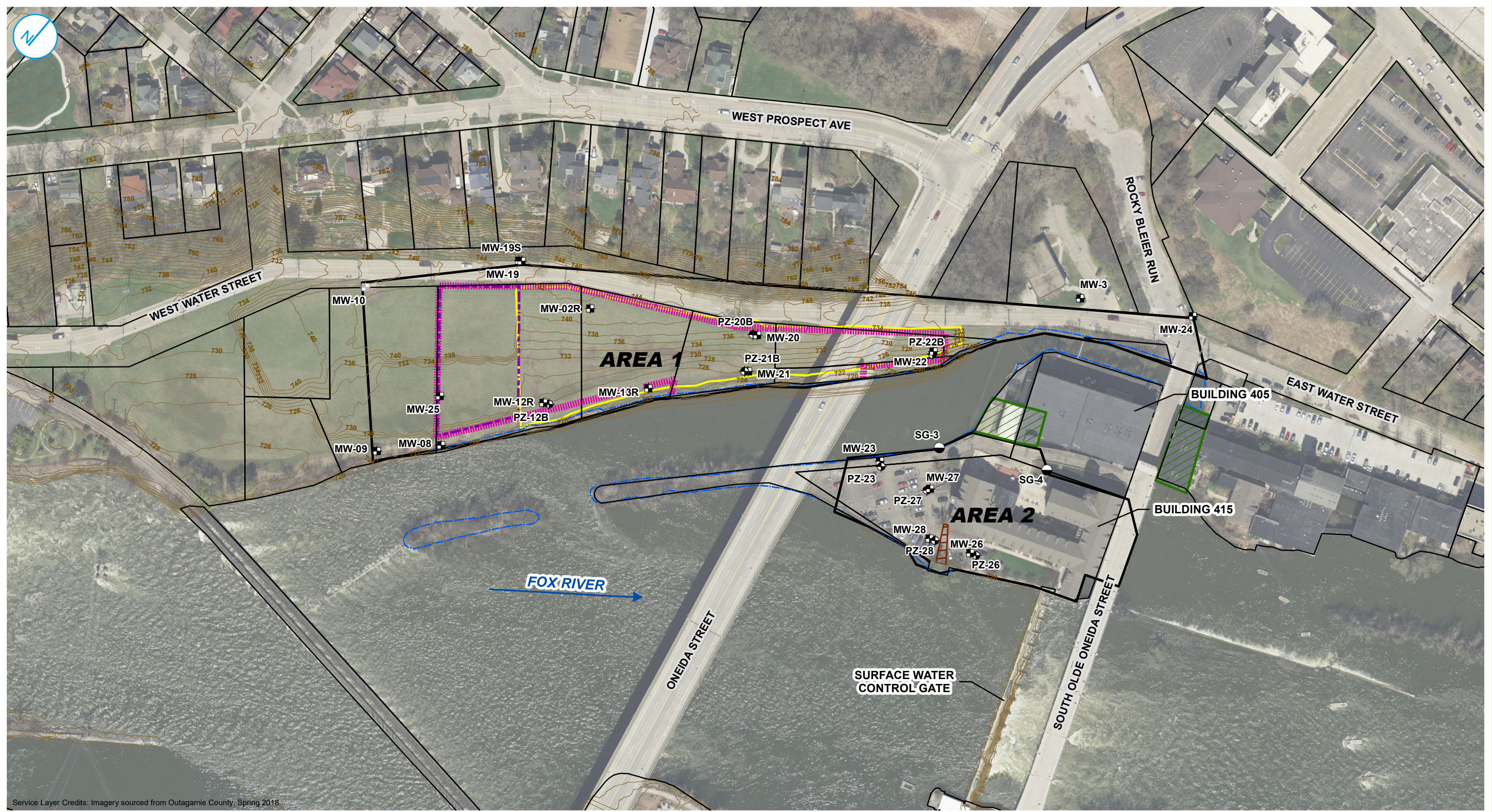
**WE ENERGIES**  
**FORMER APPLETON**  
**MANUFACTURED GAS PLANT (MGP)**  
APPLETON, WISCONSIN

**FIGURE 2**

RAMBOLL AMERICAS  
ENGINEERING SOLUTIONS, INC.







Service Layer Credits: Imagery sourced from Outagamie County, Spring 2018.

- MONITORING WELL
- ABANDONED MONITORING WELL LOCATION
- PIEZOMETER LOCATION
- STAFF GAUGE LOCATION
- FOX RIVER FLOW DIRECTION
- SHORELINE
- FORMER MGP SITE
- PERIMETER OF ISS TREATMENT
- HYDROGEOLOGIC
- APPROXIMATE LOCATION OF HYDROELECTRIC UNIT
- FORMER WASTE WATER TREATMENT PLANT STRUCTURES DEMOLISHED IN THIS AREA
- HISTORICAL NEEDLE DAM



Notes  
- PLAN NORTH IS N39° 11' 42" OF TRUE NORTH

**HYDROGEOLOGIC AREAS 1 AND 2**  
2022 ANNUAL REPORT

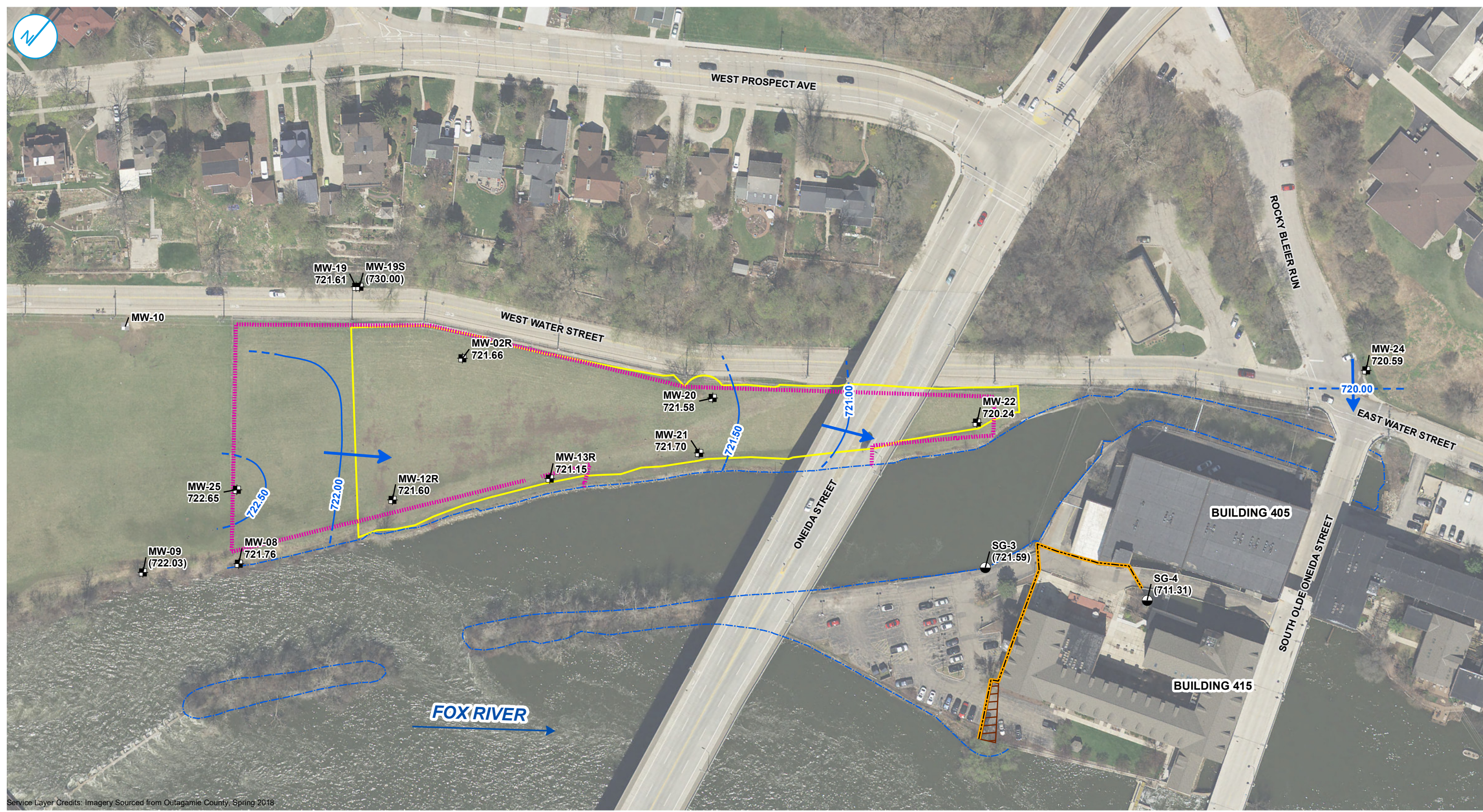
**WE ENERGIES**  
FORMER APPLETON  
MANUFACTURED GAS PLANT (MGP)  
APPLETON, WISCONSIN

**FIGURE 3**

RAMBOLL AMERICAS  
ENGINEERING SOLUTIONS, INC.







- MONITORING WELL LOCATION
- ABANDONED MONITORING WELL LOCATION
- STAFF GAUGE LOCATION
- GROUNDWATER ELEVATION CONTOUR (FT NAVD88, 0.5 FT INTERVAL)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- FOX RIVER FLOW DIRECTION
- SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT AREA
- STRUCTURAL BARRIER TO GROUNDWATER FLOW
- HISTORICAL NEEDLE DAM STRUCTURE



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - WATER ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING

**LOWER TILL PIEZOMETRIC SURFACE ELEVATIONS (AREA 1) APRIL 2022**  
 2022 ANNUAL REPORT

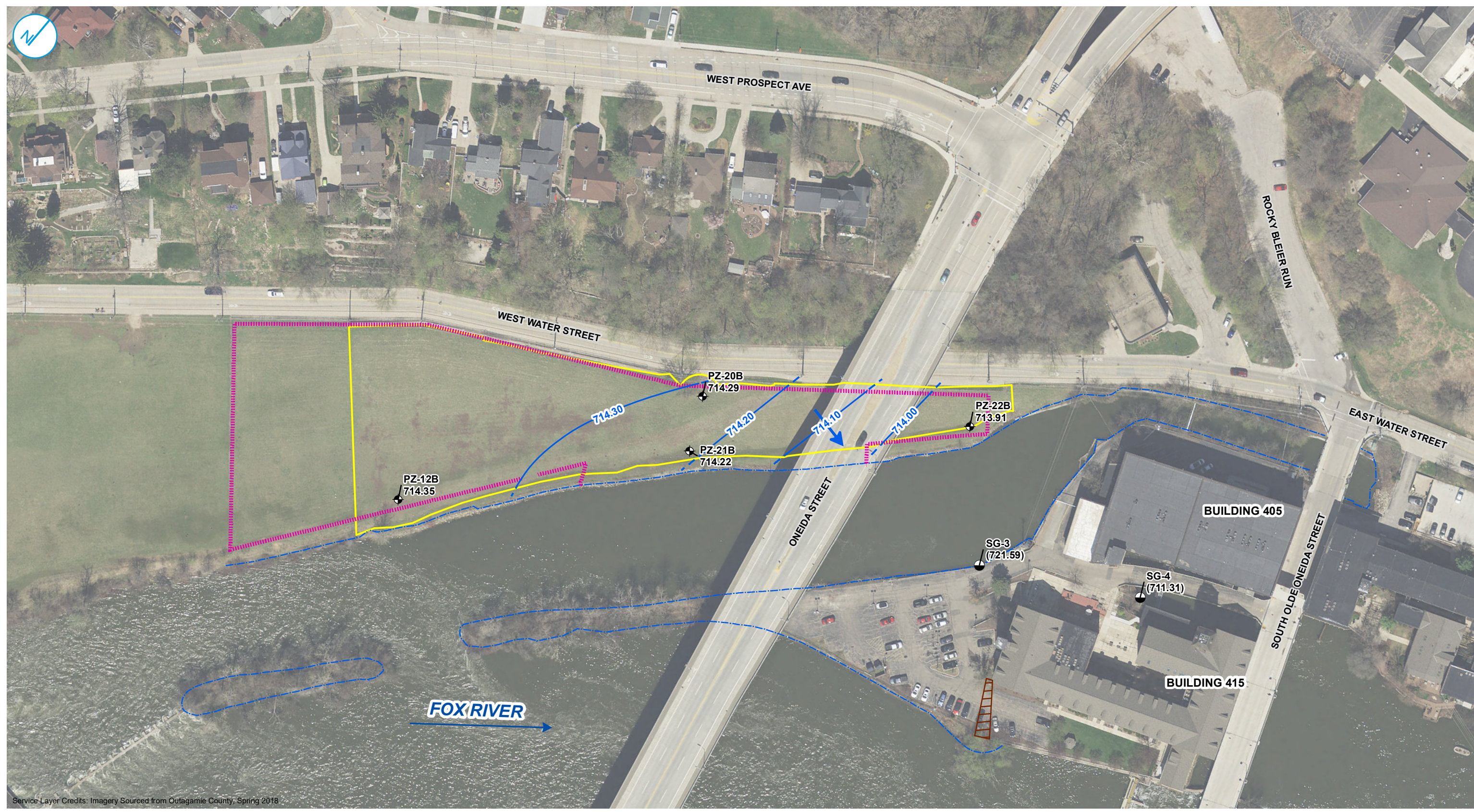
**WE ENERGIES**  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN

**FIGURE 4**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.







Service Layer Credits: Imagery Sourced from Outagamie County, Spring 2018

- ◆ PIEZOMETER LOCATION
- STAFF GAUGE LOCATION
- GROUNDWATER ELEVATION CONTOUR (FT NAVD88, 0.1 FT INTERVAL)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION
- ➔ FOX RIVER FLOW DIRECTION
- - - SHORELINE
- ▬ FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT
- ▭ HISTORICAL NEEDLE DAM STRUCTURE



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - WATER ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING

**BEDROCK PIEZOMETRIC SURFACE ELEVATIONS (AREA 1) APRIL 2022**  
 2022 ANNUAL REPORT

**WE ENERGIES**  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN

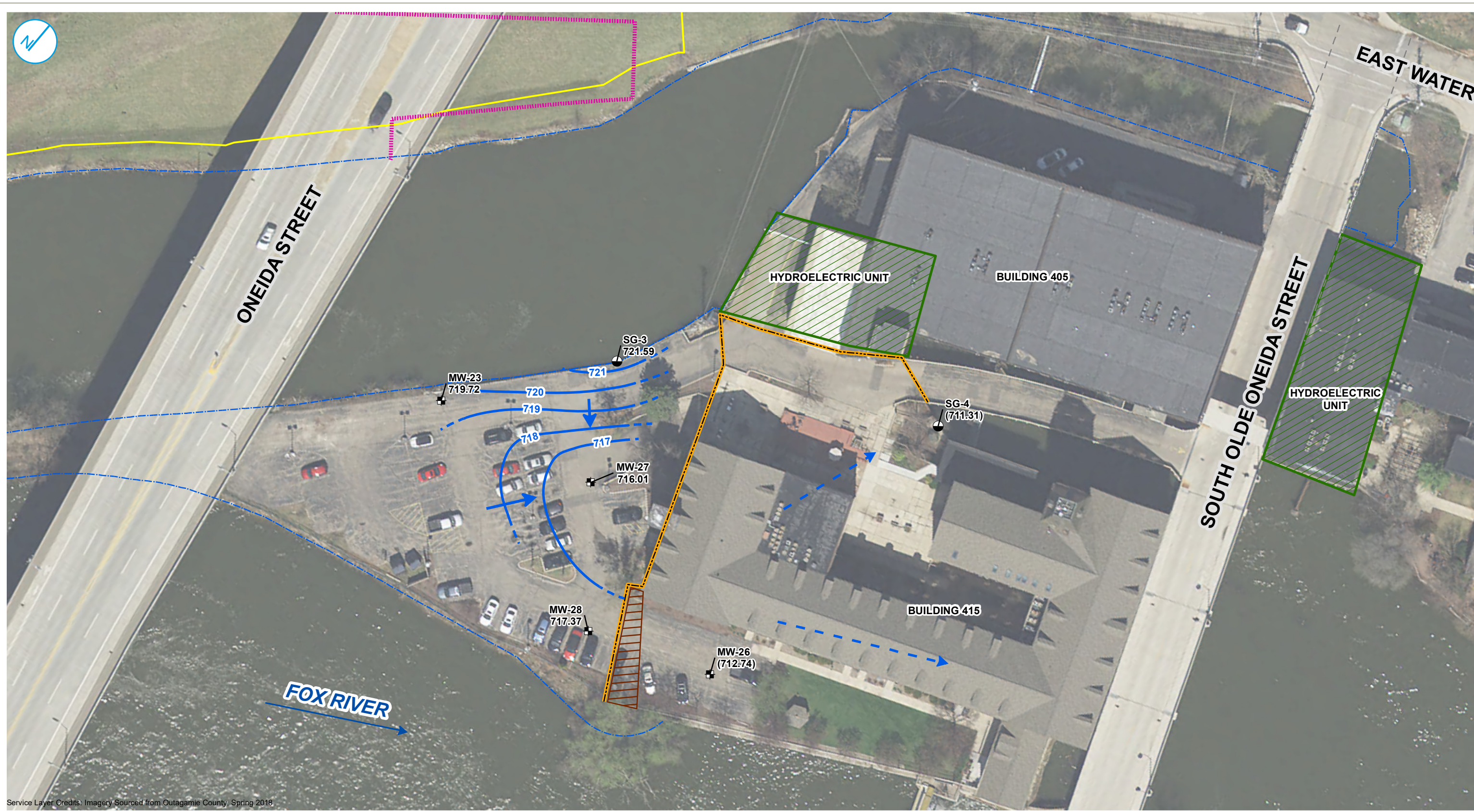
**FIGURE 5**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.





PROJECT: 169000XXXX | DATED: 2/13/2023 | DESIGNER: STOLZSD  
 \\rammke2file011Y\_Drive\GIS\Projects\1511508\MXD\2022\_AnnualReport\Figure 6\_Water\_Table Elevations 2204.mxd



- MONITORING WELL LOCATION
- STAFF GAUGE LOCATION
- GROUNDWATER ELEVATION CONTOUR (FT NAVD88, 1-FT INTERVAL)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- INFERRED GROUNDWATER FLOW DIRECTION
- GROUNDWATER FLOW DIRECTION
- FOX RIVER FLOW DIRECTION
- SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT
- STRUCTURAL BARRIER TO GROUNDWATER FLOW
- APPROXIMATE LOCATION OF HYDROELECTRIC UNIT
- HISTORICAL NEEDLE DAM STRUCTURE



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - WATER ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING

**WATER TABLE ELEVATIONS  
 (AREA 2) APRIL 2022  
 2022 ANNUAL REPORT**

**WE ENERGIES  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN**

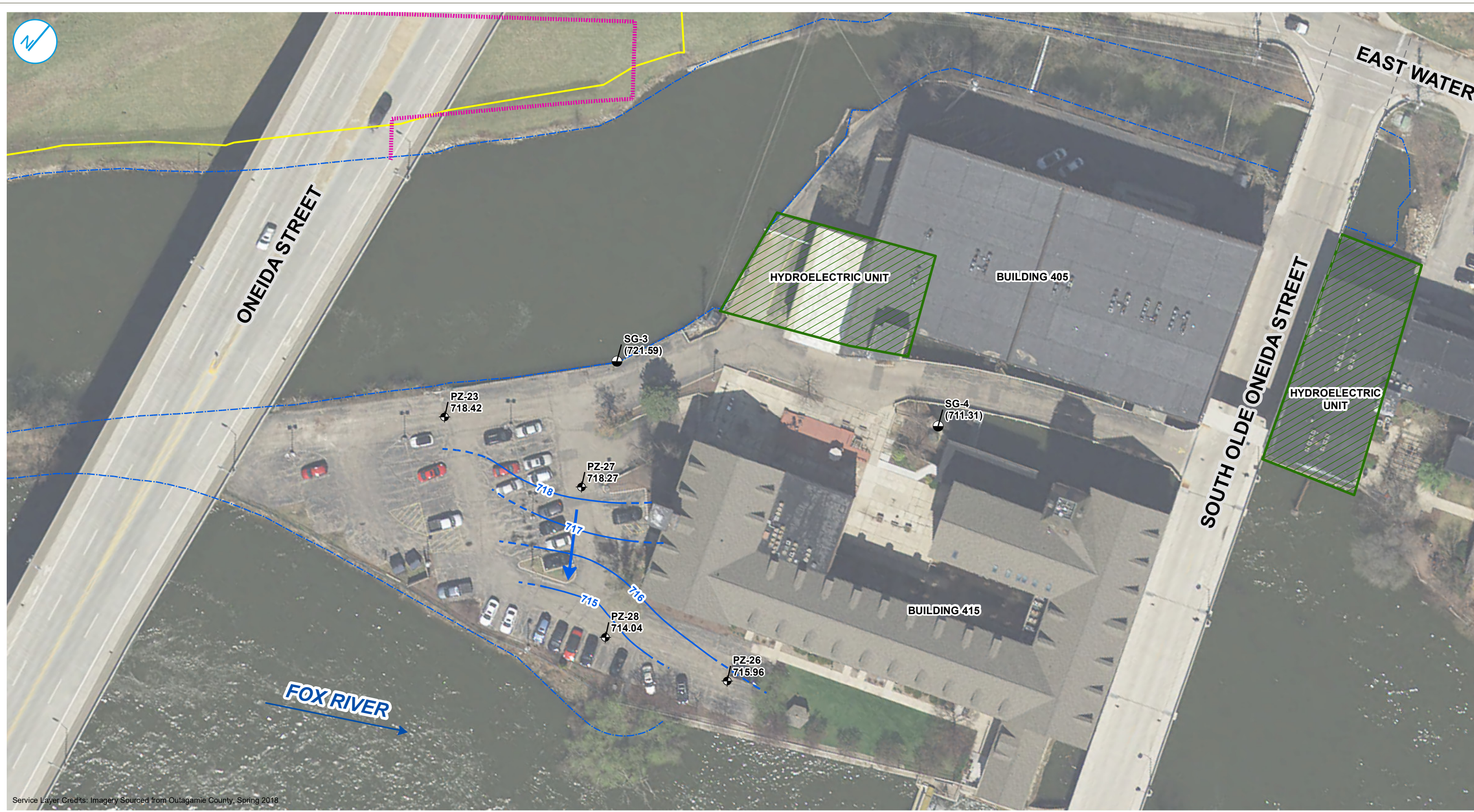
**FIGURE 6**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.



Service Layer Credits: Imagery Sourced from Outagamie County, Spring 2018





Service Layer Credits: Imagery Sourced from Outagamie County, Spring 2018

- ◆ PIEZOMETER LOCATION
- STAFF GAUGE LOCATION
- GROUNDWATER ELEVATION CONTOUR (FT NAVD88, 1 FT INTERVAL)
- - - INFERRED GROUNDWATER ELEVATION CONTOUR
- ➔ GROUNDWATER FLOW DIRECTION
- ➔ FOX RIVER FLOW DIRECTION
- - - SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT
- ▨ APPROXIMATE LOCATION OF HYDROELECTRIC UNIT



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - WATER ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING

**BEDROCK PIEZOMETRIC SURFACE ELEVATIONS (AREA 1) APRIL 2022**  
 2022 ANNUAL REPORT

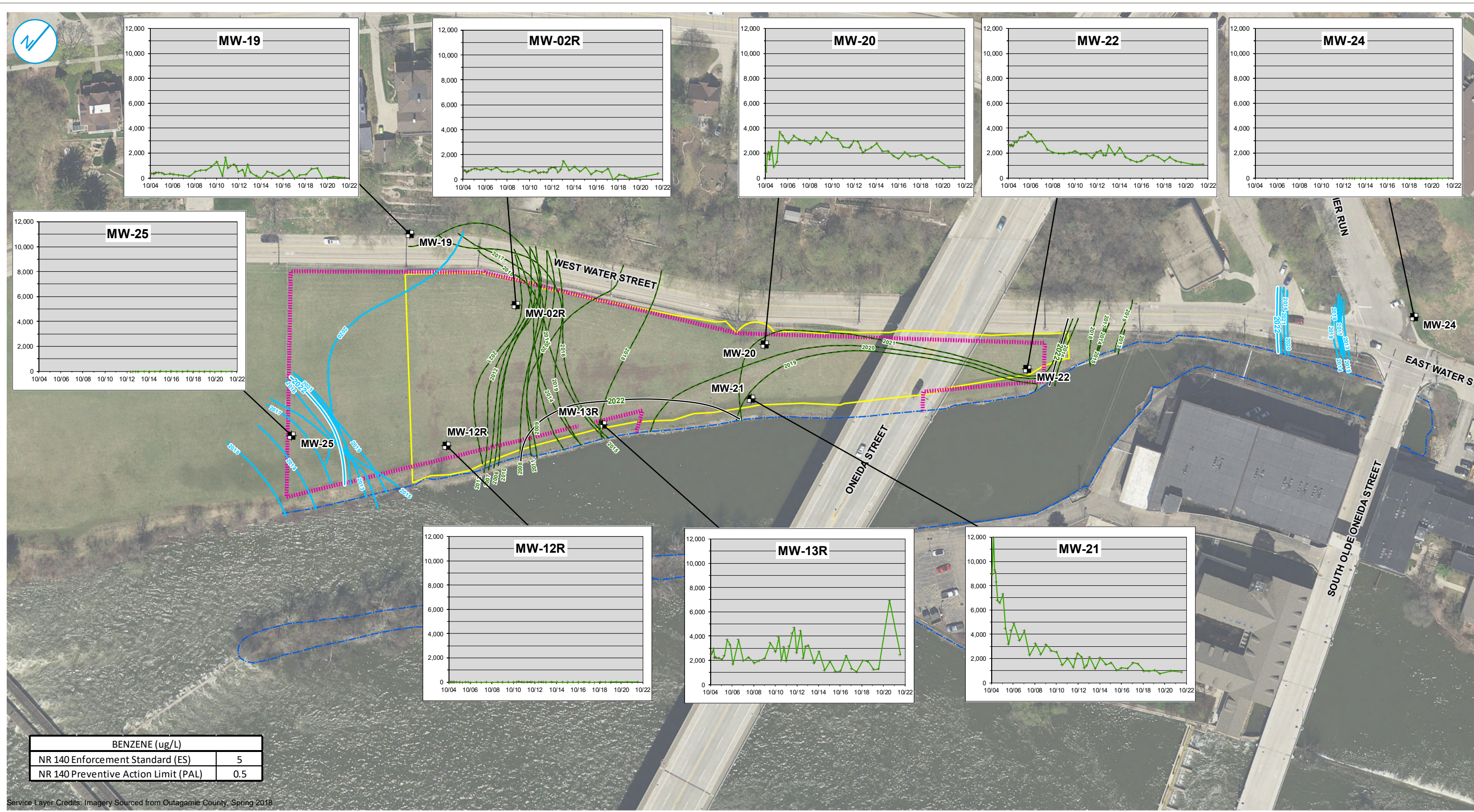
**WE ENERGIES**  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN

**FIGURE 7**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.







- MONITORING WELL LOCATION
- 5 µg/L CONTOUR (NR140 ES)
- ANNUAL 1,000 µg/L CONTOUR
- SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT AREA



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - ISOCONCENTRATION CONTOURS PRESENTED WERE CREATED BY KRIGING WELL DATA COLLECTED DURING APRIL SAMPLING EVENT OF EACH YEAR.  
 - DATES SHOWN AS MM/YY  
 - CONCENTRATIONS SHOWN AS µg/L (MICROGRAMS PER LITER)

**LOWER TILL GROUNDWATER BENZENE ANALYTICAL SUMMARY (AREA 1)**  
 2022 ANNUAL REPORT

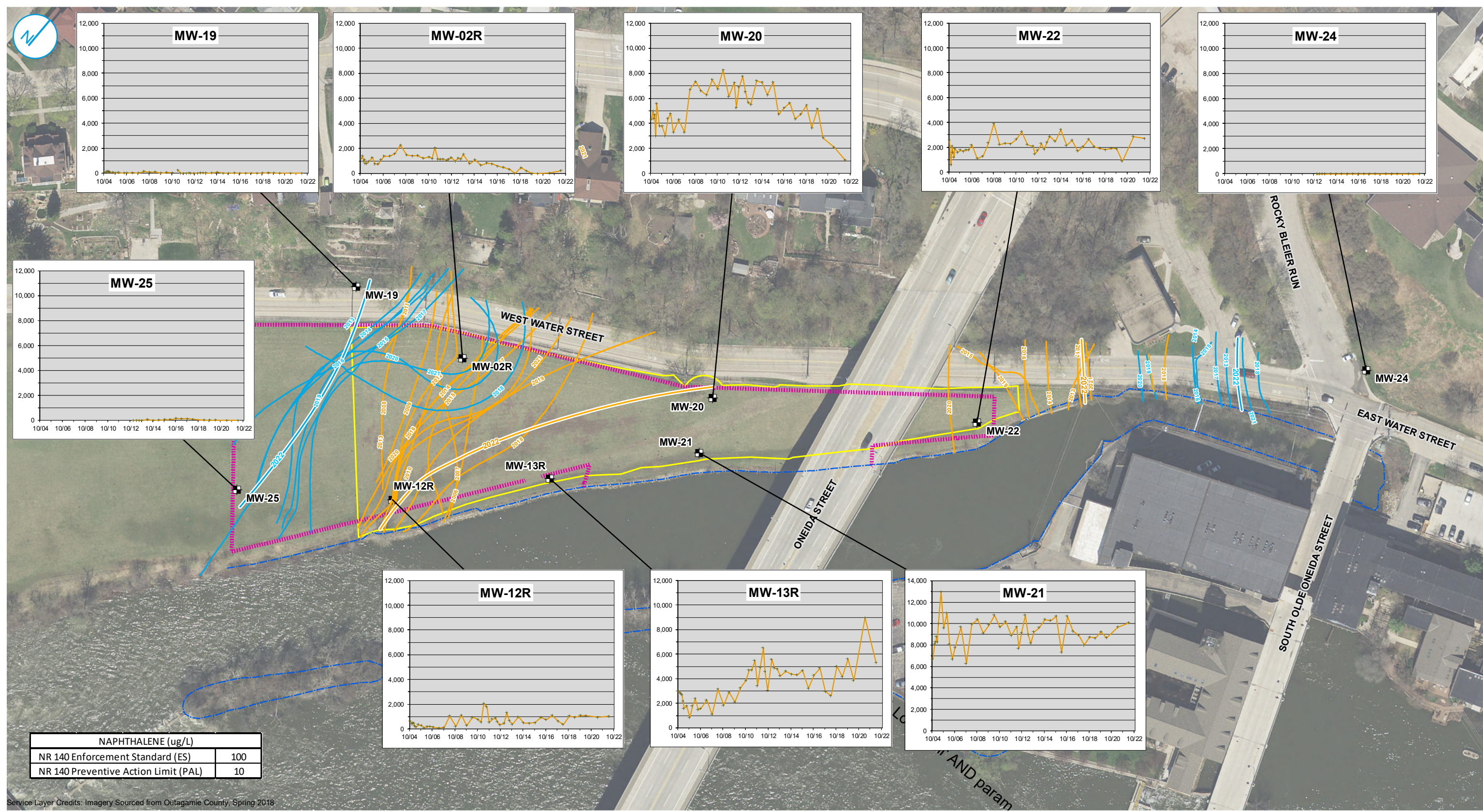
**WE ENERGIES**  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN

**FIGURE 8**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.







- MONITORING WELL LOCATION
- 100 µg/L CONTOUR (NR140 ES)
- ANNUAL 1,000 µg/L CONTOUR
- SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT AREA



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - ISOCONCENTRATION CONTOURS PRESENTED WERE CREATED BY KRIGING WELL DATA COLLECTED DURING APRIL SAMPLING EVENT OF EACH YEAR.  
 - DATES SHOWN AS MM/YY  
 - CONCENTRATIONS SHOWN AS µg/L (MICROGRAMS PER LITER)

**LOWER TILL GROUNDWATER NAPHTHALENE ANALYTICAL SUMMARY (AREA 1) 2022 ANNUAL REPORT**

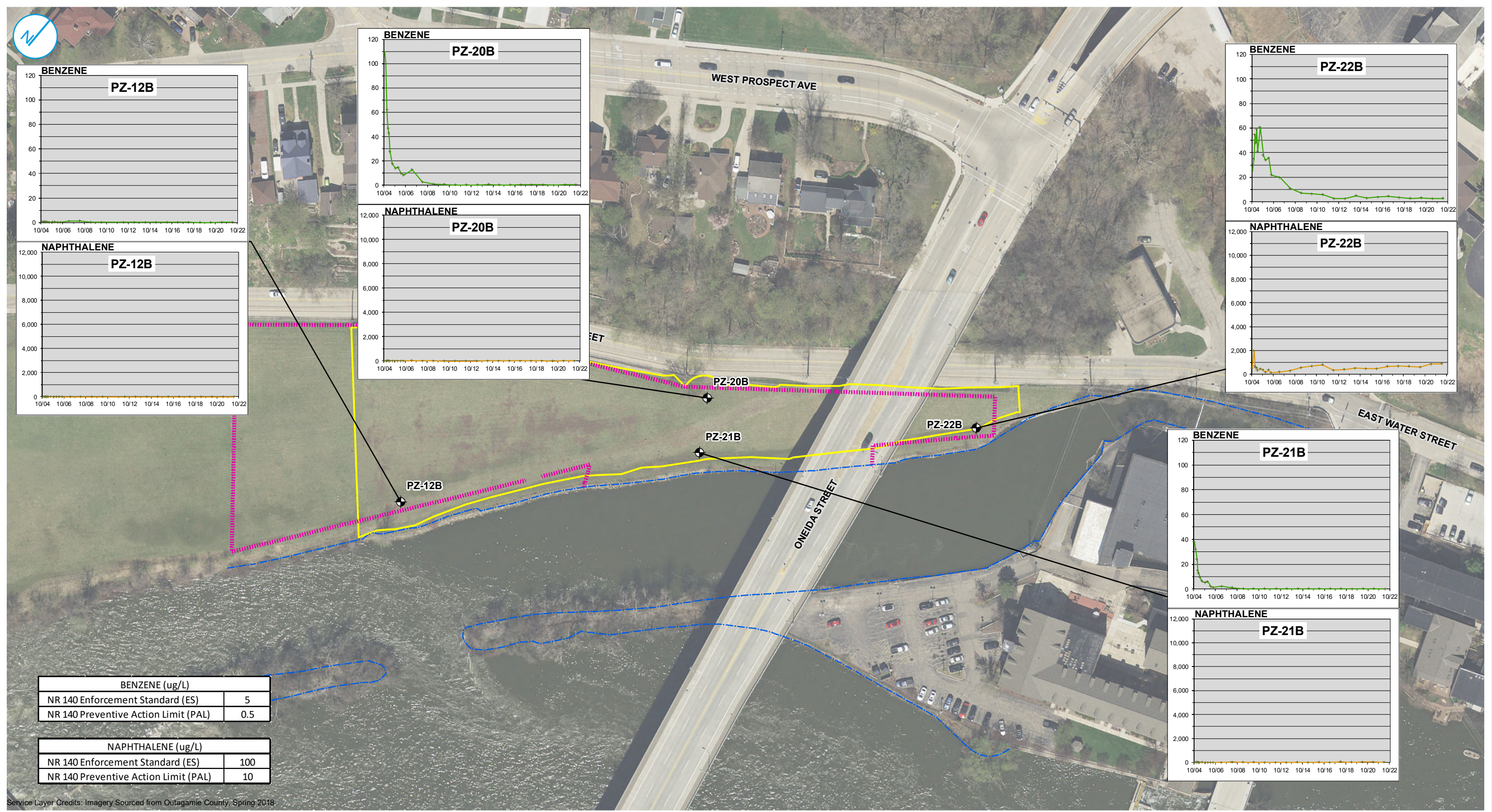
**WE ENERGIES  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN**

**FIGURE 9**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.







- ◆ PIEZOMETER LOCATION
- SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT AREA



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - DATES SHOWN AS MM/YY  
 - CONCENTRATIONS SHOWN AS µg/L (MICROGRAMS PER LITER)

**BEDROCK GROUNDWATER  
 BENZENE AND NAPHTHALENE  
 ANALYTICAL SUMMARY (AREA 1)  
 2022 ANNUAL REPORT**

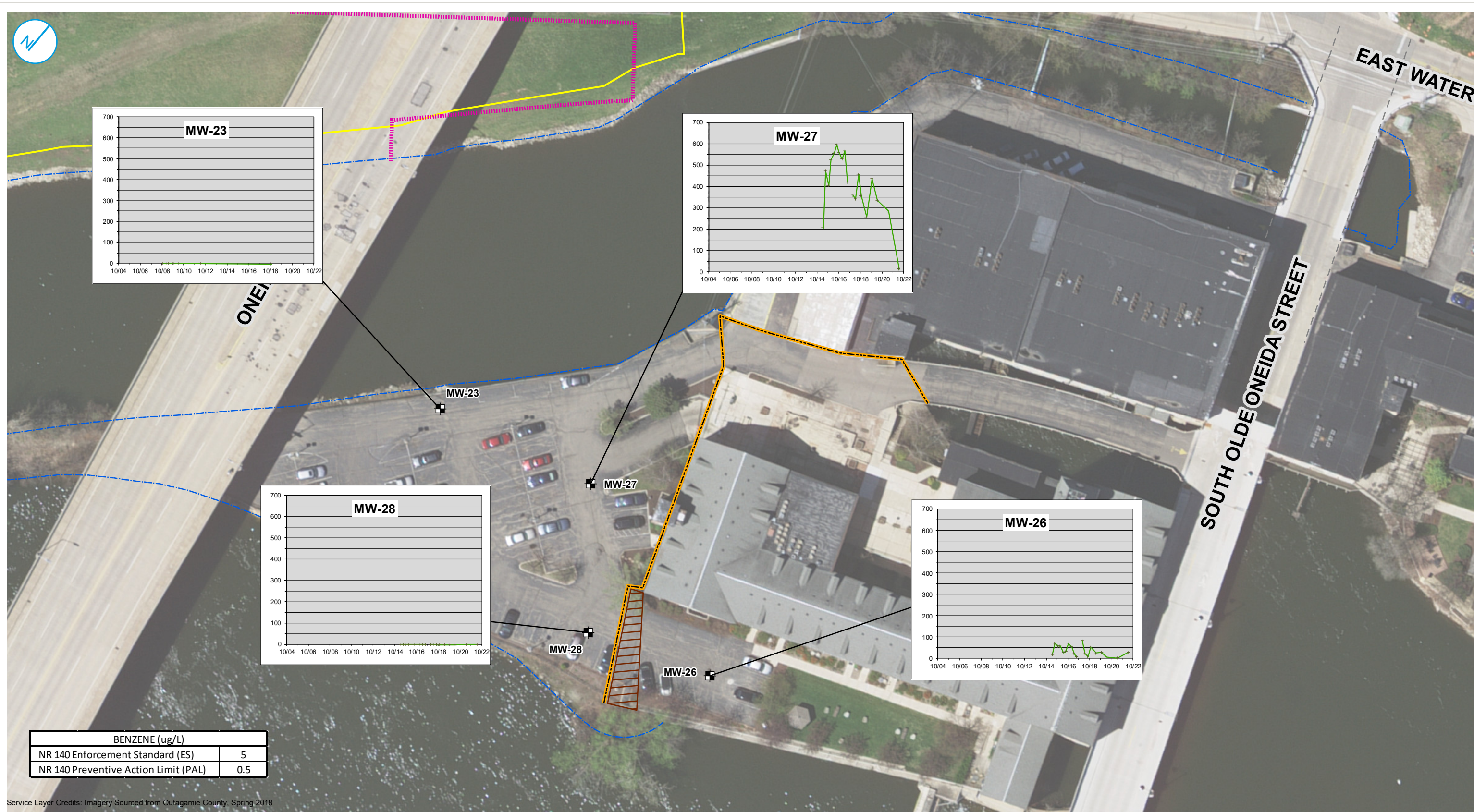
**WE ENERGIES  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN**

**FIGURE 10**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.







- ☒ MONITORING WELL LOCATION
- SHORELINE
- STRUCTURAL BARRIER TO GROUNDWATER FLOW
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT AREA
- HISTORICAL NEEDLE DAM STRUCTURE



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - DATES SHOWN AS MM/YY  
 - CONCENTRATIONS SHOWN AS ug/L (MICROGRAMS PER LITER)

**WATER TABLE GROUNDWATER  
 BENZENE ANALYTICAL SUMMARY (AREA 2)  
 2022 ANNUAL REPORT**

**WE ENERGIES  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN**

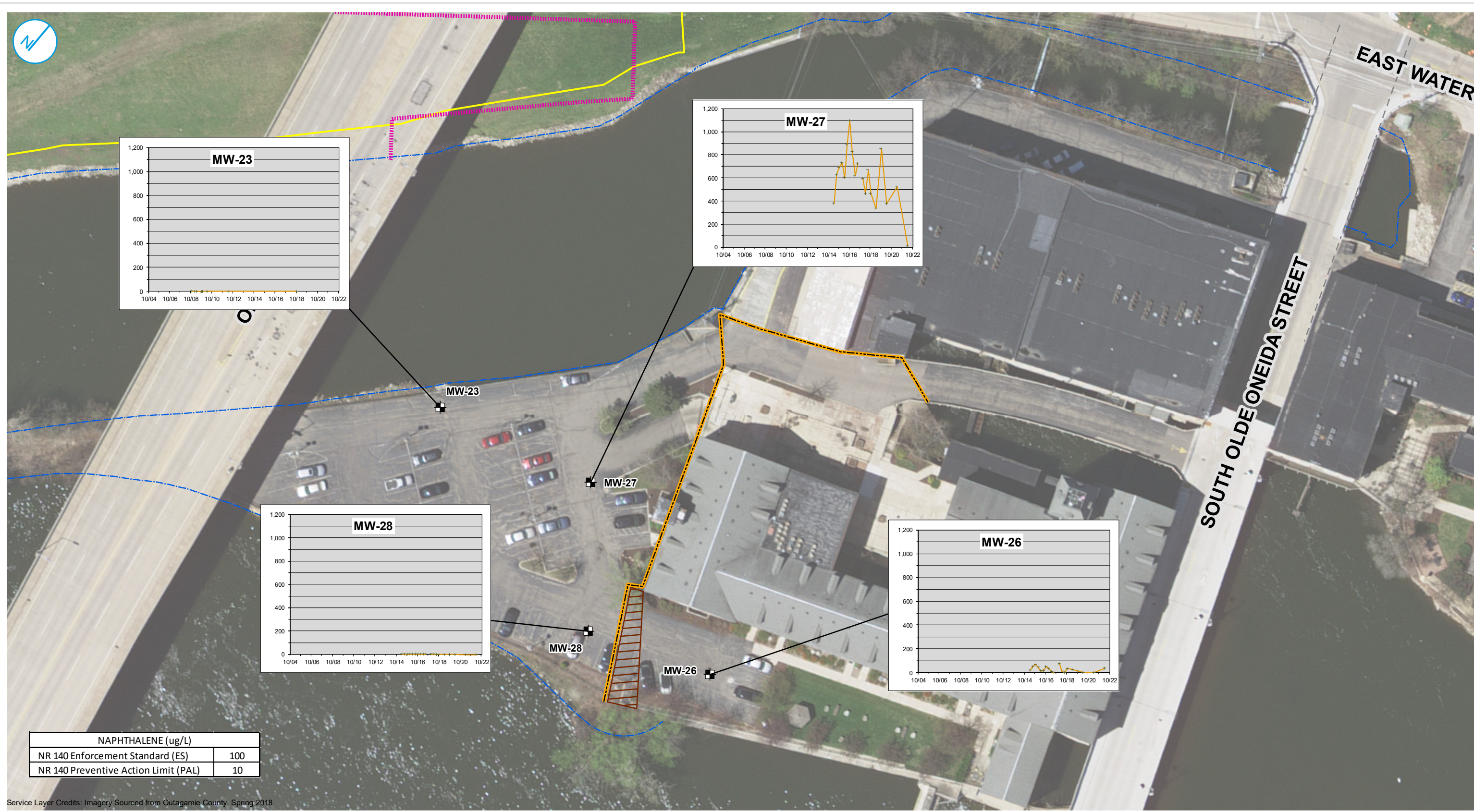
**FIGURE 11**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.



Service Layer Credits: Imagery Sourced from Outagamie County, Spring 2018





**WATER TABLE GROUNDWATER  
NAPHTHALENE ANALYTICAL SUMMARY (AREA 2)  
2022 ANNUAL REPORT**

**FIGURE 12**

0 25 50 100 Feet

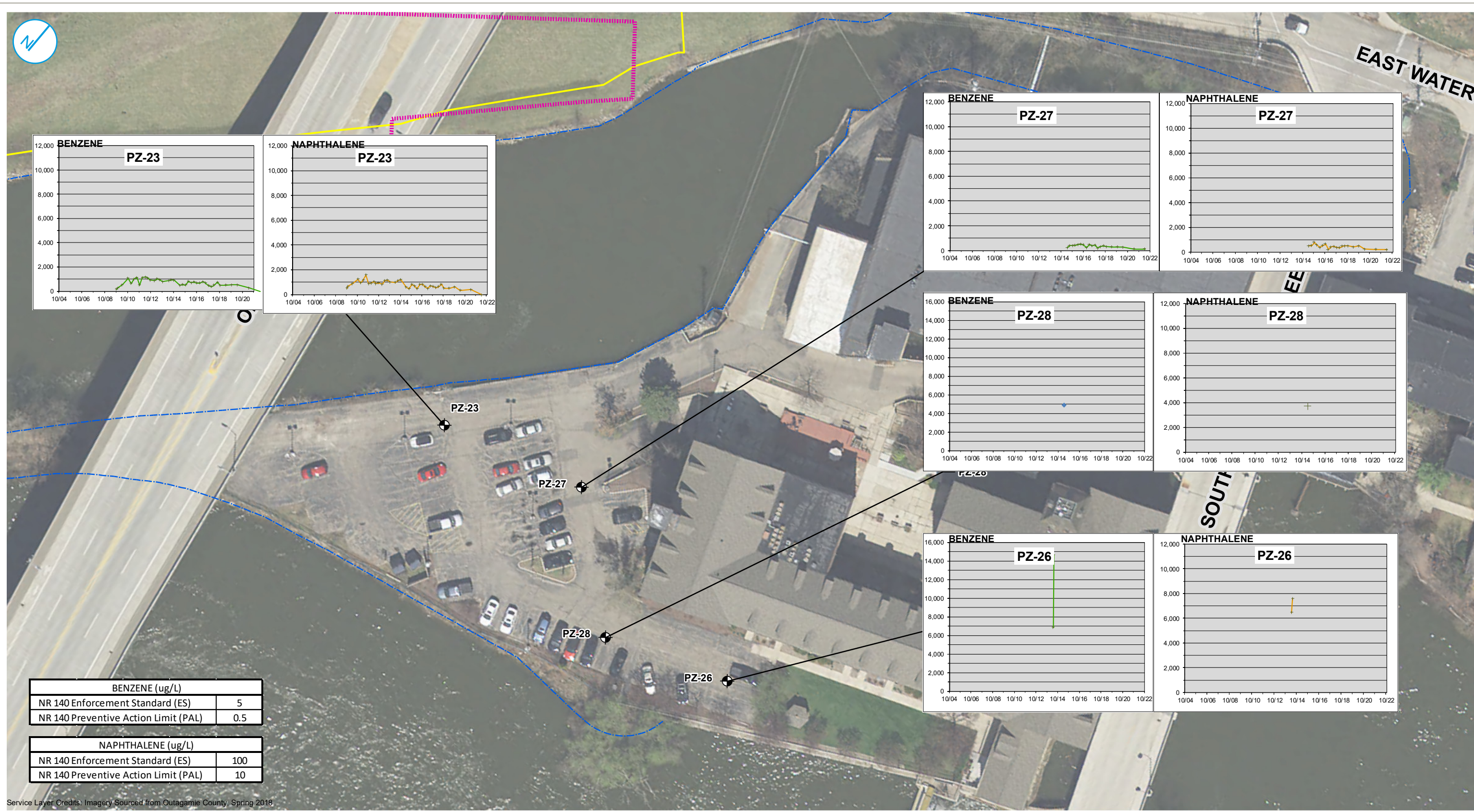
**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - DATES SHOWN AS MM/YY  
 - CONCENTRATIONS SHOWN AS ug/L (MICROGRAMS PER LITER)

**WE ENERGIES  
FORMER APPLETON  
MANUFACTURED GAS PLANT (MGP)  
APPLETON, WISCONSIN**

RAMBOLL AMERICAS  
ENGINEERING SOLUTIONS, INC.

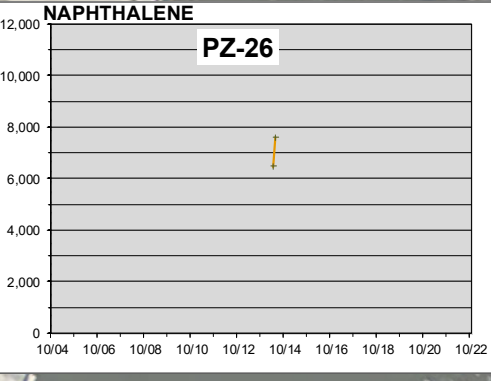
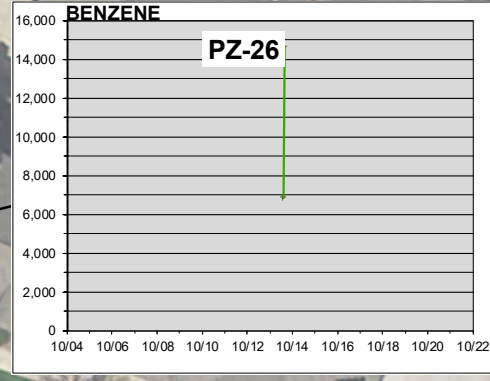
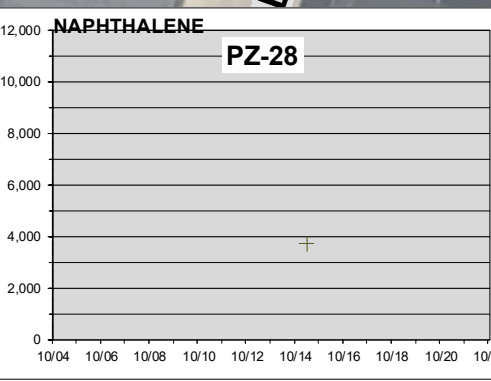
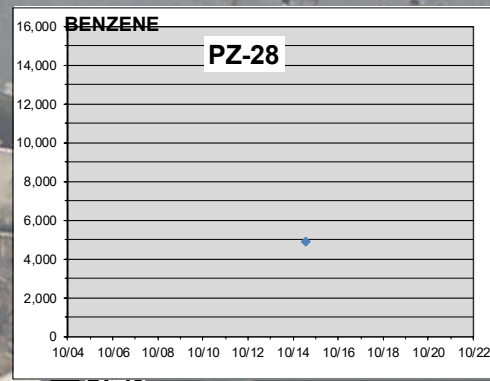
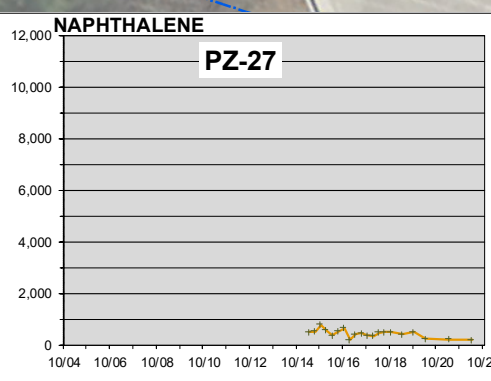
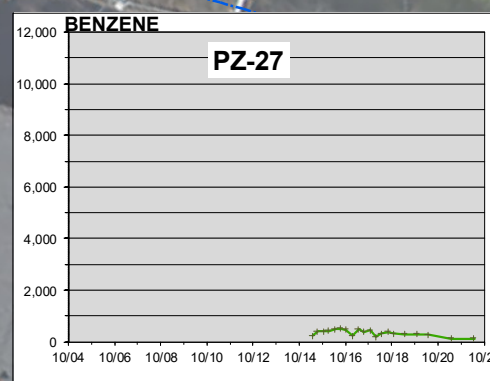






BENZENE (ug/L)	
NR 140 Enforcement Standard (ES)	5
NR 140 Preventive Action Limit (PAL)	0.5

NAPHTHALENE (ug/L)	
NR 140 Enforcement Standard (ES)	100
NR 140 Preventive Action Limit (PAL)	10



- ◆ PIEZOMETER LOCATION
- SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT AREA

**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - DATES SHOWN AS MM/YY  
 - CONCENTRATIONS SHOWN AS ug/L (MICROGRAMS PER LITER)

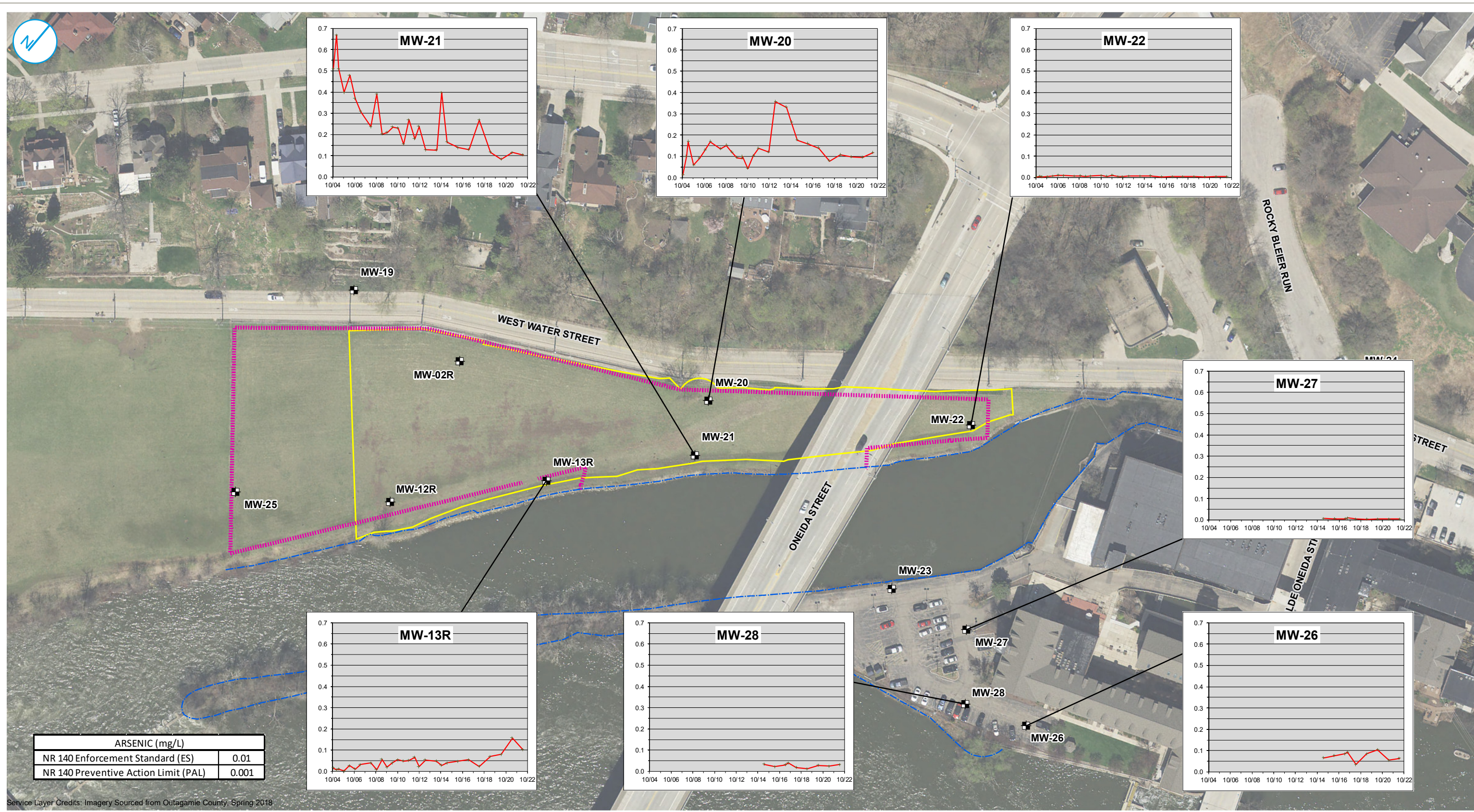
**UPPER WEATHERED BEDROCK  
 GROUNDWATER BENZENE AND  
 NAPHTHALENE ANALYTICAL SUMMARY (AREA 2)  
 2022 ANNUAL REPORT**

**WE ENERGIES  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN**

**FIGURE 13**







- ☒ MONITORING WELL LOCATION
- SHORELINE
- ▬ FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT AREA

Notes  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - DATES SHOWN AS MMYY  
 - CONCENTRATIONS SHOWN AS mg/L (MILLIGRAMS PER LITER)

**LOWER TILL GROUNDWATER ARSENIC ANALYTICAL SUMMARY (AREAS 1 & 2) 2022 ANNUAL REPORT**

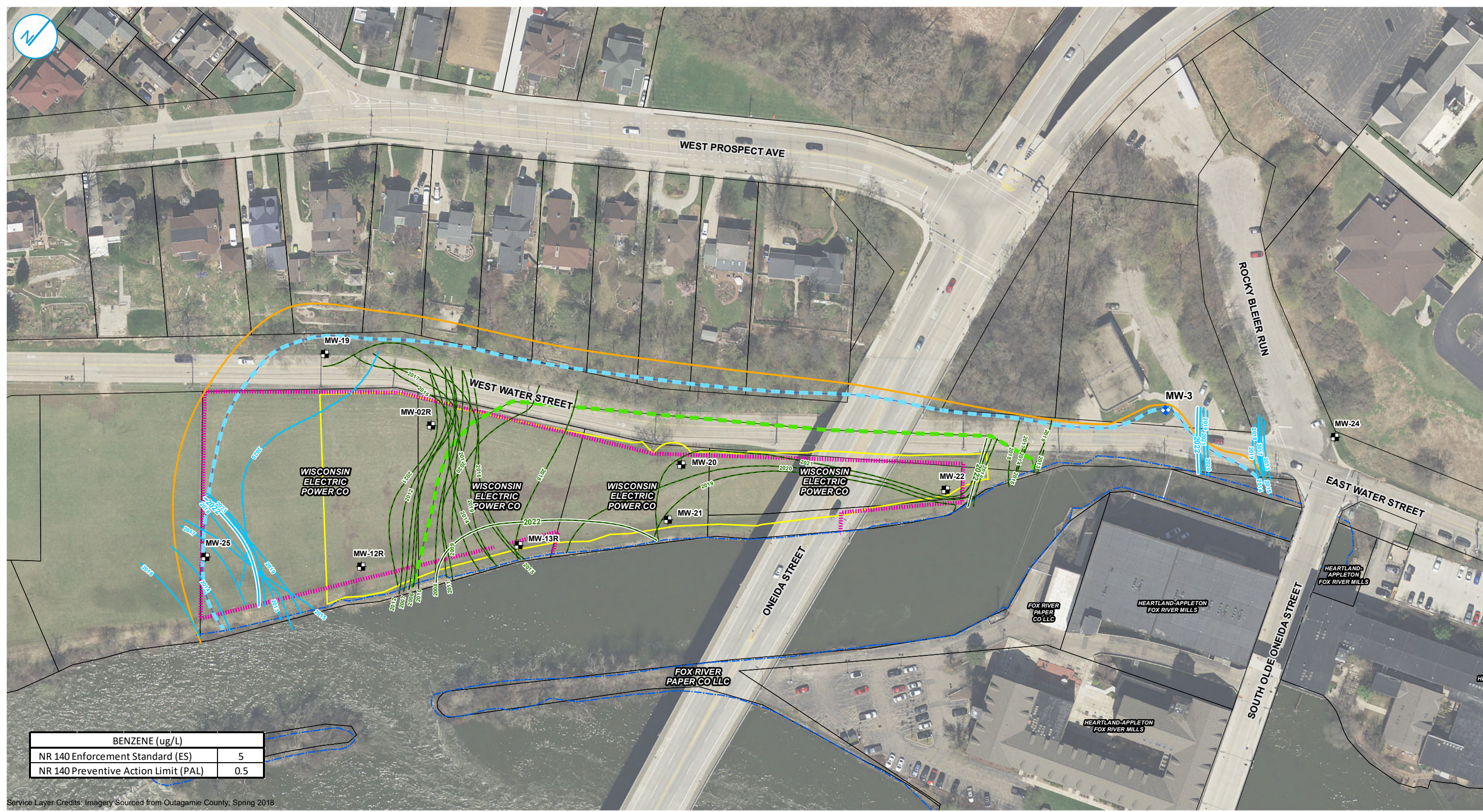
**WE ENERGIES  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN**

**FIGURE 14**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.







BENZENE (ug/L)	
NR 140 Enforcement Standard (ES)	5
NR 140 Preventive Action Limit (PAL)	0.5

- MONITORING WELL LOCATION
- LAWRENCE UNIVERSITY PROPERTY WELL (ABANDONED)
- LIMIT OF GROUNDWATER IMPACTS
- CLOSED 5 µg/L BENZENE ISOCONCENTRATION LINE
- CLOSED 1,000 µg/L BENZENE ISOCONCENTRATION LINE
- BENZENE ANNUAL 1,000 µg/L CONTOUR
- BENZENE 5 µg/L CONTOUR (NR140 ES)
- SHORELINE
- FORMER MGP SITE PERIMETER
- PERIMETER OF ISS TREATMENT AREA
- 2019 TAX PARCEL



**Notes**  
 - PLAN NORTH IS N39° 11' 42" OF TRUE NORTH  
 - ISOCONCENTRATION CONTOURS PRESENTED WERE CREATED BY KRIGING WELL DATA COLLECTED DURING APRIL SAMPLING EVENT OF EACH YEAR.  
 - DATES SHOWN AS MM/YY  
 - CONCENTRATIONS SHOWN AS µg/L (MICROGRAMS PER LITER)

**LIMITS OF GROUNDWATER IMPACTS  
 2022 ANNUAL REPORT**

**WE ENERGIES  
 FORMER APPLETON  
 MANUFACTURED GAS PLANT (MGP)  
 APPLETON, WISCONSIN**

**FIGURE 15**

RAMBOLL AMERICAS  
 ENGINEERING SOLUTIONS, INC.





**APPENDIX A  
SITE PHOTOGRAPHS**



Photo 1: Well MW-02R converted to flush mount



Photo 2: Well MW-08 converted to flush mount



**Appendix A Site Photographs**

2022 Well Conversions  
Ellen Kort Peace Park



Photo 3: Well MW-09 converted to flush mount



Photo 4: Well MW-13R converted to flush mount



**Appendix A Site Photographs**

2022 Well Conversions  
Ellen Kort Peace Park





Photo 5: Wells MW-21 and PZ-21B remained as stickups



Photo 6: Well MW-25 converted to flush mount



Photo 7: Wells PZ-12B and MW-12R converted to flush mount



Photo 8: Wells PZ-20B and MW-20B converted to flush mount



## Appendix A Site Photographs

2022 Well Conversions  
Ellen Kort Peace Park



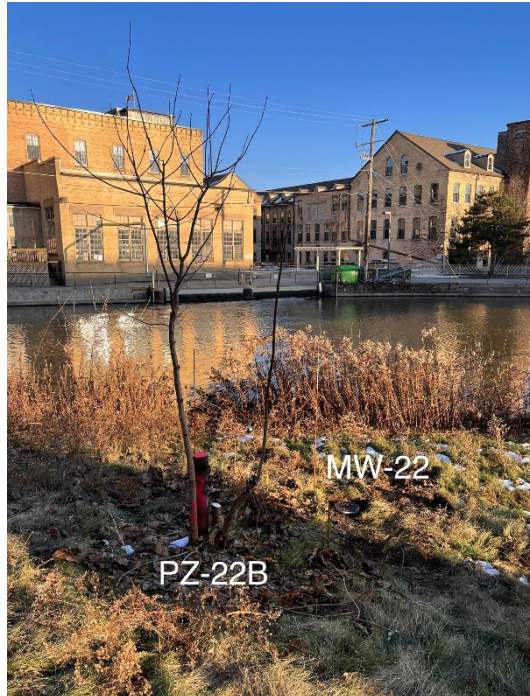
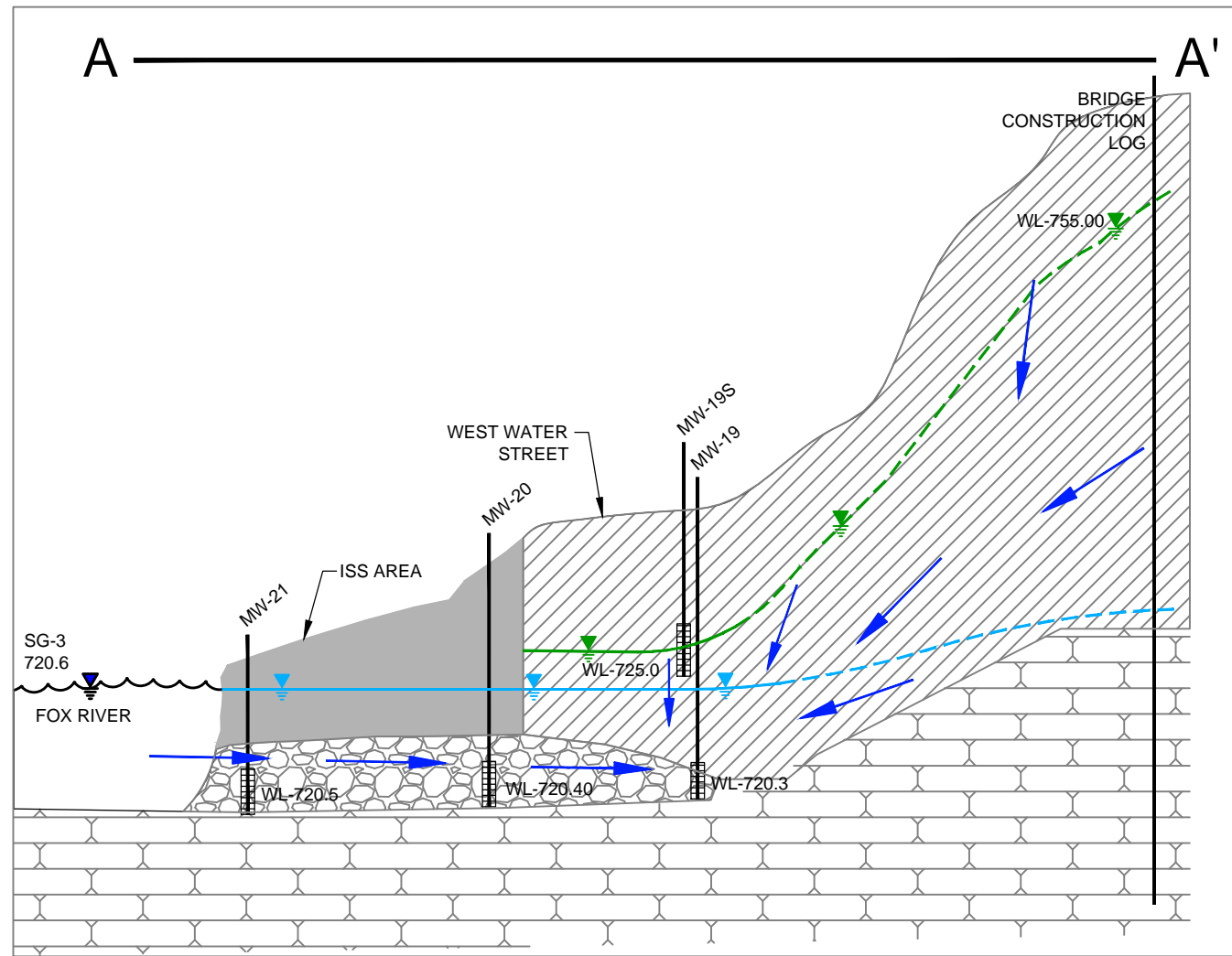


Photo 9: Well MW-22 converted to flush mount and well PZ-22B remained as stick up

**APPENDIX B  
CONCEPTUAL FLOW MODEL AND CONCEPTUAL SITE MODEL  
FIGURES**

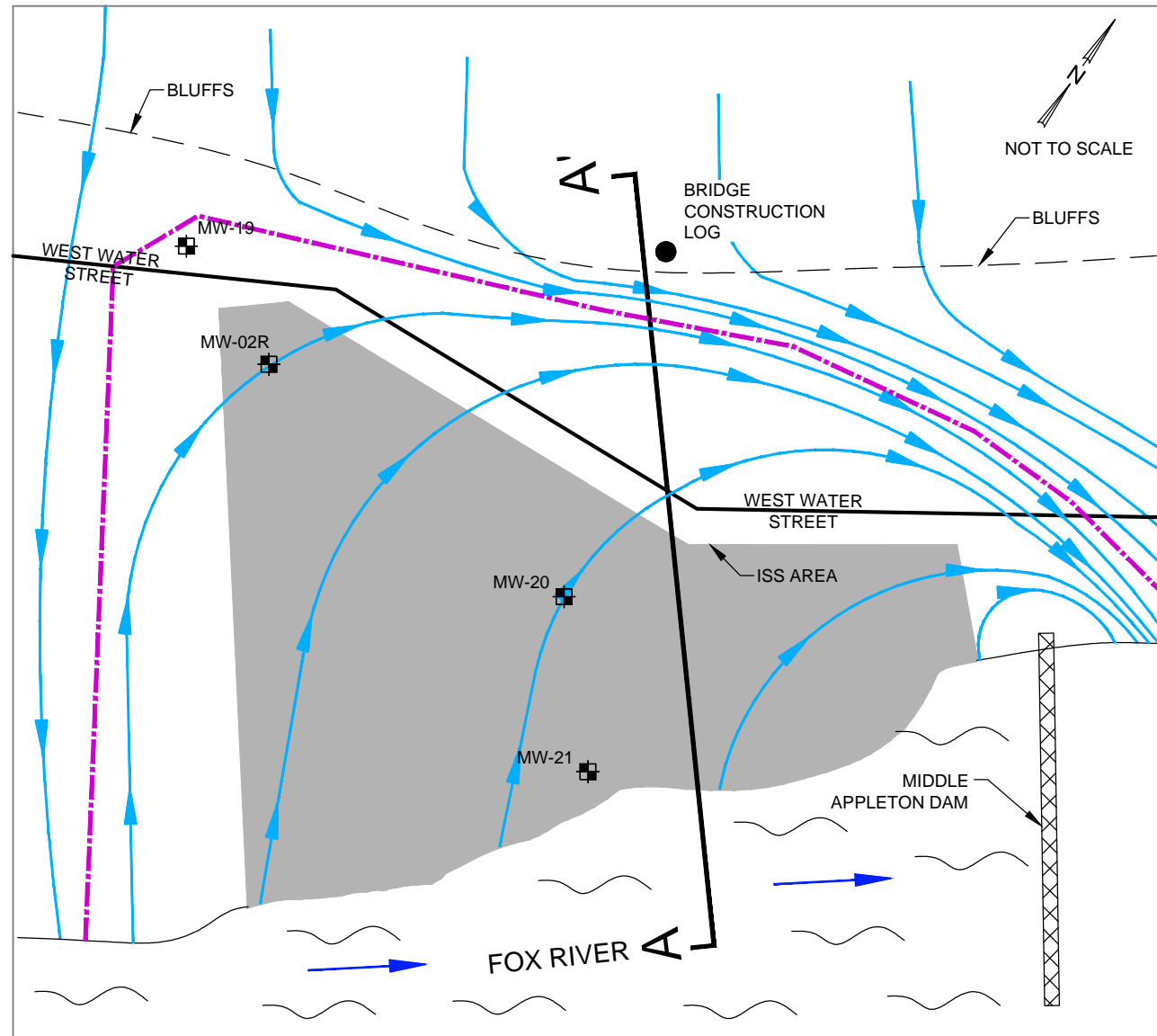


**CONCEPTUAL FLOW MODEL**  
**(PREVIOUSLY SUBMITTED AS FIGURE 12 OF THE**  
**2014 ANNUAL REPORT)**



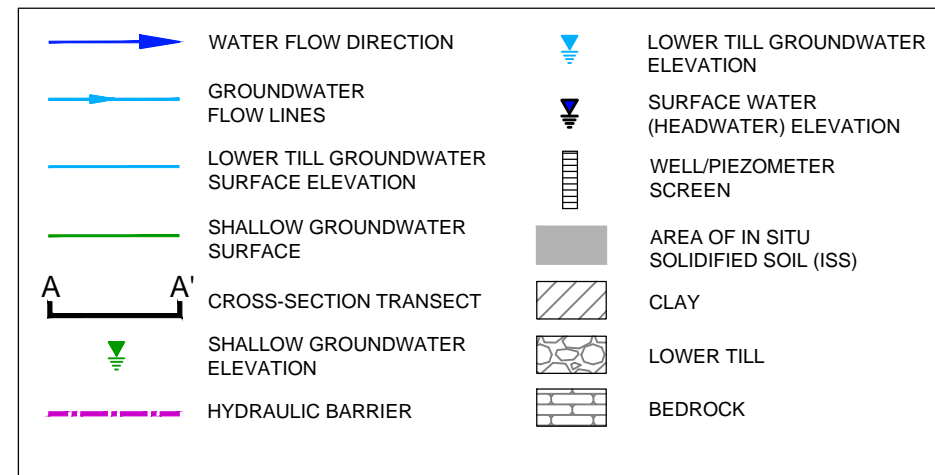
1 CROSS-SECTION A-A'

NOT TO SCALE



2 PLAN VIEW

NOT TO SCALE



DRAWN BY:	DMD	DATE:	03/11/15
CHECKED BY:	BGH	DATE:	03/25/15
APPROVED BY:	BGH	DATE:	04/27/15
DRAWING NO:	1508-212-B12		
REFERENCE:			

**CONCEPTUAL FLOW MODEL**  
 2014 ANNUAL GROUNDWATER REPORT  
 WE ENERGIES  
 APPLETON FORMER MGP SITE  
 APPLETON, WISCONSIN



PROJECT NO.  
1508/21.2

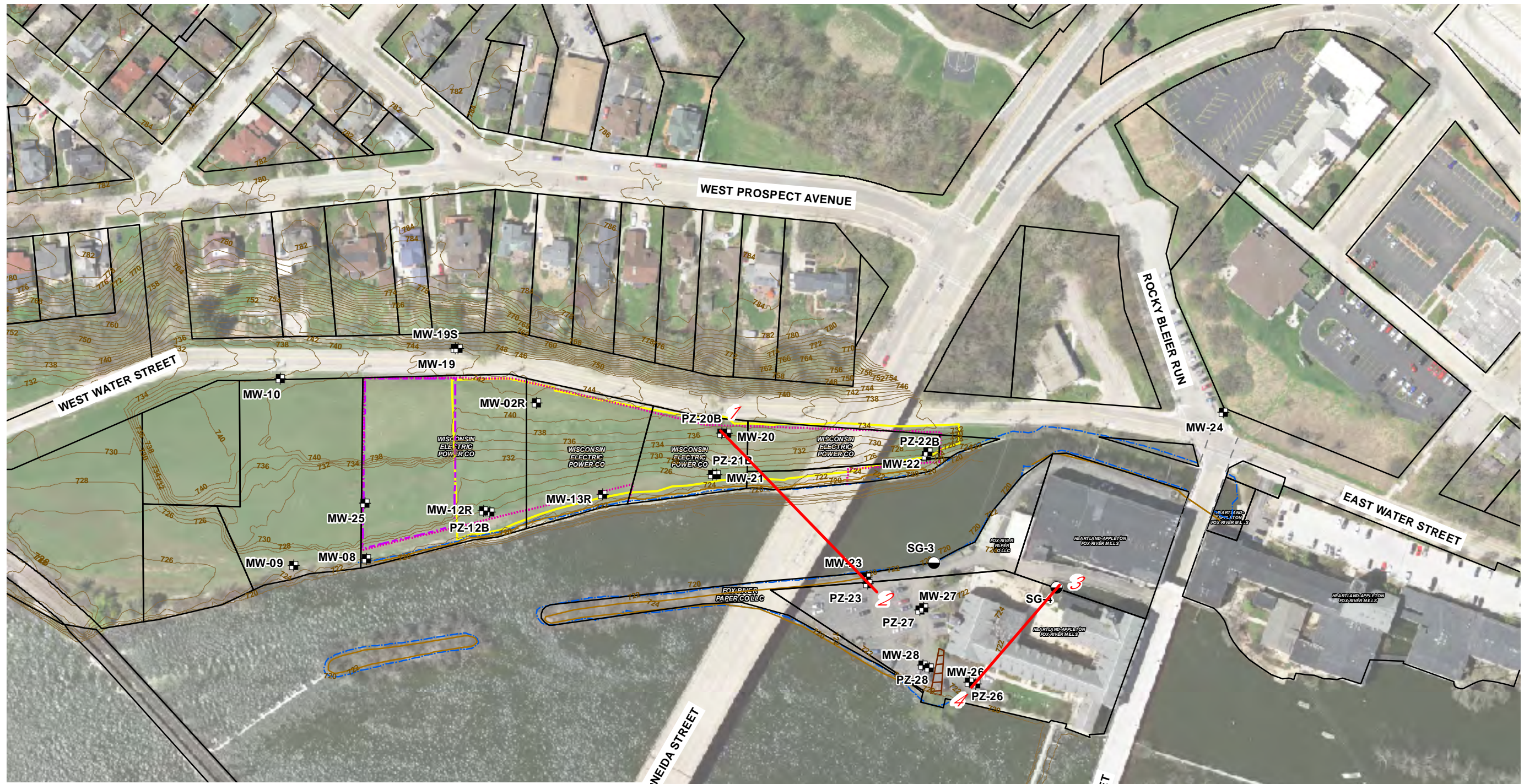
FIGURE NO.  
12

Apr 27, 2015 4:39pm PLOTTED BY: dduda, SAVED BY: dduda  
 I:\ACADdata\Projects\15\1508\21-2\1508-212-B12.dwg Layout1  
 XREFS:

## **CONCEPTUAL SITE MODEL FIGURES**

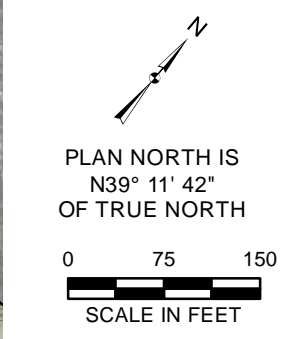


Y:\GIS\Projects\1511508\MXD\2016\_Annual\_Report\E1\_Site\_Features and CSM.mxd Author: stolzsd Date/Time: 4/12/2017, 4:15:39 PM



- 1 2 CSM PROFILE (SEE DRAWINGS CSM-1 THROUGH CSM-4)
- + MONITORING WELL LOCATION
- STAFF GAUGE LOCATION
- 2014 TAX PARCEL
- ~ TOP OF BANK
- ~ GROUND SURFACE ELEVATION CONTOURS
- ⋯ FORMER MGP SITE PERIMETER
- - - SHORELINE
- FORMER WASTE WATER TREATMENT PLANT STRUCTURES DEMOLISHED IN THIS AREA
- PERIMETER OF ISS TREATMENT AREA
- HISTORICAL NEEDLE DAM STRUCTURE

SOURCE: TAX PARCEL DATA OBTAINED FROM OUTAGAMIE COUNTY GIS  
IMAGERY SOURCE: OUTAGAMIE COUNTY SPRING 2014



DRAWN BY/DATE:  
SDS 2/8/17  
REVIEWED BY/DATE:  
ANS 2/8/17  
APPROVED BY/DATE:  
BGH 4/12/17

**SITE FEATURES AND CONCEPTUAL SITE MODEL (CSM) PROFILES**

2016 ANNUAL REPORT  
FORMER APPLETON MANUFACTURED GAS PLANT (MGP) FACILITY  
WE ENERGIES  
APPLETON, WISCONSIN

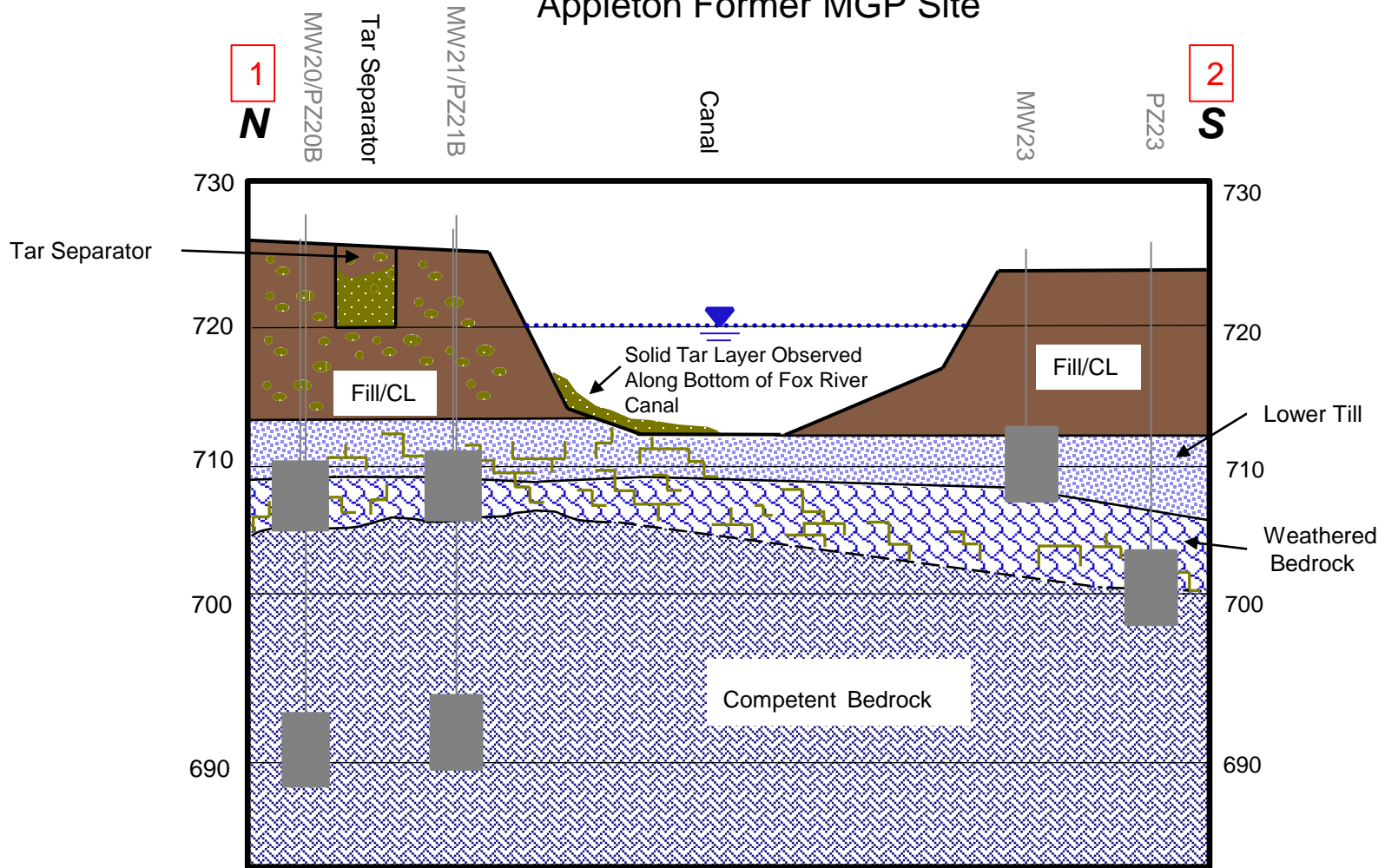
PROJECT NO: 1508

FIGURE NO: E1



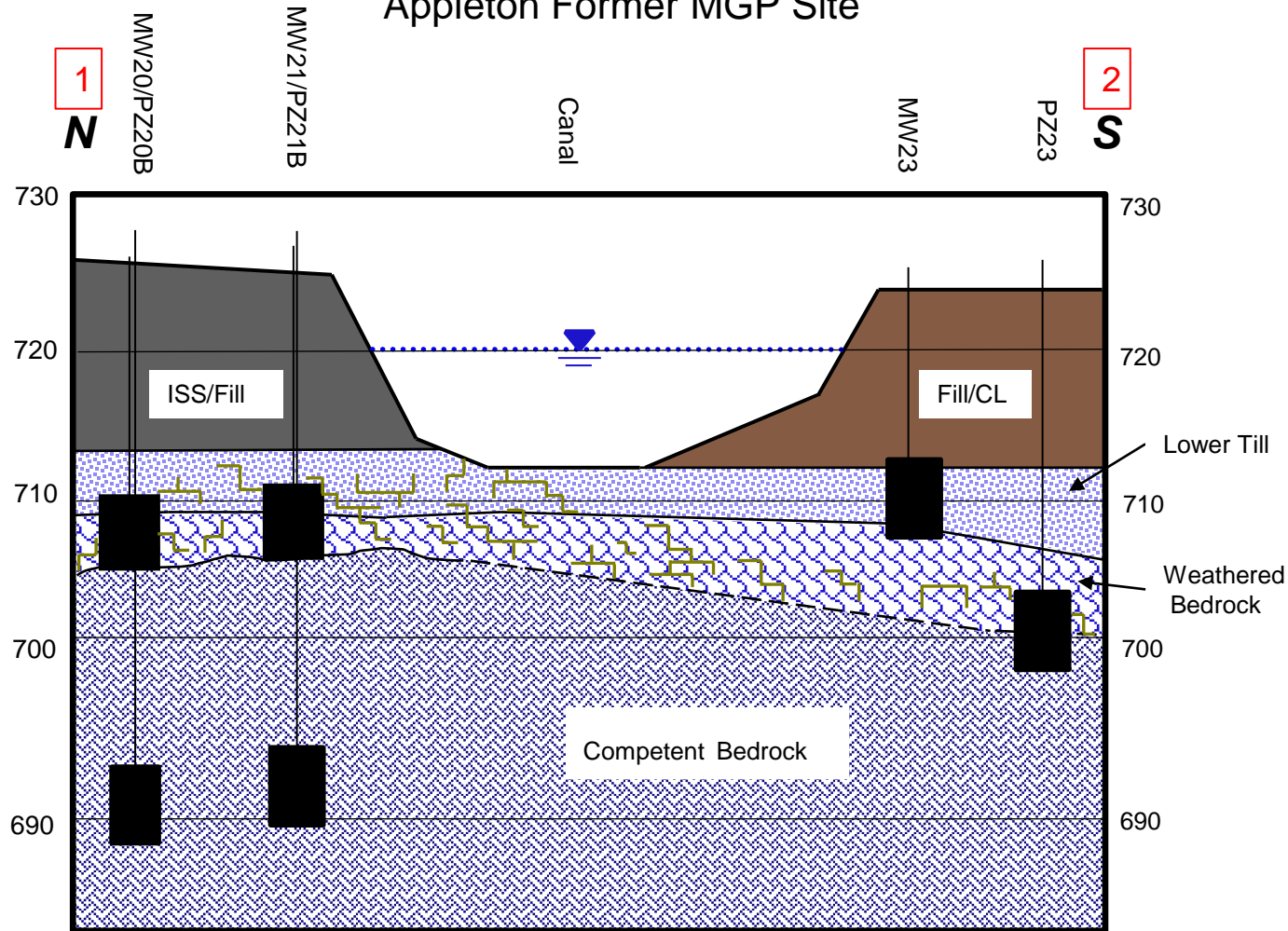


# Pre-Remediation Conceptual Drawing of Residual Materials: Appleton Former MGP Site



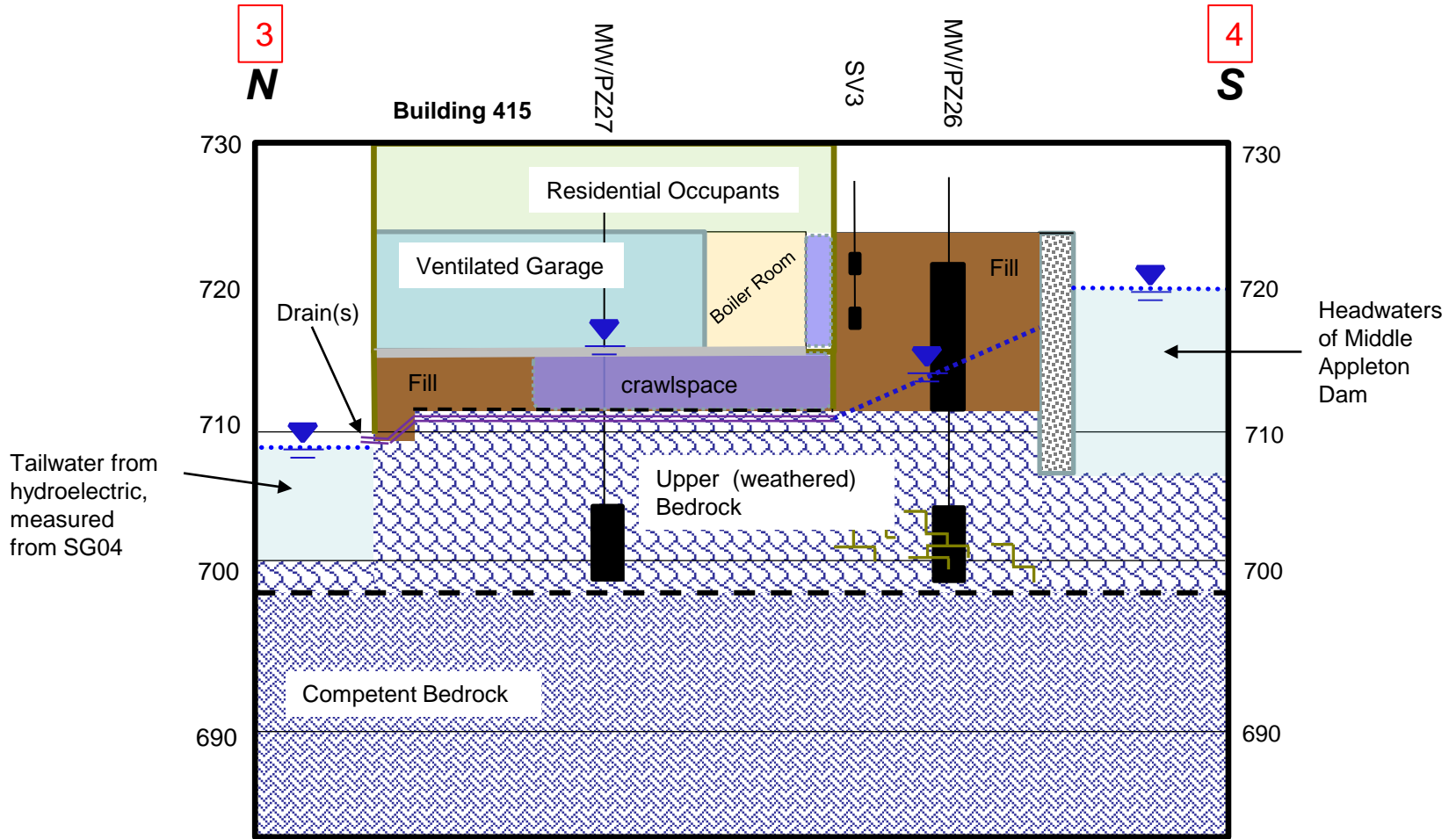
CSM-1. Conceptual drawing that illustrates the presence of MGP residuals prior to remedial construction (source removal and in situ solidification). Residual product is shown in green. Post-construction monitoring wells (gray) were included for reference. During remedial construction in 2002 and 2003, potential source areas such as the material within the tar separator and the solid tar layer observed along the bottom of the canal were removed. Following source removal, the fill and clay north of the canal was solidified. See "Post-Remediation Conceptual Drawing of Residual Materials" for conceptual drawing of post-remediation conditions.

# Post-Remediation Conceptual Drawing of Residual Materials: Appleton Former MGP Site



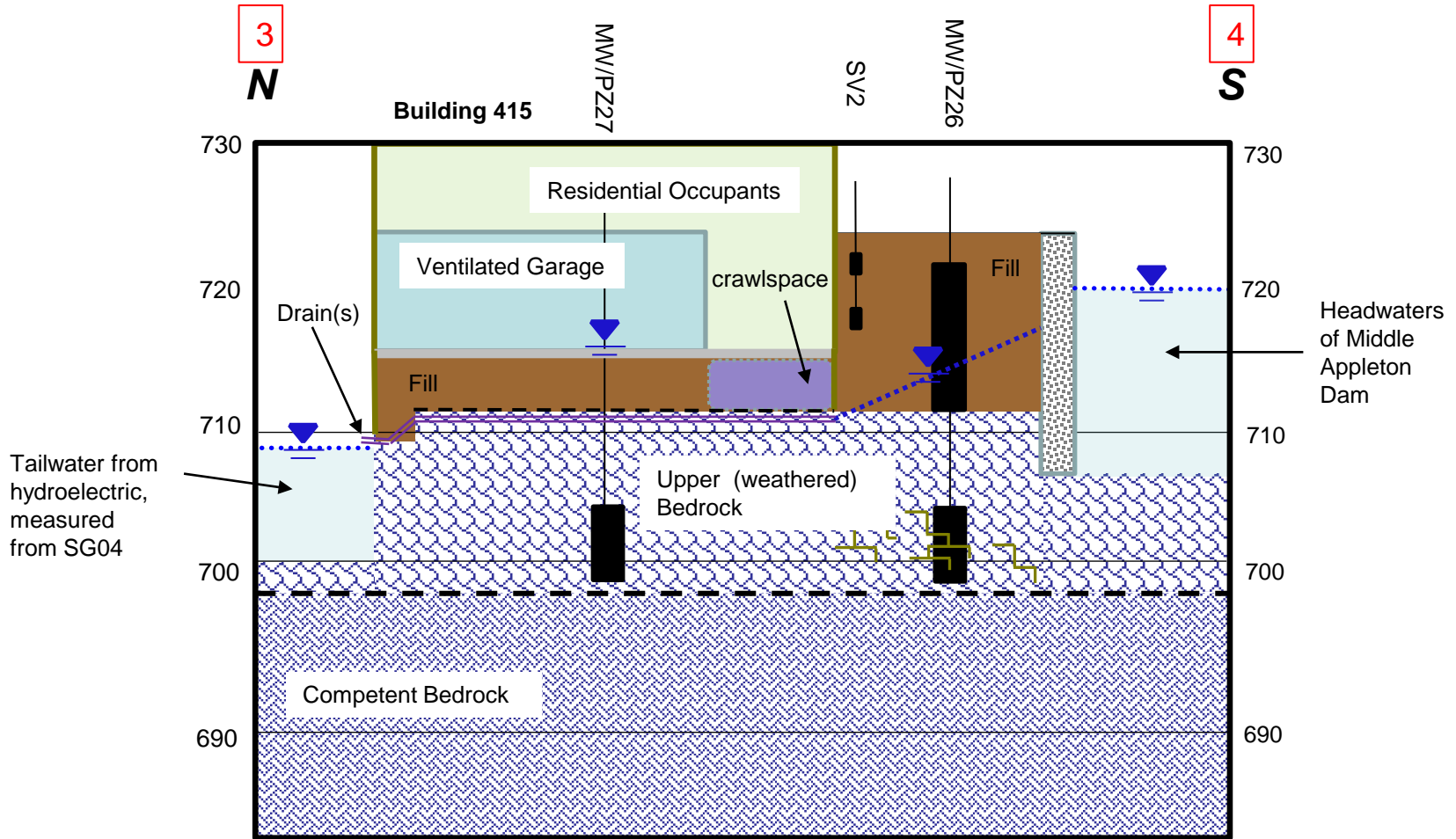
CSM-2. Conceptual drawing that illustrates the presence of MGP residuals following remedial construction (source removal and in situ solidification). Residual product is shown in green. The remediation area, including solidified soils, is shown in gray. Post-construction monitoring wells are in black. Following remedial construction, minor amounts of residual product have been observed in the lower till and weathered bedrock; and, a sheen was observed in portions of the canal bottom when dewatered in November 2011. The source of the observed residuals was removed or solidified during construction.

# Conceptual Drawing of Building 415 Appleton Former MGP Site (Boiler Room)



CSM-3. Conceptual drawing that illustrates the profile of the apartment building located at 415 South Olde Oneida Street. Monitoring wells and soil vapor probes have been projected onto the profile. Residual product observed in shallow (weathered) bedrock is shown in green. The floor of the garage has been surveyed at 715 feet NAVD 88. Observations suggest that the wall of the building sits on bedrock near the elevation of the tailwater from the hydroelectric units, a crawl space was observed beneath the garage slab along the southern wall of the building and PVC drain pipes were observed in the wall near SG04 at approximately 709.5 feet, the drain pipes become submerged when tailwater elevations exceed 710 feet.

# Conceptual Drawing of Building 415 Appleton Former MGP Site (Near Occupied Space)



CSM-4. Conceptual drawing that illustrates the profile of the apartment building located at 415 South Olde Oneida Street. Monitoring wells and soil vapor probes have been projected onto the profile. Residual product observed in shallow (weathered) bedrock is shown in green. The floor of the garage has been surveyed at 715 feet NAVD 88. Observations suggest that the wall of the building sits on bedrock near the elevation of the tailwater from the hydroelectric units, a crawlspace was observed beneath the garage slab along the southern wall of the building and PVC drain pipes were observed in the wall near SG04 at approximately 709.5 feet, the drain pipes become submerged when tailwater elevations exceed 710 feet.



**APPENDIX C**  
**2022 GROUNDWATER LABORATORY REPORTS (ON CD)**

May 10, 2022

Andrew Cawrse  
Ramboll Americas  
234 W Florida St  
Milwaukee, WI 53204

RE: Project: APPLETON MGP  
Pace Project No.: 40243866

Dear Andrew Cawrse:

Enclosed are the analytical results for sample(s) received by the laboratory on April 22, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

RRvised to update collections times. This report replaces the original report dated 5/5/22

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Brian Basten  
brian.basten@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Alex Bartelme, Ramboll  
NRT Data, Ramboll  
Frank Dombrowski, WE Energies  
Brian Hennings, Ramboll Americas  
WE Energies Lab Reports, WE Energies  
Evvan Plank, Ramboll



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: APPLETON MGP

Pace Project No.: 40243866

---

### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: APPLETON MGP  
Pace Project No.: 40243866

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40243866001	MW-25	Water	04/21/22 16:47	04/22/22 15:00
40243866002	MW-12R	Water	04/21/22 17:18	04/22/22 15:00
40243866003	PZ-12B	Water	04/21/22 18:12	04/22/22 15:00
40243866004	MW-13R	Water	04/21/22 18:45	04/22/22 15:00
40243866005	QAQC2	Water	04/21/22 18:50	04/22/22 15:00
40243866006	EB-01	Water	04/21/22 19:00	04/22/22 15:00
40243866007	TB-1	Water	04/21/22 00:00	04/22/22 15:00
40243866008	MW-22	Water	04/22/22 07:46	04/22/22 15:00
40243866009	PZ-22B	Water	04/22/22 08:41	04/22/22 15:00
40243866010	MW-21	Water	04/22/22 09:17	04/22/22 15:00
40243866011	PZ-21B	Water	04/22/22 09:54	04/22/22 15:00
40243866012	MW-20	Water	04/22/22 10:28	04/22/22 15:00
40243866013	PZ-20B	Water	04/22/22 11:03	04/22/22 15:00
40243866014	MW-02R	Water	04/22/22 11:53	04/22/22 15:00
40243866015	EB-02	Water	04/22/22 12:00	04/22/22 15:00

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### SAMPLE ANALYTE COUNT

Project: APPLETON MGP  
Pace Project No.: 40243866

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40243866001	MW-25	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243866002	MW-12R	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243866003	PZ-12B	EPA 8260	LAP	5
40243866004	MW-13R	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243866005	QAQC2	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243866006	EB-01	EPA 8260	LAP	9
40243866007	TB-1	EPA 8260	LAP	9
40243866008	MW-22	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243866009	PZ-22B	EPA 8260	LAP	5
40243866010	MW-21	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9

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### SAMPLE ANALYTE COUNT

Project: APPLETON MGP

Pace Project No.: 40243866

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
<b>40243866011</b>	<b>PZ-21B</b>	EPA 8260	LAP	5
<b>40243866012</b>	<b>MW-20</b>	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
<b>40243866013</b>	<b>PZ-20B</b>	EPA 8260	LAP	5
<b>40243866014</b>	<b>MW-02R</b>	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
<b>40243866015</b>	<b>EB-02</b>	EPA 8260	LAP	9

PASI-G = Pace Analytical Services - Green Bay

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### ANALYTICAL RESULTS

Project: APPLETON MGP

Pace Project No.: 40243866

**Sample: MW-25**      **Lab ID: 40243866001**      Collected: 04/21/22 16:47      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>1160</b>	ug/L	14.0	2.9	5		04/26/22 11:35	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	<b>0.93J</b>	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 00:02	7440-38-2	
Iron, Dissolved	<b>133J</b>	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 00:02	7439-89-6	
Manganese, Dissolved	<b>24.1</b>	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 00:02	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>0.89J</b>	ug/L	1.0	0.30	1		04/27/22 21:48	71-43-2	
Ethylbenzene	<b>0.84J</b>	ug/L	1.0	0.33	1		04/27/22 21:48	100-41-4	
Naphthalene	<b>7.1</b>	ug/L	5.0	1.1	1		04/27/22 21:48	91-20-3	
Toluene	<b>0.30J</b>	ug/L	1.0	0.29	1		04/27/22 21:48	108-88-3	
m&p-Xylene	<b>0.74J</b>	ug/L	2.0	0.70	1		04/27/22 21:48	179601-23-1	
o-Xylene	<b>0.35J</b>	ug/L	1.0	0.35	1		04/27/22 21:48	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	90	%	70-130		1		04/27/22 21:48	2037-26-5	
4-Bromofluorobenzene (S)	99	%	70-130		1		04/27/22 21:48	460-00-4	
1,2-Dichlorobenzene-d4 (S)	113	%	70-130		1		04/27/22 21:48	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	<b>89.0</b>	mg/L	10.0	2.2	5		05/03/22 00:03	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<b>219</b>	mg/L	50.0	10.4	2		04/29/22 12:40		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<b>0.20J</b>	mg/L	0.25	0.059	1		04/25/22 13:31		

**Sample: MW-12R**      **Lab ID: 40243866002**      Collected: 04/21/22 17:18      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>1980</b>	ug/L	28.0	5.8	10		04/26/22 11:42	74-82-8	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243866

**Sample: MW-12R**      **Lab ID: 40243866002**      Collected: 04/21/22 17:18      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	1.1	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 00:16	7440-38-2	
Iron, Dissolved	215J	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 00:16	7439-89-6	
Manganese, Dissolved	9.7	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 00:16	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	29.9	ug/L	10.0	3.0	10		04/28/22 00:44	71-43-2	
Ethylbenzene	68.4	ug/L	10.0	3.3	10		04/28/22 00:44	100-41-4	
Naphthalene	1050	ug/L	50.0	11.3	10		04/28/22 00:44	91-20-3	
Toluene	12.3	ug/L	10.0	2.9	10		04/28/22 00:44	108-88-3	
m&p-Xylene	25.2	ug/L	20.0	7.0	10		04/28/22 00:44	179601-23-1	
o-Xylene	28.6	ug/L	10.0	3.5	10		04/28/22 00:44	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	93	%	70-130		10		04/28/22 00:44	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130		10		04/28/22 00:44	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	70-130		10		04/28/22 00:44	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	88.7	mg/L	10.0	2.2	5		05/03/22 01:00	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	376	mg/L	50.0	10.4	2		04/29/22 12:41		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<0.059	mg/L	0.25	0.059	1		04/25/22 13:32		

**Sample: PZ-12B**      **Lab ID: 40243866003**      Collected: 04/21/22 18:12      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		04/28/22 09:16	71-43-2	
Naphthalene	<1.1	ug/L	5.0	1.1	1		04/28/22 09:16	91-20-3	
<b>Surrogates</b>									
Toluene-d8 (S)	91	%	70-130		1		04/28/22 09:16	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130		1		04/28/22 09:16	460-00-4	
1,2-Dichlorobenzene-d4 (S)	113	%	70-130		1		04/28/22 09:16	2199-69-1	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243866

**Sample: MW-13R**      **Lab ID: 40243866004**      Collected: 04/21/22 18:45      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	1330	ug/L	28.0	5.8	10		04/26/22 13:39	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	101	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 00:24	7440-38-2	
Iron, Dissolved	552	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 00:24	7439-89-6	
Manganese, Dissolved	37.0	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 00:24	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	2390	ug/L	50.0	14.8	50		04/27/22 23:25	71-43-2	
Ethylbenzene	545	ug/L	50.0	16.3	50		04/27/22 23:25	100-41-4	
Naphthalene	4900	ug/L	250	56.5	50		04/27/22 23:25	91-20-3	
Toluene	470	ug/L	50.0	14.4	50		04/27/22 23:25	108-88-3	
m&p-Xylene	691	ug/L	100	35.0	50		04/27/22 23:25	179601-23-1	
o-Xylene	255	ug/L	50.0	17.4	50		04/27/22 23:25	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	90	%	70-130		50		04/27/22 23:25	2037-26-5	
4-Bromofluorobenzene (S)	95	%	70-130		50		04/27/22 23:25	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	70-130		50		04/27/22 23:25	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	960	mg/L	100	22.2	50		05/03/22 01:15	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	215	mg/L	50.0	10.4	2		04/29/22 12:42		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<0.059	mg/L	0.25	0.059	1		04/25/22 13:32		

**Sample: QAQC2**      **Lab ID: 40243866005**      Collected: 04/21/22 18:50      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	1300	ug/L	28.0	5.8	10		04/26/22 13:45	74-82-8	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243866

**Sample: QAQC2**      **Lab ID: 40243866005**      Collected: 04/21/22 18:50      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	104	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 00:46	7440-38-2	
Iron, Dissolved	561	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 00:46	7439-89-6	
Manganese, Dissolved	38.8	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 00:46	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	2480	ug/L	50.0	14.8	50		04/27/22 23:45	71-43-2	
Ethylbenzene	565	ug/L	50.0	16.3	50		04/27/22 23:45	100-41-4	
Naphthalene	5310	ug/L	250	56.5	50		04/27/22 23:45	91-20-3	
Toluene	522	ug/L	50.0	14.4	50		04/27/22 23:45	108-88-3	
m&p-Xylene	750	ug/L	100	35.0	50		04/27/22 23:45	179601-23-1	
o-Xylene	280	ug/L	50.0	17.4	50		04/27/22 23:45	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	95	%	70-130		50		04/27/22 23:45	2037-26-5	
4-Bromofluorobenzene (S)	94	%	70-130		50		04/27/22 23:45	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	70-130		50		04/27/22 23:45	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	948	mg/L	40.0	8.9	20		05/03/22 17:22	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	200	mg/L	125	26.0	5		04/29/22 12:43		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<0.059	mg/L	0.25	0.059	1		04/25/22 13:33		

**Sample: EB-01**      **Lab ID: 40243866006**      Collected: 04/21/22 19:00      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		04/28/22 08:56	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/28/22 08:56	100-41-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		04/28/22 08:56	91-20-3	
Toluene	0.39J	ug/L	1.0	0.29	1		04/28/22 08:56	108-88-3	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/28/22 08:56	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/28/22 08:56	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	89	%	70-130		1		04/28/22 08:56	2037-26-5	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243866

**Sample: EB-01**      **Lab ID: 40243866006**      Collected: 04/21/22 19:00      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	97	%	70-130		1		04/28/22 08:56	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	70-130		1		04/28/22 08:56	2199-69-1	

**Sample: TB-1**      **Lab ID: 40243866007**      Collected: 04/21/22 00:00      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		04/27/22 19:50	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/27/22 19:50	100-41-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		04/27/22 19:50	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		04/27/22 19:50	108-88-3	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/27/22 19:50	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/27/22 19:50	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	91	%	70-130		1		04/27/22 19:50	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130		1		04/27/22 19:50	460-00-4	
1,2-Dichlorobenzene-d4 (S)	111	%	70-130		1		04/27/22 19:50	2199-69-1	

**Sample: MW-22**      **Lab ID: 40243866008**      Collected: 04/22/22 07:46      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>3040</b>	ug/L	56.0	11.5	20		04/26/22 12:20	74-82-8	M1
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	<b>5.3</b>	ug/L	1.0	0.28	1	04/26/22 05:51	05/04/22 23:32	7440-38-2	
Iron, Dissolved	<b>146J</b>	ug/L	250	58.0	1	04/26/22 05:51	05/04/22 23:32	7439-89-6	
Manganese, Dissolved	<b>63.0</b>	ug/L	4.0	1.2	1	04/26/22 05:51	05/04/22 23:32	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>1100</b>	ug/L	25.0	7.4	25		04/27/22 18:31	71-43-2	
Ethylbenzene	<b>372</b>	ug/L	25.0	8.1	25		04/27/22 18:31	100-41-4	M1
Naphthalene	<b>2720</b>	ug/L	125	28.2	25		04/27/22 18:31	91-20-3	
Toluene	<b>8.6J</b>	ug/L	25.0	7.2	25		04/27/22 18:31	108-88-3	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243866

**Sample: MW-22**      **Lab ID: 40243866008**      Collected: 04/22/22 07:46      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
m&p-Xylene	<b>43.2J</b>	ug/L	50.0	17.5	25		04/27/22 18:31	179601-23-1	
o-Xylene	<b>28.4</b>	ug/L	25.0	8.7	25		04/27/22 18:31	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	96	%	70-130		25		04/27/22 18:31	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130		25		04/27/22 18:31	460-00-4	
1,2-Dichlorobenzene-d4 (S)	117	%	70-130		25		04/27/22 18:31	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	<b>8.4</b>	mg/L	2.0	0.44	1		05/03/22 01:44	14808-79-8	M0
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<b>410</b>	mg/L	125	26.0	5		04/29/22 12:48		M0
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		04/25/22 13:34		

**Sample: PZ-22B**      **Lab ID: 40243866009**      Collected: 04/22/22 08:41      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>3.1J</b>	ug/L	5.0	1.5	5		04/28/22 00:05	71-43-2	
Naphthalene	<b>889</b>	ug/L	25.0	5.6	5		04/28/22 00:05	91-20-3	
<b>Surrogates</b>									
Toluene-d8 (S)	90	%	70-130		5		04/28/22 00:05	2037-26-5	
4-Bromofluorobenzene (S)	97	%	70-130		5		04/28/22 00:05	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	70-130		5		04/28/22 00:05	2199-69-1	

**Sample: MW-21**      **Lab ID: 40243866010**      Collected: 04/22/22 09:17      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>69.0</b>	ug/L	2.8	0.58	1		04/26/22 12:13	74-82-8	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243866

**Sample: MW-21**      **Lab ID: 40243866010**      Collected: 04/22/22 09:17      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	<b>105</b>	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 00:53	7440-38-2	
Iron, Dissolved	<b>214J</b>	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 00:53	7439-89-6	
Manganese, Dissolved	<b>&lt;1.2</b>	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 00:53	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>888</b>	ug/L	100	29.5	100		04/27/22 18:51	71-43-2	
Ethylbenzene	<b>194</b>	ug/L	100	32.5	100		04/27/22 18:51	100-41-4	
Naphthalene	<b>10100</b>	ug/L	500	113	100		04/27/22 18:51	91-20-3	
Toluene	<b>781</b>	ug/L	100	28.8	100		04/27/22 18:51	108-88-3	
m&p-Xylene	<b>448</b>	ug/L	200	70.0	100		04/27/22 18:51	179601-23-1	
o-Xylene	<b>246</b>	ug/L	100	34.8	100		04/27/22 18:51	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	90	%	70-130		100		04/27/22 18:51	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		100		04/27/22 18:51	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		100		04/27/22 18:51	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	<b>414</b>	mg/L	40.0	8.9	20		05/03/22 02:27	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<b>120</b>	mg/L	25.0	5.2	1		04/29/22 12:51		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<b>3.8</b>	mg/L	0.25	0.059	1		04/25/22 13:38		

**Sample: PZ-21B**      **Lab ID: 40243866011**      Collected: 04/22/22 09:54      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>0.31J</b>	ug/L	1.0	0.30	1		04/27/22 20:49	71-43-2	
Naphthalene	<b>31.6</b>	ug/L	5.0	1.1	1		04/27/22 20:49	91-20-3	
<b>Surrogates</b>									
Toluene-d8 (S)	90	%	70-130		1		04/27/22 20:49	2037-26-5	
4-Bromofluorobenzene (S)	93	%	70-130		1		04/27/22 20:49	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		04/27/22 20:49	2199-69-1	

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### ANALYTICAL RESULTS

Project: APPLETON MGP

Pace Project No.: 40243866

Sample: MW-20 Lab ID: 40243866012 Collected: 04/22/22 10:28 Received: 04/22/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	247	ug/L	2.8	0.58	1		04/26/22 10:13	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	118	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 03:15	7440-38-2	
Iron, Dissolved	123J	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 03:15	7439-89-6	
Manganese, Dissolved	2.5J	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 03:15	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	890	ug/L	25.0	7.4	25		04/28/22 00:24	71-43-2	
Ethylbenzene	321	ug/L	25.0	8.1	25		04/28/22 00:24	100-41-4	
Naphthalene	1060	ug/L	125	28.2	25		04/28/22 00:24	91-20-3	
Toluene	580	ug/L	25.0	7.2	25		04/28/22 00:24	108-88-3	
m&p-Xylene	317	ug/L	50.0	17.5	25		04/28/22 00:24	179601-23-1	
o-Xylene	234	ug/L	25.0	8.7	25		04/28/22 00:24	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	91	%	70-130		25		04/28/22 00:24	2037-26-5	
4-Bromofluorobenzene (S)	98	%	70-130		25		04/28/22 00:24	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	70-130		25		04/28/22 00:24	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	369	mg/L	40.0	8.9	20		05/03/22 02:41	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	289	mg/L	50.0	10.4	2		04/29/22 12:52		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	0.082J	mg/L	0.25	0.059	1		04/25/22 13:39		

Sample: PZ-20B Lab ID: 40243866013 Collected: 04/22/22 11:03 Received: 04/22/22 15:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	0.67J	ug/L	1.0	0.30	1		04/27/22 20:29	71-43-2	
Naphthalene	8.2	ug/L	5.0	1.1	1		04/27/22 20:29	91-20-3	
<b>Surrogates</b>									
Toluene-d8 (S)	93	%	70-130		1		04/27/22 20:29	2037-26-5	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243866

**Sample: PZ-20B**      **Lab ID: 40243866013**      Collected: 04/22/22 11:03      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	94	%	70-130		1		04/27/22 20:29	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		04/27/22 20:29	2199-69-1	

**Sample: MW-02R**      **Lab ID: 40243866014**      Collected: 04/22/22 11:53      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>1280</b>	ug/L	14.0	2.9	5		04/26/22 12:27	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	<b>1.6</b>	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 03:23	7440-38-2	
Iron, Dissolved	<b>483</b>	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 03:23	7439-89-6	
Manganese, Dissolved	<b>3.9J</b>	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 03:23	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>473</b>	ug/L	4.0	1.2	4		04/27/22 19:11	71-43-2	
Ethylbenzene	<b>233</b>	ug/L	4.0	1.3	4		04/27/22 19:11	100-41-4	
Naphthalene	<b>242</b>	ug/L	20.0	4.5	4		04/27/22 19:11	91-20-3	
Toluene	<b>23.7</b>	ug/L	4.0	1.2	4		04/27/22 19:11	108-88-3	
m&p-Xylene	<b>67.1</b>	ug/L	8.0	2.8	4		04/27/22 19:11	179601-23-1	
o-Xylene	<b>88.9</b>	ug/L	4.0	1.4	4		04/27/22 19:11	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	92	%	70-130		4		04/27/22 19:11	2037-26-5	
4-Bromofluorobenzene (S)	98	%	70-130		4		04/27/22 19:11	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	70-130		4		04/27/22 19:11	2199-69-1	

<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	<b>393</b>	mg/L	40.0	8.9	20		05/03/22 02:55	14808-79-8	

<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<b>459</b>	mg/L	50.0	10.4	2		04/29/22 12:53		

<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		04/25/22 13:39		

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### ANALYTICAL RESULTS

Project: APPLETON MGP

Pace Project No.: 40243866

**Sample: EB-02**      **Lab ID: 40243866015**      Collected: 04/22/22 12:00      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		04/27/22 20:10	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/27/22 20:10	100-41-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		04/27/22 20:10	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		04/27/22 20:10	108-88-3	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/27/22 20:10	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/27/22 20:10	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	91	%	70-130		1		04/27/22 20:10	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1		04/27/22 20:10	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		04/27/22 20:10	2199-69-1	

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243866

QC Batch:	414082	Analysis Method:	EPA 8015B Modified
QC Batch Method:	EPA 8015B Modified	Analysis Description:	Methane, Ethane, Ethene GCV
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

METHOD BLANK: 2384263 Matrix: Water  
Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	ug/L	<0.58	2.8	04/26/22 09:07	

LABORATORY CONTROL SAMPLE & LCSD: 2384264 2384265

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	28.6	27.3	28.0	95	98	73-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2384266 2384267

Parameter	Units	40243866008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methane	ug/L	3040	571	571	8060	8530	878	960	10-200	6	20	E,M1

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243866

QC Batch:	414058	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET Dissolved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

METHOD BLANK: 2384200 Matrix: Water  
Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	05/04/22 23:17	
Iron, Dissolved	ug/L	<58.0	250	05/04/22 23:17	
Manganese, Dissolved	ug/L	<1.2	4.0	05/04/22 23:17	

LABORATORY CONTROL SAMPLE: 2384201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	250	249	100	80-120	
Iron, Dissolved	ug/L	10000	10300	103	80-120	
Manganese, Dissolved	ug/L	250	246	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2384202 2384203

Parameter	Units	40243866008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	5.3	250	250	260	257	102	101	75-125	1	20	
Iron, Dissolved	ug/L	146J	10000	10000	10400	10300	102	101	75-125	1	20	
Manganese, Dissolved	ug/L	63.0	250	250	315	309	101	98	75-125	2	20	

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243866

QC Batch:	414002	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40243866001, 40243866002, 40243866003, 40243866004, 40243866005, 40243866006, 40243866007, 40243866008, 40243866009, 40243866010, 40243866011, 40243866012, 40243866013, 40243866014, 40243866015

METHOD BLANK: 2383968 Matrix: Water  
Associated Lab Samples: 40243866001, 40243866002, 40243866003, 40243866004, 40243866005, 40243866006, 40243866007, 40243866008, 40243866009, 40243866010, 40243866011, 40243866012, 40243866013, 40243866014, 40243866015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.30	1.0	04/27/22 14:16	
Ethylbenzene	ug/L	<0.33	1.0	04/27/22 14:16	
m&p-Xylene	ug/L	<0.70	2.0	04/27/22 14:16	
Naphthalene	ug/L	<1.1	5.0	04/27/22 14:16	
o-Xylene	ug/L	<0.35	1.0	04/27/22 14:16	
Toluene	ug/L	<0.29	1.0	04/27/22 14:16	
1,2-Dichlorobenzene-d4 (S)	%	109	70-130	04/27/22 14:16	
4-Bromofluorobenzene (S)	%	101	70-130	04/27/22 14:16	
Toluene-d8 (S)	%	90	70-130	04/27/22 14:16	

LABORATORY CONTROL SAMPLE: 2383969

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	56.7	113	70-130	
Ethylbenzene	ug/L	50	57.9	116	80-120	
m&p-Xylene	ug/L	100	119	119	70-130	
o-Xylene	ug/L	50	55.9	112	70-130	
Toluene	ug/L	50	54.4	109	80-120	
1,2-Dichlorobenzene-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			105	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383970 2383971

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40243866008 Result	Spike Conc.	Spike Conc.	MS Conc.								
Benzene	ug/L	1100	1250	1250	2620	2500	121	112	70-130	5	20		
Ethylbenzene	ug/L	372	1250	1250	1930	1870	125	120	80-121	3	20	M1	
m&p-Xylene	ug/L	43.2J	2500	2500	3070	2990	121	118	70-130	3	20		
o-Xylene	ug/L	28.4	1250	1250	1460	1440	114	113	70-130	1	20		
Toluene	ug/L	8.6J	1250	1250	1370	1400	109	111	80-120	2	20		
1,2-Dichlorobenzene-d4 (S)	%						105	102	70-130				
4-Bromofluorobenzene (S)	%						101	104	70-130				
Toluene-d8 (S)	%						98	95	70-130				

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243866

QC Batch: 414594 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

METHOD BLANK: 2387229 Matrix: Water  
Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<0.44	2.0	05/02/22 20:08	

LABORATORY CONTROL SAMPLE: 2387230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387231 2387232

Parameter	Units	40243833008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	20.5	20	20	42.4	42.5	110	110	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387241 2387242

Parameter	Units	40243866008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	8.4	20	20	30.9	31.0	112	113	90-110	0	15	M0

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243866

QC Batch: 414339 Analysis Method: EPA 310.2  
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

METHOD BLANK: 2385459 Matrix: Water  
Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<5.2	25.0	04/29/22 12:34	

LABORATORY CONTROL SAMPLE: 2385460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	98.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2385461 2385462

Parameter	Units	40243866008		2385461		2385462		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Alkalinity, Total as CaCO3	mg/L	410	500	500	978	997	114	117	90-110	2	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2385463 2385464

Parameter	Units	40243868005		2385463		2385464		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Alkalinity, Total as CaCO3	mg/L	331	200	200	564	566	117	118	90-110	0	20	M0

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### QUALITY CONTROL DATA

Project: APPLETON MGP

Pace Project No.: 40243866

QC Batch: 413991

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrate + Nitrite, preserved

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

METHOD BLANK: 2383947

Matrix: Water

Associated Lab Samples: 40243866001, 40243866002, 40243866004, 40243866005, 40243866008, 40243866010, 40243866012, 40243866014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	04/25/22 13:30	

LABORATORY CONTROL SAMPLE: 2383948

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383949 2383950

Parameter	Units	40243866008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.6	2.5	101	100	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383951 2383952

Parameter	Units	40243868005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.2	2.2	86	86	90-110	0	20	M0

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## QUALIFIERS

Project: APPLETON MGP

Pace Project No.: 40243866

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: APPLETON MGP

Pace Project No.: 40243866

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243866001	MW-25	EPA 8015B Modified	414082		
40243866002	MW-12R	EPA 8015B Modified	414082		
40243866004	MW-13R	EPA 8015B Modified	414082		
40243866005	QAQC2	EPA 8015B Modified	414082		
40243866008	MW-22	EPA 8015B Modified	414082		
40243866010	MW-21	EPA 8015B Modified	414082		
40243866012	MW-20	EPA 8015B Modified	414082		
40243866014	MW-02R	EPA 8015B Modified	414082		
40243866001	MW-25	EPA 3010A	414058	EPA 6020B	414131
40243866002	MW-12R	EPA 3010A	414058	EPA 6020B	414131
40243866004	MW-13R	EPA 3010A	414058	EPA 6020B	414131
40243866005	QAQC2	EPA 3010A	414058	EPA 6020B	414131
40243866008	MW-22	EPA 3010A	414058	EPA 6020B	414131
40243866010	MW-21	EPA 3010A	414058	EPA 6020B	414131
40243866012	MW-20	EPA 3010A	414058	EPA 6020B	414131
40243866014	MW-02R	EPA 3010A	414058	EPA 6020B	414131
40243866001	MW-25	EPA 8260	414002		
40243866002	MW-12R	EPA 8260	414002		
40243866003	PZ-12B	EPA 8260	414002		
40243866004	MW-13R	EPA 8260	414002		
40243866005	QAQC2	EPA 8260	414002		
40243866006	EB-01	EPA 8260	414002		
40243866007	TB-1	EPA 8260	414002		
40243866008	MW-22	EPA 8260	414002		
40243866009	PZ-22B	EPA 8260	414002		
40243866010	MW-21	EPA 8260	414002		
40243866011	PZ-21B	EPA 8260	414002		
40243866012	MW-20	EPA 8260	414002		
40243866013	PZ-20B	EPA 8260	414002		
40243866014	MW-02R	EPA 8260	414002		
40243866015	EB-02	EPA 8260	414002		
40243866001	MW-25	EPA 300.0	414594		
40243866002	MW-12R	EPA 300.0	414594		
40243866004	MW-13R	EPA 300.0	414594		
40243866005	QAQC2	EPA 300.0	414594		
40243866008	MW-22	EPA 300.0	414594		
40243866010	MW-21	EPA 300.0	414594		
40243866012	MW-20	EPA 300.0	414594		
40243866014	MW-02R	EPA 300.0	414594		
40243866001	MW-25	EPA 310.2	414339		
40243866002	MW-12R	EPA 310.2	414339		
40243866004	MW-13R	EPA 310.2	414339		
40243866005	QAQC2	EPA 310.2	414339		
40243866008	MW-22	EPA 310.2	414339		
40243866010	MW-21	EPA 310.2	414339		
40243866012	MW-20	EPA 310.2	414339		
40243866014	MW-02R	EPA 310.2	414339		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: APPLETON MGP

Pace Project No.: 40243866

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243866001	MW-25	EPA 353.2	413991		
40243866002	MW-12R	EPA 353.2	413991		
40243866004	MW-13R	EPA 353.2	413991		
40243866005	QAQC2	EPA 353.2	413991		
40243866008	MW-22	EPA 353.2	413991		
40243866010	MW-21	EPA 353.2	413991		
40243866012	MW-20	EPA 353.2	413991		
40243866014	MW-02R	EPA 353.2	413991		

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**Sample Condition Upon Receipt Form (SCUR)**

Project #: \_\_\_\_\_

Client Name: Ramboll

**WO# : 40243866**

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto

Client  Pace Other: \_\_\_\_\_



Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR - 107 Type of Ice: (Wet) Blue Dry None

Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 5.5 / Corr: 5.5

Temp Blank Present:  yes  no

Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 4/22/22 / Initials: MP  
 Labeled By Initials: MP

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>proj#</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis	Matrix: <u>W</u>	
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	<u>477</u>	

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

May 05, 2022

Andrew Cawrse  
Ramboll Americas  
234 W Florida St  
Milwaukee, WI 53204

RE: Project: APPLETON MGP  
Pace Project No.: 40243867

Dear Andrew Cawrse:

Enclosed are the analytical results for sample(s) received by the laboratory on April 22, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Brian Basten  
brian.basten@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Alex Bartelme, Ramboll  
NRT Data, Ramboll  
Frank Dombrowski, WE Energies  
Brian Hennings, Ramboll Americas  
WE Energies Lab Reports, WE Energies  
Evván Plank, Ramboll



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: APPLETON MGP

Pace Project No.: 40243867

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: APPLETON MGP

Pace Project No.: 40243867

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
40243867001	MW-24	Water	04/21/22 15:05	04/22/22 15:00
40243867002	MW-19	Water	04/21/22 15:59	04/22/22 15:00

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### SAMPLE ANALYTE COUNT

Project: APPLETON MGP  
Pace Project No.: 40243867

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40243867001	MW-24	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243867002	MW-19	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1

PASI-G = Pace Analytical Services - Green Bay

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243867

**Sample: MW-24**      **Lab ID: 40243867001**      Collected: 04/21/22 15:05      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>2.2J</b>	ug/L	2.8	0.58	1		04/26/22 10:27	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	<b>0.36J</b>	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 03:30	7440-38-2	
Iron, Dissolved	<b>130J</b>	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 03:30	7439-89-6	
Manganese, Dissolved	<b>92.3</b>	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 03:30	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		04/27/22 22:07	71-43-2	
Ethylbenzene	<b>&lt;0.33</b>	ug/L	1.0	0.33	1		04/27/22 22:07	100-41-4	
Naphthalene	<b>&lt;1.1</b>	ug/L	5.0	1.1	1		04/27/22 22:07	91-20-3	
Toluene	<b>&lt;0.29</b>	ug/L	1.0	0.29	1		04/27/22 22:07	108-88-3	
m&p-Xylene	<b>&lt;0.70</b>	ug/L	2.0	0.70	1		04/27/22 22:07	179601-23-1	
o-Xylene	<b>&lt;0.35</b>	ug/L	1.0	0.35	1		04/27/22 22:07	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	90	%	70-130		1		04/27/22 22:07	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1		04/27/22 22:07	460-00-4	
1,2-Dichlorobenzene-d4 (S)	112	%	70-130		1		04/27/22 22:07	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	<b>119</b>	mg/L	10.0	2.2	5		05/03/22 03:10	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<b>483</b>	mg/L	50.0	10.4	2		04/29/22 12:54		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<b>0.90</b>	mg/L	0.25	0.059	1		04/25/22 13:40		

**Sample: MW-19**      **Lab ID: 40243867002**      Collected: 04/21/22 15:59      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>1190</b>	ug/L	14.0	2.9	5		04/26/22 12:34	74-82-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243867

**Sample: MW-19**      **Lab ID: 40243867002**      Collected: 04/21/22 15:59      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B    Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	<b>0.95J</b>	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 03:37	7440-38-2	
Iron, Dissolved	<b>759</b>	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 03:37	7439-89-6	
Manganese, Dissolved	<b>15.4</b>	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 03:37	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>33.1</b>	ug/L	1.0	0.30	1		04/28/22 09:35	71-43-2	
Ethylbenzene	<b>42.4</b>	ug/L	1.0	0.33	1		04/28/22 09:35	100-41-4	
Naphthalene	<b>5.9</b>	ug/L	5.0	1.1	1		04/28/22 09:35	91-20-3	
Toluene	<b>1.9</b>	ug/L	1.0	0.29	1		04/28/22 09:35	108-88-3	
m&p-Xylene	<b>6.0</b>	ug/L	2.0	0.70	1		04/28/22 09:35	179601-23-1	
o-Xylene	<b>12.8</b>	ug/L	1.0	0.35	1		04/28/22 09:35	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	92	%	70-130		1		04/28/22 09:35	2037-26-5	
4-Bromofluorobenzene (S)	96	%	70-130		1		04/28/22 09:35	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		04/28/22 09:35	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	<b>253</b>	mg/L	40.0	8.9	20		05/03/22 04:07	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<b>518</b>	mg/L	50.0	10.4	2		04/29/22 12:55		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		04/25/22 13:41		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243867

QC Batch: 414082      Analysis Method: EPA 8015B Modified  
QC Batch Method: EPA 8015B Modified      Analysis Description: Methane, Ethane, Ethene GCV  
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243867001, 40243867002

METHOD BLANK: 2384263      Matrix: Water

Associated Lab Samples: 40243867001, 40243867002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	ug/L	<0.58	2.8	04/26/22 09:07	

LABORATORY CONTROL SAMPLE & LCSD: 2384264

2384265

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	28.6	27.3	28.0	95	98	73-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2384266

2384267

Parameter	Units	40243866008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methane	ug/L	3040	571	571	8060	8530	878	960	10-200	6	20	E,M1

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243867

QC Batch: 414058      Analysis Method: EPA 6020B  
QC Batch Method: EPA 3010A      Analysis Description: 6020B MET Dissolved  
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243867001, 40243867002

METHOD BLANK: 2384200      Matrix: Water

Associated Lab Samples: 40243867001, 40243867002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	05/04/22 23:17	
Iron, Dissolved	ug/L	<58.0	250	05/04/22 23:17	
Manganese, Dissolved	ug/L	<1.2	4.0	05/04/22 23:17	

LABORATORY CONTROL SAMPLE: 2384201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	250	249	100	80-120	
Iron, Dissolved	ug/L	10000	10300	103	80-120	
Manganese, Dissolved	ug/L	250	246	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2384202      2384203

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40243866008 Result	Spike Conc.	Spike Conc.	Result								
Arsenic, Dissolved	ug/L	5.3	250	250	260	257	102	101	75-125	1	20		
Iron, Dissolved	ug/L	146J	10000	10000	10400	10300	102	101	75-125	1	20		
Manganese, Dissolved	ug/L	63.0	250	250	315	309	101	98	75-125	2	20		

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243867

QC Batch: 414002      Analysis Method: EPA 8260  
QC Batch Method: EPA 8260      Analysis Description: 8260 MSV UST-WATER  
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243867001, 40243867002

METHOD BLANK: 2383968      Matrix: Water  
Associated Lab Samples: 40243867001, 40243867002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.30	1.0	04/27/22 14:16	
Ethylbenzene	ug/L	<0.33	1.0	04/27/22 14:16	
m&p-Xylene	ug/L	<0.70	2.0	04/27/22 14:16	
Naphthalene	ug/L	<1.1	5.0	04/27/22 14:16	
o-Xylene	ug/L	<0.35	1.0	04/27/22 14:16	
Toluene	ug/L	<0.29	1.0	04/27/22 14:16	
1,2-Dichlorobenzene-d4 (S)	%	109	70-130	04/27/22 14:16	
4-Bromofluorobenzene (S)	%	101	70-130	04/27/22 14:16	
Toluene-d8 (S)	%	90	70-130	04/27/22 14:16	

LABORATORY CONTROL SAMPLE: 2383969

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	56.7	113	70-130	
Ethylbenzene	ug/L	50	57.9	116	80-120	
m&p-Xylene	ug/L	100	119	119	70-130	
o-Xylene	ug/L	50	55.9	112	70-130	
Toluene	ug/L	50	54.4	109	80-120	
1,2-Dichlorobenzene-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			105	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383970      2383971

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40243866008 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Benzene	ug/L	1100	1250	1250	2620	2500	121	112	70-130	5	20	
Ethylbenzene	ug/L	372	1250	1250	1930	1870	125	120	80-121	3	20	M1
m&p-Xylene	ug/L	43.2J	2500	2500	3070	2990	121	118	70-130	3	20	
o-Xylene	ug/L	28.4	1250	1250	1460	1440	114	113	70-130	1	20	
Toluene	ug/L	8.6J	1250	1250	1370	1400	109	111	80-120	2	20	
1,2-Dichlorobenzene-d4 (S)	%						105	102	70-130			
4-Bromofluorobenzene (S)	%						101	104	70-130			
Toluene-d8 (S)	%						98	95	70-130			

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243867

QC Batch: 414594      Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0      Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40243867001, 40243867002

METHOD BLANK: 2387229      Matrix: Water  
Associated Lab Samples: 40243867001, 40243867002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<0.44	2.0	05/02/22 20:08	

LABORATORY CONTROL SAMPLE: 2387230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387231      2387232

Parameter	Units	40243833008		MS		MSD		% Rec		Limits		Max		Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Sulfate	mg/L	20.5	20	20	20	42.4	42.5	110	110	90-110	0	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387241      2387242

Parameter	Units	40243866008		MS		MSD		% Rec		Limits		Max		Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Sulfate	mg/L	8.4	20	20	20	30.9	31.0	112	113	90-110	0	15	M0	

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243867

QC Batch: 414339 Analysis Method: EPA 310.2  
QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40243867001, 40243867002

METHOD BLANK: 2385459 Matrix: Water  
Associated Lab Samples: 40243867001, 40243867002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<5.2	25.0	04/29/22 12:34	

LABORATORY CONTROL SAMPLE: 2385460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	98.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2385461 2385462

Parameter	Units	40243866008		2385461		2385462		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.					MS Result
Alkalinity, Total as CaCO3	mg/L	410	500	500	500	978	997	114	117	90-110	2	20 M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2385463 2385464

Parameter	Units	40243868005		2385463		2385464		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.					MS Result
Alkalinity, Total as CaCO3	mg/L	331	200	200	200	564	566	117	118	90-110	0	20 M0

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243867

QC Batch: 413991 Analysis Method: EPA 353.2  
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, preserved  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40243867001, 40243867002

METHOD BLANK: 2383947 Matrix: Water  
Associated Lab Samples: 40243867001, 40243867002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	04/25/22 13:30	

LABORATORY CONTROL SAMPLE: 2383948

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383949 2383950

Parameter	Units	40243866008		2383949		2383950		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.5	2.5	2.6	2.5	101	100	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383951 2383952

Parameter	Units	40243868005		2383951		2383952		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.5	2.2	2.2	86	86	90-110	0	20	M0

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## QUALIFIERS

Project: APPLETON MGP

Pace Project No.: 40243867

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: APPLETON MGP  
Pace Project No.: 40243867

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243867001	MW-24	EPA 8015B Modified	414082		
40243867002	MW-19	EPA 8015B Modified	414082		
40243867001	MW-24	EPA 3010A	414058	EPA 6020B	414131
40243867002	MW-19	EPA 3010A	414058	EPA 6020B	414131
40243867001	MW-24	EPA 8260	414002		
40243867002	MW-19	EPA 8260	414002		
40243867001	MW-24	EPA 300.0	414594		
40243867002	MW-19	EPA 300.0	414594		
40243867001	MW-24	EPA 310.2	414339		
40243867002	MW-19	EPA 310.2	414339		
40243867001	MW-24	EPA 353.2	413991		
40243867002	MW-19	EPA 353.2	413991		

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### Sample Condition Upon Receipt Form (SCUR)

Client Name: Ramboll

Project #: **WO#: 40243867**  
  
 40243867

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR-107 Type of Ice:  Wet  Blue  Dry  None

Cooler Temperature Uncorr: 5/5 / Corr: 1.5/1.5

Samples on ice, cooling process has begun

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Person examining contents:  
 Date: 4/22/22 / Initials: [Signature]  
 Labeled By Initials: [Signature]

Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>proj#</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. <u>Chris 4/22/22</u>
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
- Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
- Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
- Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login  
 Page 2 of 2

May 06, 2022

Andrew Cawrse  
Ramboll Americas  
234 W Florida St  
Milwaukee, WI 53204

RE: Project: APPLETON MGP  
Pace Project No.: 40243868

Dear Andrew Cawrse:

Enclosed are the analytical results for sample(s) received by the laboratory on April 22, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Brian Basten  
brian.basten@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Alex Bartelme, Ramboll  
NRT Data, Ramboll  
Frank Dombrowski, WE Energies  
Brian Hennings, Ramboll Americas  
WE Energies Lab Reports, WE Energies  
Evván Plank, Ramboll



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## CERTIFICATIONS

Project: APPLETON MGP

Pace Project No.: 40243868

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: APPLETON MGP

Pace Project No.: 40243868

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40243868001	MW-26	Water	04/21/22 11:12	04/22/22 15:00
40243868002	MW-28	Water	04/21/22 12:10	04/22/22 15:00
40243868003	PZ-27	Water	04/21/22 12:57	04/22/22 15:00
40243868004	MW-27	Water	04/21/22 13:23	04/22/22 15:00
40243868005	PZ-23	Water	04/21/22 13:54	04/22/22 15:00
40243868006	QAQC1	Water	04/21/22 14:00	04/22/22 15:00

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### SAMPLE ANALYTE COUNT

Project: APPLETON MGP  
Pace Project No.: 40243868

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40243868001	MW-26	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243868002	MW-28	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243868003	PZ-27	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243868004	MW-27	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243868005	PZ-23	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1
40243868006	QAQC1	EPA 8015B Modified	KHB	1
		EPA 6020B	KXS	3
		EPA 8260	LAP	9
		EPA 300.0	HMB	1
		EPA 310.2	DAW	1
		EPA 353.2	DAW	1

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### SAMPLE ANALYTE COUNT

Project: APPLETON MGP

Pace Project No.: 40243868

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Method</b>	<b>Analysts</b>	<b>Analytes Reported</b>
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PASI-G = Pace Analytical Services - Green Bay

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243868

**Sample: MW-26**      **Lab ID: 40243868001**      Collected: 04/21/22 11:12      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>3620</b>	ug/L	56.0	11.5	20		04/26/22 12:41	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	<b>64.6</b>	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 03:45	7440-38-2	
Iron, Dissolved	<b>1730</b>	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 03:45	7439-89-6	
Manganese, Dissolved	<b>258</b>	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 03:45	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<b>28.4</b>	ug/L	1.0	0.30	1		04/27/22 08:07	71-43-2	
Ethylbenzene	<b>&lt;0.33</b>	ug/L	1.0	0.33	1		04/27/22 08:07	100-41-4	
Naphthalene	<b>38.7</b>	ug/L	5.0	1.1	1		04/27/22 08:07	91-20-3	
Toluene	<b>&lt;0.29</b>	ug/L	1.0	0.29	1		04/27/22 08:07	108-88-3	
m&p-Xylene	<b>0.83J</b>	ug/L	2.0	0.70	1		04/27/22 08:07	179601-23-1	
o-Xylene	<b>2.0</b>	ug/L	1.0	0.35	1		04/27/22 08:07	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	105	%	70-130		1		04/27/22 08:07	2037-26-5	
4-Bromofluorobenzene (S)	107	%	70-130		1		04/27/22 08:07	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		04/27/22 08:07	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	<b>11.0</b>	mg/L	2.0	0.44	1		05/03/22 04:22	14808-79-8	
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<b>438</b>	mg/L	50.0	10.4	2		04/29/22 12:56		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		04/25/22 13:41		

**Sample: MW-28**      **Lab ID: 40243868002**      Collected: 04/21/22 12:10      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	<b>3390</b>	ug/L	56.0	11.5	20		04/26/22 12:48	74-82-8	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243868

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: MW-28</b> <b>Lab ID: 40243868002</b> Collected: 04/21/22 12:10    Received: 04/22/22 15:00    Matrix: Water									
<b>6020B MET ICPMS, Dissolved</b> Analytical Method: EPA 6020B    Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	32.8	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 03:52	7440-38-2	
Iron, Dissolved	1660	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 03:52	7439-89-6	
Manganese, Dissolved	598	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 03:52	7439-96-5	
<b>8260 MSV UST</b> Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		04/27/22 08:26	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/27/22 08:26	100-41-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		04/27/22 08:26	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		04/27/22 08:26	108-88-3	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/27/22 08:26	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/27/22 08:26	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	106	%	70-130		1		04/27/22 08:26	2037-26-5	
4-Bromofluorobenzene (S)	108	%	70-130		1		04/27/22 08:26	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		04/27/22 08:26	2199-69-1	
<b>300.0 IC Anions</b> Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	37.6	mg/L	10.0	2.2	5		05/03/22 04:36	14808-79-8	
<b>310.2 Alkalinity</b> Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	248	mg/L	25.0	5.2	1		04/29/22 12:57		
<b>353.2 Nitrogen, NO2/NO3 pres.</b> Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<0.059	mg/L	0.25	0.059	1		04/25/22 13:42		

<b>Sample: PZ-27</b> <b>Lab ID: 40243868003</b> Collected: 04/21/22 12:57    Received: 04/22/22 15:00    Matrix: Water									
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b> Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	4430	ug/L	56.0	11.5	20		04/26/22 12:55	74-82-8	
<b>6020B MET ICPMS, Dissolved</b> Analytical Method: EPA 6020B    Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	2.0	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 03:59	7440-38-2	
Iron, Dissolved	1240	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 03:59	7439-89-6	
Manganese, Dissolved	104	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 03:59	7439-96-5	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243868

**Sample: PZ-27**      **Lab ID: 40243868003**      Collected: 04/21/22 12:57      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	143	ug/L	5.0	1.5	5		04/27/22 10:26	71-43-2	
Ethylbenzene	16.9	ug/L	5.0	1.6	5		04/27/22 10:26	100-41-4	
Naphthalene	224	ug/L	25.0	5.6	5		04/27/22 10:26	91-20-3	
Toluene	<1.4	ug/L	5.0	1.4	5		04/27/22 10:26	108-88-3	
m&p-Xylene	4.8J	ug/L	10.0	3.5	5		04/27/22 10:26	179601-23-1	
o-Xylene	7.5	ug/L	5.0	1.7	5		04/27/22 10:26	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	103	%	70-130		5		04/27/22 10:26	2037-26-5	
4-Bromofluorobenzene (S)	107	%	70-130		5		04/27/22 10:26	460-00-4	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		5		04/27/22 10:26	2199-69-1	

<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	1.0J	mg/L	2.0	0.44	1		05/03/22 04:50	14808-79-8	

<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	243	mg/L	25.0	5.2	1		04/29/22 13:01		

<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<0.059	mg/L	0.25	0.059	1		04/25/22 13:43		

**Sample: MW-27**      **Lab ID: 40243868004**      Collected: 04/21/22 13:23      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	464	ug/L	7.0	1.4	2.5		04/26/22 13:02	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	5.3	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 04:07	7440-38-2	
Iron, Dissolved	162J	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 04:07	7439-89-6	
Manganese, Dissolved	45.3	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 04:07	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	13.6	ug/L	1.0	0.30	1		04/27/22 11:26	71-43-2	
Ethylbenzene	2.8	ug/L	1.0	0.33	1		04/27/22 11:26	100-41-4	
Naphthalene	14.9	ug/L	5.0	1.1	1		04/27/22 11:26	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		04/27/22 11:26	108-88-3	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243868

**Sample: MW-27**      **Lab ID: 40243868004**      Collected: 04/21/22 13:23      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/27/22 11:26	179601-23-1	
o-Xylene	0.41J	ug/L	1.0	0.35	1		04/27/22 11:26	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	104	%	70-130		1		04/27/22 11:26	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130		1		04/27/22 11:26	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		1		04/27/22 11:26	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	16.6	mg/L	2.0	0.44	1		05/03/22 20:29	14808-79-8	M0
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	220	mg/L	25.0	5.2	1		04/29/22 13:02		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	0.46	mg/L	0.25	0.059	1		04/25/22 13:43		

**Sample: PZ-23**      **Lab ID: 40243868005**      Collected: 04/21/22 13:54      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	3320	ug/L	140	28.8	50		04/26/22 13:52	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	2.5	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 04:14	7440-38-2	
Iron, Dissolved	6890	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 04:14	7439-89-6	
Manganese, Dissolved	526	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 04:14	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		04/27/22 10:46	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/27/22 10:46	100-41-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		04/27/22 10:46	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		04/27/22 10:46	108-88-3	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/27/22 10:46	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/27/22 10:46	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	106	%	70-130		1		04/27/22 10:46	2037-26-5	

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### ANALYTICAL RESULTS

Project: APPLETON MGP  
Pace Project No.: 40243868

**Sample: PZ-23**      **Lab ID: 40243868005**      Collected: 04/21/22 13:54      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	112	%	70-130		1		04/27/22 10:46	460-00-4	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		1		04/27/22 10:46	2199-69-1	
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay									
Sulfate	<2.2	mg/L	10.0	2.2	5		05/03/22 21:12	14808-79-8	D3
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	331	mg/L	50.0	10.4	2		04/29/22 13:03		M0
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2 Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<0.059	mg/L	0.25	0.059	1		04/25/22 13:44		M0

**Sample: QAQC1**      **Lab ID: 40243868006**      Collected: 04/21/22 14:00      Received: 04/22/22 15:00      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>Methane, Ethane, Ethene GCV</b>									
Analytical Method: EPA 8015B Modified Pace Analytical Services - Green Bay									
Methane	5190	ug/L	140	28.8	50		04/26/22 13:59	74-82-8	
<b>6020B MET ICPMS, Dissolved</b>									
Analytical Method: EPA 6020B      Preparation Method: EPA 3010A Pace Analytical Services - Green Bay									
Arsenic, Dissolved	2.6	ug/L	1.0	0.28	1	04/26/22 05:51	05/05/22 04:21	7440-38-2	
Iron, Dissolved	7160	ug/L	250	58.0	1	04/26/22 05:51	05/05/22 04:21	7439-89-6	
Manganese, Dissolved	550	ug/L	4.0	1.2	1	04/26/22 05:51	05/05/22 04:21	7439-96-5	
<b>8260 MSV UST</b>									
Analytical Method: EPA 8260 Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		04/27/22 08:46	71-43-2	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		04/27/22 08:46	100-41-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		04/27/22 08:46	91-20-3	
Toluene	<0.29	ug/L	1.0	0.29	1		04/27/22 08:46	108-88-3	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		04/27/22 08:46	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		04/27/22 08:46	95-47-6	
<b>Surrogates</b>									
Toluene-d8 (S)	102	%	70-130		1		04/27/22 08:46	2037-26-5	
4-Bromofluorobenzene (S)	106	%	70-130		1		04/27/22 08:46	460-00-4	
1,2-Dichlorobenzene-d4 (S)	105	%	70-130		1		04/27/22 08:46	2199-69-1	

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## ANALYTICAL RESULTS

Project: APPLETON MGP

Pace Project No.: 40243868

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**Sample: QAQC1**                      **Lab ID: 40243868006**    Collected: 04/21/22 14:00    Received: 04/22/22 15:00    Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>300.0 IC Anions</b>									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Sulfate	<b>&lt;2.2</b>	mg/L	10.0	2.2	5		05/03/22 21:26	14808-79-8	D3
<b>310.2 Alkalinity</b>									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<b>351</b>	mg/L	25.0	5.2	1		04/29/22 13:06		
<b>353.2 Nitrogen, NO2/NO3 pres.</b>									
Analytical Method: EPA 353.2									
Pace Analytical Services - Green Bay									
Nitrogen, NO2 plus NO3	<b>&lt;0.059</b>	mg/L	0.25	0.059	1		04/25/22 13:48		

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243868

QC Batch: 414082 Analysis Method: EPA 8015B Modified  
QC Batch Method: EPA 8015B Modified Analysis Description: Methane, Ethane, Ethene GCV  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

METHOD BLANK: 2384263 Matrix: Water  
Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	ug/L	<0.58	2.8	04/26/22 09:07	

LABORATORY CONTROL SAMPLE & LCSD: 2384264 2384265

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	ug/L	28.6	27.3	28.0	95	98	73-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2384266 2384267

Parameter	Units	40243866008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Methane	ug/L	3040	571	571	8060	8530	878	960	10-200	6	20	E,M1

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243868

QC Batch: 414058 Analysis Method: EPA 6020B  
QC Batch Method: EPA 3010A Analysis Description: 6020B MET Dissolved  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

METHOD BLANK: 2384200 Matrix: Water  
Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	05/04/22 23:17	
Iron, Dissolved	ug/L	<58.0	250	05/04/22 23:17	
Manganese, Dissolved	ug/L	<1.2	4.0	05/04/22 23:17	

LABORATORY CONTROL SAMPLE: 2384201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	250	249	100	80-120	
Iron, Dissolved	ug/L	10000	10300	103	80-120	
Manganese, Dissolved	ug/L	250	246	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2384202 2384203

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40243866008 Result	Spike Conc.	Spike Conc.	Result								
Arsenic, Dissolved	ug/L	5.3	250	250	260	257	102	101	75-125	1	20		
Iron, Dissolved	ug/L	146J	10000	10000	10400	10300	102	101	75-125	1	20		
Manganese, Dissolved	ug/L	63.0	250	250	315	309	101	98	75-125	2	20		

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### QUALITY CONTROL DATA

Project: APPLETON MGP

Pace Project No.: 40243868

QC Batch: 414030

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

METHOD BLANK: 2384096

Matrix: Water

Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	<0.30	1.0	04/26/22 15:30	
Ethylbenzene	ug/L	<0.33	1.0	04/26/22 15:30	
m&p-Xylene	ug/L	<0.70	2.0	04/26/22 15:30	
Naphthalene	ug/L	<1.1	5.0	04/26/22 15:30	
o-Xylene	ug/L	<0.35	1.0	04/26/22 15:30	
Toluene	ug/L	<0.29	1.0	04/26/22 15:30	
1,2-Dichlorobenzene-d4 (S)	%	106	70-130	04/26/22 15:30	
4-Bromofluorobenzene (S)	%	106	70-130	04/26/22 15:30	
Toluene-d8 (S)	%	106	70-130	04/26/22 15:30	

LABORATORY CONTROL SAMPLE: 2384097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	48.5	97	70-130	
Ethylbenzene	ug/L	50	53.5	107	80-120	
m&p-Xylene	ug/L	100	104	104	70-130	
o-Xylene	ug/L	50	50.9	102	70-130	
Toluene	ug/L	50	53.3	107	80-120	
1,2-Dichlorobenzene-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			110	70-130	
Toluene-d8 (S)	%			106	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: APPLETON MGP

Pace Project No.: 40243868

QC Batch: 414594

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243868001, 40243868002, 40243868003

METHOD BLANK: 2387229

Matrix: Water

Associated Lab Samples: 40243868001, 40243868002, 40243868003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<0.44	2.0	05/02/22 20:08	

LABORATORY CONTROL SAMPLE: 2387230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	19.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387231 2387232

Parameter	Units	40243833008		2387231		2387232		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					
Sulfate	mg/L	20.5	20	20	20	42.4	42.5	110	110	90-110	0	15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387241 2387242

Parameter	Units	40243866008		2387241		2387242		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result					
Sulfate	mg/L	8.4	20	20	20	30.9	31.0	112	113	90-110	0	15 M0

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: APPLETON MGP  
Pace Project No.: 40243868

QC Batch: 414615 Analysis Method: EPA 300.0  
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions  
Laboratory: Pace Analytical Services - Green Bay  
Associated Lab Samples: 40243868004, 40243868005, 40243868006

METHOD BLANK: 2387292 Matrix: Water  
Associated Lab Samples: 40243868004, 40243868005, 40243868006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<0.44	2.0	05/03/22 20:00	

LABORATORY CONTROL SAMPLE: 2387293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	20	21.4	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387294 2387295

Parameter	Units	40243868004		2387294		2387295		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Sulfate	mg/L	16.6	20	20	39.0	38.8	112	111	90-110	0	15 M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2387296 2387297

Parameter	Units	40244020023		2387296		2387297		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Sulfate	mg/L	148	100	100	246	243	98	95	90-110	1	15

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### QUALITY CONTROL DATA

Project: APPLETON MGP

Pace Project No.: 40243868

QC Batch: 414339

Analysis Method: EPA 310.2

QC Batch Method: EPA 310.2

Analysis Description: 310.2 Alkalinity

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

METHOD BLANK: 2385459

Matrix: Water

Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<5.2	25.0	04/29/22 12:34	

LABORATORY CONTROL SAMPLE: 2385460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	98.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2385461 2385462

Parameter	Units	40243866008		2385461		2385462		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.					MS Result
Alkalinity, Total as CaCO3	mg/L	410	500	500	500	978	997	114	117	90-110	2	20 M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2385463 2385464

Parameter	Units	40243868005		2385463		2385464		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MS Spike Conc.	MS Result	MS Spike Conc.	MS Result	MS Spike Conc.					MS Result
Alkalinity, Total as CaCO3	mg/L	331	200	200	200	564	566	117	118	90-110	0	20 M0

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### QUALITY CONTROL DATA

Project: APPLETON MGP

Pace Project No.: 40243868

QC Batch:	413991	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate + Nitrite, preserved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

METHOD BLANK: 2383947 Matrix: Water  
Associated Lab Samples: 40243868001, 40243868002, 40243868003, 40243868004, 40243868005, 40243868006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	<0.059	0.25	04/25/22 13:30	

LABORATORY CONTROL SAMPLE: 2383948

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383949 2383950

Parameter	Units	40243866008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.6	2.5	101	100	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2383951 2383952

Parameter	Units	40243868005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	mg/L	<0.059	2.5	2.5	2.2	2.2	86	86	90-110	0	20 M0	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: APPLETON MGP

Pace Project No.: 40243868

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: APPLETON MGP  
Pace Project No.: 40243868

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243868001	MW-26	EPA 8015B Modified	414082		
40243868002	MW-28	EPA 8015B Modified	414082		
40243868003	PZ-27	EPA 8015B Modified	414082		
40243868004	MW-27	EPA 8015B Modified	414082		
40243868005	PZ-23	EPA 8015B Modified	414082		
40243868006	QAQC1	EPA 8015B Modified	414082		
40243868001	MW-26	EPA 3010A	414058	EPA 6020B	414131
40243868002	MW-28	EPA 3010A	414058	EPA 6020B	414131
40243868003	PZ-27	EPA 3010A	414058	EPA 6020B	414131
40243868004	MW-27	EPA 3010A	414058	EPA 6020B	414131
40243868005	PZ-23	EPA 3010A	414058	EPA 6020B	414131
40243868006	QAQC1	EPA 3010A	414058	EPA 6020B	414131
40243868001	MW-26	EPA 8260	414030		
40243868002	MW-28	EPA 8260	414030		
40243868003	PZ-27	EPA 8260	414030		
40243868004	MW-27	EPA 8260	414030		
40243868005	PZ-23	EPA 8260	414030		
40243868006	QAQC1	EPA 8260	414030		
40243868001	MW-26	EPA 300.0	414594		
40243868002	MW-28	EPA 300.0	414594		
40243868003	PZ-27	EPA 300.0	414594		
40243868004	MW-27	EPA 300.0	414615		
40243868005	PZ-23	EPA 300.0	414615		
40243868006	QAQC1	EPA 300.0	414615		
40243868001	MW-26	EPA 310.2	414339		
40243868002	MW-28	EPA 310.2	414339		
40243868003	PZ-27	EPA 310.2	414339		
40243868004	MW-27	EPA 310.2	414339		
40243868005	PZ-23	EPA 310.2	414339		
40243868006	QAQC1	EPA 310.2	414339		
40243868001	MW-26	EPA 353.2	413991		
40243868002	MW-28	EPA 353.2	413991		
40243868003	PZ-27	EPA 353.2	413991		
40243868004	MW-27	EPA 353.2	413991		
40243868005	PZ-23	EPA 353.2	413991		
40243868006	QAQC1	EPA 353.2	413991		

### REPORT OF LABORATORY ANALYSIS

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Pace

QC: LTR

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

941043  
67973-422-001  
40243868

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: Ramboll	Report To: <i>Steford, Duncan</i>	Report To: <i>GDS DATA @ RAMBOLL.COM</i>	Company Name: <i>ACCOUNTS PAYABLE</i>	Report To: <i>WTE ENERGY</i>	Company Name: <i>WTE ENERGY</i>
Address: 415A S 3rd St.	Copy To: <i>ANDREW.CAURSE@RAMBOLL.COM</i>	Copy To: <i>ANDREW.CAURSE@RAMBOLL.COM</i>	Address: <i>333 WEVERETT ST MILWAUKEE, WI</i>	Address: <i>333 WEVERETT ST MILWAUKEE, WI</i>	Address: <i>333 WEVERETT ST MILWAUKEE, WI</i>
Milwaukee, WI 53204	Project Name: <i>Appleton MGP</i>	Project Name: <i>Appleton MGP</i>	Pace Quote:	Pace Quote:	Pace Quote:
Email: <i>andrew.caurse@ramboll.com</i>	Requested Due Date:	Requested Due Date:	Pace Project Manager: <i>brian.basten@pacelabs.com</i>	Pace Project Manager: <i>brian.basten@pacelabs.com</i>	Pace Project Manager: <i>brian.basten@pacelabs.com</i>
Phone: 262-719-4512	Project #:	Project #:	Pace Profile #: <i>829 #1</i>	Pace Profile #: <i>829 #1</i>	Pace Profile #: <i>829 #1</i>
Fax:					

Page: 1 of 7

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / .) Sample IDs must be unique	MATRIX CODE (see valid codes to left)	CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analyses Test Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Regulatory Agency	State / Location							
				START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other						BTEX+NAP by 8260	Dissolved As, Fe, Mn 6020	Nitrate + Nitrite	Sulfate & Alkalinity	Methane by 8015B	Benzene+Nap 8260	Trip BLANK
				DATE	TIME	DATE	TIME																						
1	MW-26	✓	G	4-21-22	1112			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	001					
2	MW-28				1210			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	002					
3	PZ-27				1257			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	003					
4	MW-27				1323			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	004					
5	PZ-23				1354			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	005					
6	QAQC1				1400			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	006					
7	MW-24				1505			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2						
8	MW-19				1559			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2						
9	MW-25				1647			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1						
10	MW-12B				1718			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1						
11	PZ-12B				1812			3															1						
12	MW-13R	✓	G	4	1845			9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	
	<i>De Gd</i> RAMBOLL	4-22-22	1500	<i>Mary [Signature]</i>	4-22-22	1500	1.5%	✓ N ✓

PACE DROP OFF

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:						
SIGNATURE of SAMPLER:	DATE Signed:					



QA: LTA

### CHAIN-OF-CUSTODY / Analytical Request Document

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40243868  
67973-4.22-001  
4/22/22  
40243866

Page: 2 of 2

#### Section A

##### Required Client Information:

Company: Ramboll  
 Address: 415A S 3rd St.  
 Milwaukee, WI 53204  
 Email: [andrew.larsen@ramboll.com](mailto:andrew.larsen@ramboll.com)  
 Phone: 262-719-4512 Fax:  
 Requested Due Date:

#### Section B

##### Required Project Information:

Report To: ~~Clasford, Demetrius~~ EDS DATA RAMBOLL  
 Copy To: ANDREW.LARSEN@RAMBOLL.COM  
 Order #:  
 Project Name: Appleton MGP  
 Project #:

#### Section C

##### Invoice Information:

Attention: ACCOUNTS PAYABLE  
 Company Name: WE ENERGIES  
 Address: 333 W EVERETT ST. MILWAUKEE  
 Pace Quote:  
 Pace Project Manager: brian.basten@pacelabs.com,  
 Pace Profile #: 829 #1

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Residual Chlorine (Y/N)							
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other		BTEX+NAP by 8260	Dissolved As, Fe, Mn 6020	Nitrate + Nitrite	Sulfate & Alkalinity	Methane by 8015B	Benzene+Nap 8260	Trip BLANK
						DATE	TIME	DATE	TIME																		
	QA QC 2			UTG	G	4-21-22	1850			9	X	X	X	X										1	005		
	EB-01			WTG	G	6	1900			3			X											1	006		
	TB-1			WT	-	-	-			2			X											1	007		
	MW-22			WTG	G	4-22-22	746			27	X	X	X	X										1	008		
	P2-22B						841			3			X											1	009		
	MW-21						917			X	X	X	X											1	010		
	P2-21B						954			3			X											1	011		
	MW-20						1028			X	X	X	X											1	012		
	P2-20B						1103			3			X											1	013		
	MW-02R						1153			9	X	X	X											1	014		
	EB-01						1200			3			X											1	015		
ADDITIONAL COMMENTS		SAMPLER		LOCATION		DATE		VOLUME		SAMPLER		DATE		VOLUME		SAMPLER		DATE		VOLUME		SAMPLER		DATE		VOLUME	
		Ramboll		4-22-22		1500		Ming PDL pace		4/22/22		1500		1.5%		N		Y									

PACE Drop off

PRINT Name of SAMPLER:  
 SIGNATURE of SAMPLER:  
 DATE Signed:

TEMP in C  
 Received on Ice (Y/N)  
 Custody Sealed Cooler (Y/N)  
 Samples Intact (Y/N)

Sample Preservation Receipt Form

Client Name: Ramball

Project # 40243868

All containers needing preservation have been checked and noted below:  Yes  No  N/A

Lab Lot# of pH paper: 003112 Lab Std #/ID of preservation (if pH adjusted):

Initial when completed: CAH Date/Time:

Pace Lab #	Glass						Plastic					Vials					Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)					
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	JG9U	WGFU	WPFU								SP5T	ZPLC	GN		
001																																			
002																																			2.5 / 5 / 10
003																																			2.5 / 5 / 10
004																																			2.5 / 5 / 10
005																																			2.5 / 5 / 10
006																																			2.5 / 5 / 10
007																																			2.5 / 5 / 10
008																																			2.5 / 5 / 10
009																																			2.5 / 5 / 10
010																																			2.5 / 5 / 10
011																																			2.5 / 5 / 10
012																																			2.5 / 5 / 10
013																																			2.5 / 5 / 10
014																																			2.5 / 5 / 10
015																																			2.5 / 5 / 10
016																																			2.5 / 5 / 10
017																																			2.5 / 5 / 10
018																																			2.5 / 5 / 10
019																																			2.5 / 5 / 10
020																																			2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: \_\_\_\_\_ Headspace in VOA Vials (>6mm)  Yes  No  N/A \*if yes look in headspace column

AG1U 1 liter amber glass	BP1U 1 liter plastic unpres	VG9A 40 mL clear ascorbic	JGFU 4 oz amber jar unpres
BG1U 1 liter clear glass	BP3U 250 mL plastic unpres	DG9T 40 mL amber Na Thio	JG9U 9 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP3B 250 mL plastic NaOH	VG9U 40 mL clear vial unpres	WGFU 4 oz clear jar unpres
AG4S 125 mL amber glass H2SO4	BP3N 250 mL plastic HNO3	VG9H 40 mL clear vial HCL	WPFU 4 oz plastic jar unpres
AG4U 120 mL amber glass unpres	BP3S 250 mL plastic H2SO4	VG9M 40 mL clear vial MeOH	SP5T 120 mL plastic Na Thiosulfate
AG5U 100 mL amber glass unpres		VG9D 40 mL clear vial DI	ZPLC ziploc bag
AG2S 500 mL amber glass H2SO4			GN
BG3U 250 mL clear glass unpres			

Sample Condition Upon Receipt Form (SCUR)

Client Name: Ramboll

Project #:

WO#: 40243868



40243868

Courier:  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used SR-107 Type of Ice: Wet Blue Dry None

Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 5/5 / Corr: 1.5/1.5

Temp Blank Present:  yes  no

Biological Tissue is Frozen:  yes  no

Person examining contents:

Date: 4/22/22 Initials: [Signature]

Labeled By Initials: [Signature]

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>proj#</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. <u>[Signature]</u>
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis	Matrix: <u>W</u>	
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login





## ANALYTICAL REPORT

Lab Number:	L2221332
Client:	Ramboll 234 W. Florida St, 5th Floor Milwaukee, WI 53204
ATTN:	Andrew Cawrse
Phone:	(414) 837-3645
Project Name:	APPLETON MGP
Project Number:	1940101019
Report Date:	05/13/22

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2221332-01	MW-24	WATER	APPLETON, WI	04/21/22 15:05	04/23/22
L2221332-02	MW-12R	WATER	APPLETON, WI	04/21/22 17:18	04/23/22
L2221332-03	MW-22	WATER	APPLETON, WI	04/22/22 07:46	04/23/22
L2221332-04	MW-3	WATER	APPLETON, WI	04/22/22 12:46	04/23/22

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### PIANO Volatile Organics

L2221332-02D: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2221332-02D, -03D, and -04D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The WG1630877-5 Method Blank, associated with L2221332-01, -02D, -03D, and -04D, has concentrations below the reporting limits and "J" qualified. Associated field sample results are "B" qualified if the concentrations are less than 10x the concentrations in the blank.

#### Semivolatile Organics

L2221332-03D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

#### Alkylated PAHs

L2221332-02D and -03D: The sample has elevated detection limits due to the dilution required by the sample matrix.

#### Saturated Hydrocarbons

L2221332-01RE, -02RE, 03RE and -04RE: The sample was extracted with the method required holding time exceeded.: The sample was extracted with the method required holding time exceeded.

L2221332-03D: An interference with n-Dodecane (C12) was over the instrument calibration limit, therefore the



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

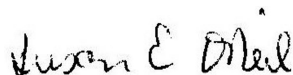
**Lab Number:** L2221332  
**Report Date:** 05/13/22

### Case Narrative (continued)

sample was diluted until separation was achieved; both initial and diluted analyses were reported. The WG1632063-2/-3 LCS/LCSD recoveries, associated with L2221332-01, -02, -03D, -03, and -04, were outside the acceptance criteria for individual target compounds; however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all results are considered to have a potentially low bias for nonane (c9) (42%/25%), decane (c10) (49%/28%), and dodecane (c12) (36% LCSD only).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Susan O'Neil

Title: Technical Director/Representative

Date: 05/13/22

# ORGANICS

# VOLATILES

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-01  
 Client ID: MW-24  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 15:05  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260B  
 Analytical Date: 04/26/22 19:25  
 Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PIANO Volatile Organics by GC/MS - Mansfield Lab</b>						
3-Methyl-1-butene	ND		ug/l	2.00	0.297	1
Isopentane	ND		ug/l	2.00	0.366	1
1-Pentene	ND		ug/l	2.00	0.365	1
2-Methyl-1-Butene	ND		ug/l	2.00	0.311	1
Pentane	ND		ug/l	2.00	0.624	1
trans-2-Pentene	ND		ug/l	2.00	0.270	1
Isoprene	ND		ug/l	2.00	0.357	1
cis-2-Pentene	ND		ug/l	2.00	0.322	1
Tertiary Butanol	ND		ug/l	25.0	3.24	1
2,2-Dimethylbutane	ND		ug/l	2.00	0.617	1
4-Methyl-1-pentene	ND		ug/l	2.00	0.311	1
Cyclopentane	ND		ug/l	2.00	0.519	1
2,3-Dimethylbutane	ND		ug/l	2.00	0.826	1
2-Methylpentane	ND		ug/l	2.00	0.542	1
Methyl tert butyl ether	ND		ug/l	2.00	0.412	1
3-Methylpentane	ND		ug/l	2.00	0.317	1
1-Hexene	ND		ug/l	2.00	0.281	1
n-Hexane	ND		ug/l	2.00	0.329	1
Isopropyl Ether	ND		ug/l	2.00	0.242	1
trans-2-Hexene	ND		ug/l	2.00	0.261	1
2-Methyl-2-pentene	ND		ug/l	2.00	0.306	1
cis-2-Hexene	ND		ug/l	2.00	0.271	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	0.303	1
2,2-Dimethylpentane	ND		ug/l	2.00	0.269	1
Methylcyclopentane	ND		ug/l	2.00	0.268	1
2,4-Dimethylpentane	ND		ug/l	2.00	0.247	1
2,2,3-Trimethylbutane	ND		ug/l	2.00	0.270	1
1,2-Dichloroethane	ND		ug/l	2.00	0.295	1



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-01  
**Client ID:** MW-24  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/21/22 15:05  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PIANO Volatile Organics by GC/MS - Mansfield Lab</b>						
3,3-Dimethylpentane	ND		ug/l	2.00	0.372	1
Cyclohexane	ND		ug/l	2.00	0.247	1
2-Methylhexane	ND		ug/l	2.00	0.315	1
Benzene	0.332	J	ug/l	2.00	0.305	1
2,3-Dimethylpentane	ND		ug/l	2.00	0.265	1
Thiophene	ND		ug/l	2.00	0.284	1
1,1-Dimethylcyclopentane	ND		ug/l	2.00	0.240	1
3-Methylhexane	ND		ug/l	2.00	0.320	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	0.246	1
3-Ethylpentane	ND		ug/l	2.00	0.289	1
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	0.585	1
Isooctane	ND		ug/l	2.00	0.218	1
trans-3-Heptene	ND		ug/l	2.00	0.311	1
Heptane	ND		ug/l	2.00	0.348	1
trans-2-Heptene	ND		ug/l	2.00	0.256	1
cis-2-Heptene	ND		ug/l	2.00	0.387	1
2,2-Dimethylhexane	ND		ug/l	2.00	0.290	1
Methylcyclohexane	ND		ug/l	2.00	0.270	1
2,5-Dimethylhexane	ND		ug/l	2.00	0.348	1
2,4-Dimethylhexane	ND		ug/l	2.00	0.243	1
Ethylcyclopentane	ND		ug/l	2.00	0.265	1
2,2,3-Trimethylpentane	ND		ug/l	2.00	0.347	1
2,3,4-Trimethylpentane	ND		ug/l	2.00	0.261	1
2,3,3-Trimethylpentane	ND		ug/l	2.00	0.397	1
Xylene (Total) <sup>1</sup>	ND		ug/l	2.00	0.209	1
2,3-Dimethylhexane	ND		ug/l	2.00	0.485	1
2-Methylheptane	ND		ug/l	2.00	0.338	1
4-Methylheptane	ND		ug/l	2.00	0.344	1
3-Methylheptane	ND		ug/l	2.00	0.385	1
3-Ethylhexane	ND		ug/l	2.00	0.358	1
Toluene	ND		ug/l	2.00	0.271	1
2-Methylthiophene	ND		ug/l	2.00	0.170	1
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	0.260	1
3-Methylthiophene	ND		ug/l	2.00	0.234	1
1-Octene	ND		ug/l	5.00	0.307	1
Octane	ND		ug/l	2.00	0.235	1
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	0.294	1

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-01

Date Collected: 04/21/22 15:05

Client ID: MW-24

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dibromoethane	ND		ug/l	2.00	0.320	1
cis-2-Octene	ND		ug/l	2.00	0.229	1
Isopropylcyclopentane	ND		ug/l	2.00	0.293	1
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	0.581	1
2,5-Dimethylheptane	ND		ug/l	2.00	0.335	1
3,5-Dimethylheptane	ND		ug/l	2.00	0.282	1
3,3-Dimethylheptane	ND		ug/l	2.00	0.242	1
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	0.199	1
2,3-Dimethylheptane	ND		ug/l	2.00	0.228	1
3,4-Dimethylheptane	ND		ug/l	2.00	0.340	1
4-Methyloctane	ND		ug/l	2.00	0.334	1
2-Methyloctane	ND		ug/l	2.00	0.512	1
Ethylbenzene	ND		ug/l	2.00	0.216	1
2-Ethylthiophene	ND		ug/l	2.00	0.176	1
3-Methyloctane	ND		ug/l	2.00	0.224	1
3,3-Diethylpentane	ND		ug/l	2.00	0.233	1
p/m-Xylene	ND		ug/l	4.00	0.381	1
1-Nonene	ND		ug/l	5.00	0.270	1
trans-3-Nonene	ND		ug/l	2.00	0.237	1
cis-3-Nonene	ND		ug/l	2.00	0.374	1
Nonane (C9)	ND		ug/l	2.00	0.311	1
Styrene	ND		ug/l	2.00	0.202	1
o-Xylene	ND		ug/l	2.00	0.209	1
2-Nonene	ND		ug/l	5.00	0.254	1
Isopropylcyclohexane	ND		ug/l	2.00	0.212	1
Isopropylbenzene	ND		ug/l	2.00	0.187	1
3,3-Dimethyloctane	ND		ug/l	2.00	0.202	1
n-Propylbenzene	ND		ug/l	2.00	0.177	1
2-Methylnonane	ND		ug/l	2.00	0.283	1
3-Methylnonane	ND		ug/l	2.00	0.279	1
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	0.316	1
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	0.282	1
1,3,5-Trimethylbenzene	ND		ug/l	2.00	0.230	1
1-Decene	ND		ug/l	2.00	0.260	1
Isobutylcyclohexane	ND		ug/l	2.00	0.163	1
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	0.170	1
Decane (C10)	0.314	J	ug/l	2.00	0.271	1

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-01

Date Collected: 04/21/22 15:05

Client ID: MW-24

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
tert-Butylbenzene	ND		ug/l	2.00	0.211	1
1,2,4-Trimethylbenzene	0.521	J	ug/l	2.00	0.207	1
Isobutylbenzene	ND		ug/l	2.00	0.270	1
sec-Butylbenzene	ND		ug/l	2.00	0.259	1
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	0.258	1
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	0.212	1
1,2,3-Trimethylbenzene	ND		ug/l	2.00	0.223	1
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	0.217	1
Indane	ND		ug/l	2.00	0.123	1
1,3-Diethylbenzene	ND		ug/l	2.00	0.249	1
1-Methyl-3-N-Propylbenzene	0.228	J	ug/l	2.00	0.202	1
Indene	ND		ug/l	2.00	0.116	1
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	0.250	1
n-Butylbenzene	ND		ug/l	2.00	0.197	1
1,2-Dimethyl-4-Ethylbenzene	0.312	J	ug/l	2.00	0.245	1
1,2-Diethylbenzene	ND		ug/l	2.00	0.296	1
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	0.249	1
1,4-Dimethyl-2-Ethylbenzene	0.205	J	ug/l	2.00	0.187	1
Undecane	0.393	J	ug/l	2.00	0.222	1
1,3-Dimethyl-4-Ethylbenzene	0.203	J	ug/l	2.00	0.194	1
1,3-Dimethyl-5-Ethylbenzene	0.352	J	ug/l	2.00	0.236	1
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	0.149	1
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	0.127	1
1,2,4,5-Tetramethylbenzene	0.256	J	ug/l	2.00	0.155	1
1,2,3,5-Tetramethylbenzene	0.337	J	ug/l	2.00	0.152	1
N-Pentylbenzene	ND		ug/l	2.00	0.249	1
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	0.214	1
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	0.285	1
Dodecane (C12)	0.780	J	ug/l	5.00	0.657	1
1,3,5-Triethylbenzene	ND		ug/l	2.00	0.380	1
Naphthalene	ND		ug/l	2.00	0.835	1
Benzo thiophene	ND		ug/l	2.00	1.06	1
1,2,4-Triethylbenzene	ND		ug/l	2.00	0.340	1
Hexylbenzene	ND		ug/l	2.00	0.385	1
MMT	ND		ug/l	5.00	1.29	1
Tridecane	ND		ug/l	5.00	1.39	1
2-Methylnaphthalene	ND		ug/l	5.00	1.32	1

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-01  
 Client ID: MW-24  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 15:05  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1-Methylnaphthalene	ND		ug/l	5.00	1.47	1
Tetradecane (C14)	0.942	J	ug/l	5.00	0.612	1
Pentadecane	ND		ug/l	5.00	1.12	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	125		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-02 D  
 Client ID: MW-12R  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 17:18  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260B  
 Analytical Date: 04/26/22 20:37  
 Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PIANO Volatile Organics by GC/MS - Mansfield Lab</b>						
3-Methyl-1-butene	ND		ug/l	10.0	1.48	5
Isopentane	ND		ug/l	10.0	1.83	5
1-Pentene	ND		ug/l	10.0	1.82	5
2-Methyl-1-Butene	ND		ug/l	10.0	1.56	5
Pentane	ND		ug/l	10.0	3.12	5
trans-2-Pentene	ND		ug/l	10.0	1.35	5
Isoprene	ND		ug/l	10.0	1.78	5
cis-2-Pentene	ND		ug/l	10.0	1.61	5
Tertiary Butanol	77.3	J	ug/l	125	16.2	5
2,2-Dimethylbutane	ND		ug/l	10.0	3.08	5
4-Methyl-1-pentene	ND		ug/l	10.0	1.56	5
Cyclopentane	ND		ug/l	10.0	2.60	5
2,3-Dimethylbutane	ND		ug/l	10.0	4.13	5
2-Methylpentane	ND		ug/l	10.0	2.71	5
Methyl tert butyl ether	ND		ug/l	10.0	2.06	5
3-Methylpentane	ND		ug/l	10.0	1.58	5
1-Hexene	ND		ug/l	10.0	1.40	5
n-Hexane	ND		ug/l	10.0	1.64	5
Isopropyl Ether	ND		ug/l	10.0	1.21	5
trans-2-Hexene	ND		ug/l	10.0	1.30	5
2-Methyl-2-pentene	ND		ug/l	10.0	1.53	5
cis-2-Hexene	ND		ug/l	10.0	1.36	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10.0	1.52	5
2,2-Dimethylpentane	ND		ug/l	10.0	1.34	5
Methylcyclopentane	ND		ug/l	10.0	1.34	5
2,4-Dimethylpentane	ND		ug/l	10.0	1.24	5
2,2,3-Trimethylbutane	ND		ug/l	10.0	1.35	5
1,2-Dichloroethane	ND		ug/l	10.0	1.48	5

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-02 D

Date Collected: 04/21/22 17:18

Client ID: MW-12R

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	10.0	1.86	5
Cyclohexane	ND		ug/l	10.0	1.24	5
2-Methylhexane	ND		ug/l	10.0	1.58	5
Benzene	34.0		ug/l	10.0	1.52	5
2,3-Dimethylpentane	ND		ug/l	10.0	1.32	5
Thiophene	ND		ug/l	10.0	1.42	5
1,1-Dimethylcyclopentane	ND		ug/l	10.0	1.20	5
3-Methylhexane	ND		ug/l	10.0	1.60	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10.0	1.23	5
3-Ethylpentane	ND		ug/l	10.0	1.44	5
1-Heptene/1,2-DMCP (trans)	ND		ug/l	20.0	2.92	5
Isooctane	ND		ug/l	10.0	1.09	5
trans-3-Heptene	ND		ug/l	10.0	1.56	5
Heptane	ND		ug/l	10.0	1.74	5
trans-2-Heptene	ND		ug/l	10.0	1.28	5
cis-2-Heptene	ND		ug/l	10.0	1.94	5
2,2-Dimethylhexane	ND		ug/l	10.0	1.45	5
Methylcyclohexane	ND		ug/l	10.0	1.35	5
2,5-Dimethylhexane	ND		ug/l	10.0	1.74	5
2,4-Dimethylhexane	ND		ug/l	10.0	1.22	5
Ethylcyclopentane	ND		ug/l	10.0	1.32	5
2,2,3-Trimethylpentane	ND		ug/l	10.0	1.74	5
2,3,4-Trimethylpentane	ND		ug/l	10.0	1.30	5
2,3,3-Trimethylpentane	ND		ug/l	10.0	1.98	5
Xylene (Total) <sup>1</sup>	76.2		ug/l	10.0	1.04	5
2,3-Dimethylhexane	ND		ug/l	10.0	2.42	5
2-Methylheptane	ND		ug/l	10.0	1.69	5
4-Methylheptane	ND		ug/l	10.0	1.72	5
3-Methylheptane	ND		ug/l	10.0	1.92	5
3-Ethylhexane	ND		ug/l	10.0	1.79	5
Toluene	13.3		ug/l	10.0	1.36	5
2-Methylthiophene	ND		ug/l	10.0	0.850	5
1,4-Dimethylcyclohexane (trans)	ND		ug/l	10.0	1.30	5
3-Methylthiophene	ND		ug/l	10.0	1.17	5
1-Octene	ND		ug/l	25.0	1.54	5
Octane	ND		ug/l	10.0	1.18	5
1,2-Dimethylcyclohexane (trans)	ND		ug/l	10.0	1.47	5

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-02 D

Date Collected: 04/21/22 17:18

Client ID: MW-12R

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dibromoethane	ND		ug/l	10.0	1.60	5
cis-2-Octene	ND		ug/l	10.0	1.14	5
Isopropylcyclopentane	ND		ug/l	10.0	1.46	5
1,2-Dimethylcyclohexane (cis)	ND		ug/l	10.0	2.90	5
2,5-Dimethylheptane	ND		ug/l	10.0	1.68	5
3,5-Dimethylheptane	ND		ug/l	10.0	1.41	5
3,3-Dimethylheptane	ND		ug/l	10.0	1.21	5
1,1,4-Trimethylcyclohexane	ND		ug/l	10.0	0.995	5
2,3-Dimethylheptane	ND		ug/l	10.0	1.14	5
3,4-Dimethylheptane	ND		ug/l	10.0	1.70	5
4-Methyloctane	ND		ug/l	10.0	1.67	5
2-Methyloctane	ND		ug/l	10.0	2.56	5
Ethylbenzene	80.1		ug/l	10.0	1.08	5
2-Ethylthiophene	ND		ug/l	10.0	0.880	5
3-Methyloctane	ND		ug/l	10.0	1.12	5
3,3-Diethylpentane	ND		ug/l	10.0	1.16	5
p/m-Xylene	33.6		ug/l	20.0	1.90	5
1-Nonene	ND		ug/l	25.0	1.35	5
trans-3-Nonene	ND		ug/l	10.0	1.18	5
cis-3-Nonene	ND		ug/l	10.0	1.87	5
Nonane (C9)	ND		ug/l	10.0	1.56	5
Styrene	2.95	J	ug/l	10.0	1.01	5
o-Xylene	42.6		ug/l	10.0	1.04	5
2-Nonene	ND		ug/l	25.0	1.27	5
Isopropylcyclohexane	ND		ug/l	10.0	1.06	5
Isopropylbenzene	20.4		ug/l	10.0	0.935	5
3,3-Dimethyloctane	ND		ug/l	10.0	1.01	5
n-Propylbenzene	5.50	J	ug/l	10.0	0.885	5
2-Methylnonane	ND		ug/l	10.0	1.42	5
3-Methylnonane	ND		ug/l	10.0	1.40	5
1-Methyl-3-Ethylbenzene	23.3		ug/l	10.0	1.58	5
1-Methyl-4-Ethylbenzene	48.2		ug/l	10.0	1.41	5
1,3,5-Trimethylbenzene	22.8		ug/l	10.0	1.15	5
1-Decene	ND		ug/l	10.0	1.30	5
Isobutylcyclohexane	ND		ug/l	10.0	0.815	5
1-Methyl-2-Ethylbenzene	13.9		ug/l	10.0	0.850	5
Decane (C10)	1.54	J	ug/l	10.0	1.36	5

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-02 D

Date Collected: 04/21/22 17:18

Client ID: MW-12R

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
tert-Butylbenzene	ND		ug/l	10.0	1.06	5
1,2,4-Trimethylbenzene	91.6		ug/l	10.0	1.04	5
Isobutylbenzene	ND		ug/l	10.0	1.35	5
sec-Butylbenzene	ND		ug/l	10.0	1.30	5
1-Methyl-3-Isopropylbenzene	14.5		ug/l	10.0	1.29	5
1-Methyl-4-Isopropylbenzene	4.68	J	ug/l	10.0	1.06	5
1,2,3-Trimethylbenzene	42.9		ug/l	10.0	1.12	5
1-Methyl-2-Isopropylbenzene	ND		ug/l	10.0	1.08	5
Indane	47.6		ug/l	10.0	0.615	5
1,3-Diethylbenzene	12.2		ug/l	10.0	1.24	5
1-Methyl-3-N-Propylbenzene	5.52	J	ug/l	10.0	1.01	5
Indene	219		ug/l	10.0	0.580	5
1-Methyl-4-N-Propylbenzene	3.95	J	ug/l	10.0	1.25	5
n-Butylbenzene	2.65	J	ug/l	10.0	0.985	5
1,2-Dimethyl-4-Ethylbenzene	13.1		ug/l	10.0	1.22	5
1,2-Diethylbenzene	ND		ug/l	10.0	1.48	5
1-Methyl-2-N-Propylbenzene	2.54	J	ug/l	10.0	1.24	5
1,4-Dimethyl-2-Ethylbenzene	8.33	J	ug/l	10.0	0.935	5
Undecane	2.36	J	ug/l	10.0	1.11	5
1,3-Dimethyl-4-Ethylbenzene	7.85	J	ug/l	10.0	0.970	5
1,3-Dimethyl-5-Ethylbenzene	35.5		ug/l	10.0	1.18	5
1,3-Dimethyl-2-Ethylbenzene	2.74	J	ug/l	10.0	0.745	5
1,2-Dimethyl-3-Ethylbenzene	5.52	J	ug/l	10.0	0.635	5
1,2,4,5-Tetramethylbenzene	11.4		ug/l	10.0	0.775	5
1,2,3,5-Tetramethylbenzene	26.8		ug/l	10.0	0.760	5
N-Pentylbenzene	ND		ug/l	10.0	1.24	5
1,2,3,4-Tetramethylbenzene	28.6		ug/l	10.0	1.07	5
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	10.0	1.42	5
Dodecane (C12)	4.58	J	ug/l	25.0	3.28	5
1,3,5-Triethylbenzene	ND		ug/l	10.0	1.90	5
Naphthalene	1010	E	ug/l	10.0	4.18	5
Benzo thiophene	24.5		ug/l	10.0	5.28	5
1,2,4-Triethylbenzene	ND		ug/l	10.0	1.70	5
Hexylbenzene	ND		ug/l	10.0	1.92	5
MMT	ND		ug/l	25.0	6.43	5
Tridecane	ND		ug/l	25.0	6.96	5
2-Methylnaphthalene	69.6		ug/l	25.0	6.61	5



**Project Name:** APPLETON MGP**Lab Number:** L2221332**Project Number:** 1940101019**Report Date:** 05/13/22**SAMPLE RESULTS**

Lab ID: L2221332-02 D

Date Collected: 04/21/22 17:18

Client ID: MW-12R

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1-Methylnaphthalene	559		ug/l	25.0	7.34	5
Tetradecane (C14)	6.10	J	ug/l	25.0	3.06	5
Pentadecane	ND		ug/l	25.0	5.58	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	124		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-02 D  
 Client ID: MW-12R  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 17:18  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260B  
 Analytical Date: 04/27/22 23:18  
 Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
Naphthalene	992		ug/l	20.0	8.35	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	123		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	99		70-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-03 D  
 Client ID: MW-22  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 07:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260B  
 Analytical Date: 04/26/22 21:48  
 Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PIANO Volatile Organics by GC/MS - Mansfield Lab</b>						
3-Methyl-1-butene	ND		ug/l	50.0	7.42	25
Isopentane	ND		ug/l	50.0	9.15	25
1-Pentene	ND		ug/l	50.0	9.12	25
2-Methyl-1-Butene	ND		ug/l	50.0	7.78	25
Pentane	ND		ug/l	50.0	15.6	25
trans-2-Pentene	ND		ug/l	50.0	6.75	25
Isoprene	ND		ug/l	50.0	8.92	25
cis-2-Pentene	ND		ug/l	50.0	8.05	25
Tertiary Butanol	465	J	ug/l	625	81.0	25
2,2-Dimethylbutane	ND		ug/l	50.0	15.4	25
4-Methyl-1-pentene	ND		ug/l	50.0	7.78	25
Cyclopentane	ND		ug/l	50.0	13.0	25
2,3-Dimethylbutane	ND		ug/l	50.0	20.6	25
2-Methylpentane	ND		ug/l	50.0	13.6	25
Methyl tert butyl ether	ND		ug/l	50.0	10.3	25
3-Methylpentane	ND		ug/l	50.0	7.92	25
1-Hexene	ND		ug/l	50.0	7.02	25
n-Hexane	ND		ug/l	50.0	8.22	25
Isopropyl Ether	ND		ug/l	50.0	6.05	25
trans-2-Hexene	ND		ug/l	50.0	6.52	25
2-Methyl-2-pentene	ND		ug/l	50.0	7.65	25
cis-2-Hexene	ND		ug/l	50.0	6.78	25
Ethyl-Tert-Butyl-Ether	ND		ug/l	50.0	7.58	25
2,2-Dimethylpentane	ND		ug/l	50.0	6.72	25
Methylcyclopentane	ND		ug/l	50.0	6.70	25
2,4-Dimethylpentane	ND		ug/l	50.0	6.18	25
2,2,3-Trimethylbutane	ND		ug/l	50.0	6.75	25
1,2-Dichloroethane	ND		ug/l	50.0	7.38	25

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-03 D

Date Collected: 04/22/22 07:46

Client ID: MW-22

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	50.0	9.30	25
Cyclohexane	ND		ug/l	50.0	6.18	25
2-Methylhexane	ND		ug/l	50.0	7.88	25
Benzene	784		ug/l	50.0	7.62	25
2,3-Dimethylpentane	ND		ug/l	50.0	6.62	25
Thiophene	ND		ug/l	50.0	7.10	25
1,1-Dimethylcyclopentane	ND		ug/l	50.0	6.00	25
3-Methylhexane	ND		ug/l	50.0	8.00	25
Tertiary-Amyl Methyl Ether	ND		ug/l	50.0	6.15	25
3-Ethylpentane	ND		ug/l	50.0	7.22	25
1-Heptene/1,2-DMCP (trans)	ND		ug/l	100	14.6	25
Isooctane	ND		ug/l	50.0	5.45	25
trans-3-Heptene	ND		ug/l	50.0	7.78	25
Heptane	ND		ug/l	50.0	8.70	25
trans-2-Heptene	ND		ug/l	50.0	6.40	25
cis-2-Heptene	ND		ug/l	50.0	9.68	25
2,2-Dimethylhexane	ND		ug/l	50.0	7.25	25
Methylcyclohexane	ND		ug/l	50.0	6.75	25
2,5-Dimethylhexane	ND		ug/l	50.0	8.70	25
2,4-Dimethylhexane	ND		ug/l	50.0	6.08	25
Ethylcyclopentane	ND		ug/l	50.0	6.62	25
2,2,3-Trimethylpentane	ND		ug/l	50.0	8.68	25
2,3,4-Trimethylpentane	ND		ug/l	50.0	6.52	25
2,3,3-Trimethylpentane	ND		ug/l	50.0	9.92	25
Xylene (Total) <sup>1</sup>	76.8	J	ug/l	50.0	5.22	25
2,3-Dimethylhexane	ND		ug/l	50.0	12.1	25
2-Methylheptane	ND		ug/l	50.0	8.45	25
4-Methylheptane	ND		ug/l	50.0	8.60	25
3-Methylheptane	ND		ug/l	50.0	9.62	25
3-Ethylhexane	ND		ug/l	50.0	8.95	25
Toluene	7.22	J	ug/l	50.0	6.78	25
2-Methylthiophene	ND		ug/l	50.0	4.25	25
1,4-Dimethylcyclohexane (trans)	ND		ug/l	50.0	6.50	25
3-Methylthiophene	ND		ug/l	50.0	5.85	25
1-Octene	ND		ug/l	125	7.68	25
Octane	ND		ug/l	50.0	5.88	25
1,2-Dimethylcyclohexane (trans)	ND		ug/l	50.0	7.35	25



Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-03 D

Date Collected: 04/22/22 07:46

Client ID: MW-22

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dibromoethane	ND		ug/l	50.0	8.00	25
cis-2-Octene	ND		ug/l	50.0	5.72	25
Isopropylcyclopentane	ND		ug/l	50.0	7.32	25
1,2-Dimethylcyclohexane (cis)	ND		ug/l	50.0	14.5	25
2,5-Dimethylheptane	ND		ug/l	50.0	8.38	25
3,5-Dimethylheptane	ND		ug/l	50.0	7.05	25
3,3-Dimethylheptane	ND		ug/l	50.0	6.05	25
1,1,4-Trimethylcyclohexane	ND		ug/l	50.0	4.98	25
2,3-Dimethylheptane	ND		ug/l	50.0	5.70	25
3,4-Dimethylheptane	ND		ug/l	50.0	8.50	25
4-Methyloctane	ND		ug/l	50.0	8.35	25
2-Methyloctane	ND		ug/l	50.0	12.8	25
Ethylbenzene	273		ug/l	50.0	5.40	25
2-Ethylthiophene	ND		ug/l	50.0	4.40	25
3-Methyloctane	ND		ug/l	50.0	5.60	25
3,3-Diethylpentane	ND		ug/l	50.0	5.82	25
p/m-Xylene	40.3	J	ug/l	100	9.52	25
1-Nonene	ND		ug/l	125	6.75	25
trans-3-Nonene	ND		ug/l	50.0	5.92	25
cis-3-Nonene	ND		ug/l	50.0	9.35	25
Nonane (C9)	ND		ug/l	50.0	7.78	25
Styrene	ND		ug/l	50.0	5.05	25
o-Xylene	36.5	J	ug/l	50.0	5.22	25
2-Nonene	ND		ug/l	125	6.35	25
Isopropylcyclohexane	ND		ug/l	50.0	5.30	25
Isopropylbenzene	20.2	J	ug/l	50.0	4.68	25
3,3-Dimethyloctane	ND		ug/l	50.0	5.05	25
n-Propylbenzene	6.52	J	ug/l	50.0	4.42	25
2-Methylnonane	ND		ug/l	50.0	7.08	25
3-Methylnonane	ND		ug/l	50.0	6.98	25
1-Methyl-3-Ethylbenzene	ND		ug/l	50.0	7.90	25
1-Methyl-4-Ethylbenzene	13.1	J	ug/l	50.0	7.05	25
1,3,5-Trimethylbenzene	11.5	J	ug/l	50.0	5.75	25
1-Decene	ND		ug/l	50.0	6.50	25
Isobutylcyclohexane	ND		ug/l	50.0	4.08	25
1-Methyl-2-Ethylbenzene	16.2	J	ug/l	50.0	4.25	25
Decane (C10)	ND		ug/l	50.0	6.78	25

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-03 D

Date Collected: 04/22/22 07:46

Client ID: MW-22

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
tert-Butylbenzene	ND		ug/l	50.0	5.28	25
1,2,4-Trimethylbenzene	77.0		ug/l	50.0	5.18	25
Isobutylbenzene	ND		ug/l	50.0	6.75	25
sec-Butylbenzene	ND		ug/l	50.0	6.48	25
1-Methyl-3-Isopropylbenzene	ND		ug/l	50.0	6.45	25
1-Methyl-4-Isopropylbenzene	ND		ug/l	50.0	5.30	25
1,2,3-Trimethylbenzene	40.2	J	ug/l	50.0	5.58	25
1-Methyl-2-Isopropylbenzene	ND		ug/l	50.0	5.42	25
Indane	730		ug/l	50.0	3.08	25
1,3-Diethylbenzene	ND		ug/l	50.0	6.22	25
1-Methyl-3-N-Propylbenzene	ND		ug/l	50.0	5.05	25
Indene	82.0		ug/l	50.0	2.90	25
1-Methyl-4-N-Propylbenzene	ND		ug/l	50.0	6.25	25
n-Butylbenzene	ND		ug/l	50.0	4.92	25
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	50.0	6.12	25
1,2-Diethylbenzene	ND		ug/l	50.0	7.40	25
1-Methyl-2-N-Propylbenzene	ND		ug/l	50.0	6.22	25
1,4-Dimethyl-2-Ethylbenzene	5.32	J	ug/l	50.0	4.68	25
Undecane	ND		ug/l	50.0	5.55	25
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	50.0	4.85	25
1,3-Dimethyl-5-Ethylbenzene	12.7	J	ug/l	50.0	5.90	25
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	50.0	3.72	25
1,2-Dimethyl-3-Ethylbenzene	3.35	J	ug/l	50.0	3.18	25
1,2,4,5-Tetramethylbenzene	9.75	J	ug/l	50.0	3.88	25
1,2,3,5-Tetramethylbenzene	12.0	J	ug/l	50.0	3.80	25
N-Pentylbenzene	ND		ug/l	50.0	6.22	25
1,2,3,4-Tetramethylbenzene	13.7	J	ug/l	50.0	5.35	25
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	50.0	7.12	25
Dodecane (C12)	ND		ug/l	125	16.4	25
1,3,5-Triethylbenzene	ND		ug/l	50.0	9.50	25
Naphthalene	2710		ug/l	50.0	20.9	25
Benzo thiophene	299		ug/l	50.0	26.4	25
1,2,4-Triethylbenzene	ND		ug/l	50.0	8.50	25
Hexylbenzene	ND		ug/l	50.0	9.62	25
MMT	ND		ug/l	125	32.2	25
Tridecane	ND		ug/l	125	34.8	25
2-Methylnaphthalene	143		ug/l	125	33.0	25

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-03 D  
 Client ID: MW-22  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 07:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1-Methylnaphthalene	258		ug/l	125	36.7	25
Tetradecane (C14)	ND		ug/l	125	15.3	25
Pentadecane	ND		ug/l	125	27.9	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	124		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-04 D  
 Client ID: MW-3  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 12:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260B  
 Analytical Date: 04/26/22 22:59  
 Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PIANO Volatile Organics by GC/MS - Mansfield Lab</b>						
3-Methyl-1-butene	ND		ug/l	4.00	0.594	2
Isopentane	ND		ug/l	4.00	0.732	2
1-Pentene	ND		ug/l	4.00	0.730	2
2-Methyl-1-Butene	ND		ug/l	4.00	0.622	2
Pentane	ND		ug/l	4.00	1.25	2
trans-2-Pentene	ND		ug/l	4.00	0.540	2
Isoprene	ND		ug/l	4.00	0.714	2
cis-2-Pentene	ND		ug/l	4.00	0.644	2
Tertiary Butanol	16.1	J	ug/l	50.0	6.48	2
2,2-Dimethylbutane	ND		ug/l	4.00	1.23	2
4-Methyl-1-pentene	ND		ug/l	4.00	0.622	2
Cyclopentane	ND		ug/l	4.00	1.04	2
2,3-Dimethylbutane	ND		ug/l	4.00	1.65	2
2-Methylpentane	ND		ug/l	4.00	1.08	2
Methyl tert butyl ether	ND		ug/l	4.00	0.824	2
3-Methylpentane	ND		ug/l	4.00	0.634	2
1-Hexene	ND		ug/l	4.00	0.562	2
n-Hexane	ND		ug/l	4.00	0.658	2
Isopropyl Ether	ND		ug/l	4.00	0.484	2
trans-2-Hexene	ND		ug/l	4.00	0.522	2
2-Methyl-2-pentene	ND		ug/l	4.00	0.612	2
cis-2-Hexene	ND		ug/l	4.00	0.542	2
Ethyl-Tert-Butyl-Ether	ND		ug/l	4.00	0.606	2
2,2-Dimethylpentane	ND		ug/l	4.00	0.538	2
Methylcyclopentane	1.32	J	ug/l	4.00	0.536	2
2,4-Dimethylpentane	ND		ug/l	4.00	0.494	2
2,2,3-Trimethylbutane	ND		ug/l	4.00	0.540	2
1,2-Dichloroethane	ND		ug/l	4.00	0.590	2



Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-04 D

Date Collected: 04/22/22 12:46

Client ID: MW-3

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
3,3-Dimethylpentane	ND		ug/l	4.00	0.744	2
Cyclohexane	4.19		ug/l	4.00	0.494	2
2-Methylhexane	ND		ug/l	4.00	0.630	2
Benzene	59.8		ug/l	4.00	0.610	2
2,3-Dimethylpentane	ND		ug/l	4.00	0.530	2
Thiophene	1.16	J	ug/l	4.00	0.568	2
1,1-Dimethylcyclopentane	ND		ug/l	4.00	0.480	2
3-Methylhexane	0.786	J	ug/l	4.00	0.640	2
Tertiary-Amyl Methyl Ether	ND		ug/l	4.00	0.492	2
3-Ethylpentane	ND		ug/l	4.00	0.578	2
1-Heptene/1,2-DMCP (trans)	2.05	J	ug/l	8.00	1.17	2
Isooctane	ND		ug/l	4.00	0.436	2
trans-3-Heptene	ND		ug/l	4.00	0.622	2
Heptane	ND		ug/l	4.00	0.696	2
trans-2-Heptene	ND		ug/l	4.00	0.512	2
cis-2-Heptene	ND		ug/l	4.00	0.774	2
2,2-Dimethylhexane	ND		ug/l	4.00	0.580	2
Methylcyclohexane	10.8		ug/l	4.00	0.540	2
2,5-Dimethylhexane	ND		ug/l	4.00	0.696	2
2,4-Dimethylhexane	0.662	J	ug/l	4.00	0.486	2
Ethylcyclopentane	0.854	J	ug/l	4.00	0.530	2
2,2,3-Trimethylpentane	ND		ug/l	4.00	0.694	2
2,3,4-Trimethylpentane	ND		ug/l	4.00	0.522	2
2,3,3-Trimethylpentane	ND		ug/l	4.00	0.794	2
Xylene (Total) <sup>1</sup>	66.9		ug/l	4.00	0.418	2
2,3-Dimethylhexane	ND		ug/l	4.00	0.970	2
2-Methylheptane	ND		ug/l	4.00	0.676	2
4-Methylheptane	ND		ug/l	4.00	0.688	2
3-Methylheptane	ND		ug/l	4.00	0.770	2
3-Ethylhexane	ND		ug/l	4.00	0.716	2
Toluene	4.57		ug/l	4.00	0.542	2
2-Methylthiophene	ND		ug/l	4.00	0.340	2
1,4-Dimethylcyclohexane (trans)	1.08	J	ug/l	4.00	0.520	2
3-Methylthiophene	ND		ug/l	4.00	0.468	2
1-Octene	ND		ug/l	10.0	0.614	2
Octane	ND		ug/l	4.00	0.470	2
1,2-Dimethylcyclohexane (trans)	4.74		ug/l	4.00	0.588	2

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-04 D

Date Collected: 04/22/22 12:46

Client ID: MW-3

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1,2-Dibromoethane	ND		ug/l	4.00	0.640	2
cis-2-Octene	ND		ug/l	4.00	0.458	2
Isopropylcyclopentane	ND		ug/l	4.00	0.586	2
1,2-Dimethylcyclohexane (cis)	1.51	J	ug/l	4.00	1.16	2
2,5-Dimethylheptane	ND		ug/l	4.00	0.670	2
3,5-Dimethylheptane	ND		ug/l	4.00	0.564	2
3,3-Dimethylheptane	ND		ug/l	4.00	0.484	2
1,1,4-Trimethylcyclohexane	ND		ug/l	4.00	0.398	2
2,3-Dimethylheptane	ND		ug/l	4.00	0.456	2
3,4-Dimethylheptane	ND		ug/l	4.00	0.680	2
4-Methyloctane	ND		ug/l	4.00	0.668	2
2-Methyloctane	ND		ug/l	4.00	1.02	2
Ethylbenzene	119		ug/l	4.00	0.432	2
2-Ethylthiophene	ND		ug/l	4.00	0.352	2
3-Methyloctane	ND		ug/l	4.00	0.448	2
3,3-Diethylpentane	ND		ug/l	4.00	0.466	2
p/m-Xylene	20.4		ug/l	8.00	0.762	2
1-Nonene	ND		ug/l	10.0	0.540	2
trans-3-Nonene	ND		ug/l	4.00	0.474	2
cis-3-Nonene	ND		ug/l	4.00	0.748	2
Nonane (C9)	ND		ug/l	4.00	0.622	2
Styrene	ND		ug/l	4.00	0.404	2
o-Xylene	46.5		ug/l	4.00	0.418	2
2-Nonene	ND		ug/l	10.0	0.508	2
Isopropylcyclohexane	ND		ug/l	4.00	0.424	2
Isopropylbenzene	33.8		ug/l	4.00	0.374	2
3,3-Dimethyloctane	ND		ug/l	4.00	0.404	2
n-Propylbenzene	12.4		ug/l	4.00	0.354	2
2-Methylnonane	ND		ug/l	4.00	0.566	2
3-Methylnonane	ND		ug/l	4.00	0.558	2
1-Methyl-3-Ethylbenzene	4.22		ug/l	4.00	0.632	2
1-Methyl-4-Ethylbenzene	3.05	J	ug/l	4.00	0.564	2
1,3,5-Trimethylbenzene	1.33	J	ug/l	4.00	0.460	2
1-Decene	ND		ug/l	4.00	0.520	2
Isobutylcyclohexane	ND		ug/l	4.00	0.326	2
1-Methyl-2-Ethylbenzene	18.5		ug/l	4.00	0.340	2
Decane (C10)	ND		ug/l	4.00	0.542	2

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

## SAMPLE RESULTS

Lab ID: L2221332-04 D

Date Collected: 04/22/22 12:46

Client ID: MW-3

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
tert-Butylbenzene	ND		ug/l	4.00	0.422	2
1,2,4-Trimethylbenzene	40.0		ug/l	4.00	0.414	2
Isobutylbenzene	0.616	J	ug/l	4.00	0.540	2
sec-Butylbenzene	1.00	J	ug/l	4.00	0.518	2
1-Methyl-3-Isopropylbenzene	4.51		ug/l	4.00	0.516	2
1-Methyl-4-Isopropylbenzene	1.20	J	ug/l	4.00	0.424	2
1,2,3-Trimethylbenzene	46.0		ug/l	4.00	0.446	2
1-Methyl-2-Isopropylbenzene	1.21	J	ug/l	4.00	0.434	2
Indane	358		ug/l	4.00	0.246	2
1,3-Diethylbenzene	15.6		ug/l	4.00	0.498	2
1-Methyl-3-N-Propylbenzene	0.568	J	ug/l	4.00	0.404	2
Indene	18.9		ug/l	4.00	0.232	2
1-Methyl-4-N-Propylbenzene	2.98	J	ug/l	4.00	0.500	2
n-Butylbenzene	2.37	J	ug/l	4.00	0.394	2
1,2-Dimethyl-4-Ethylbenzene	0.570	J	ug/l	4.00	0.490	2
1,2-Diethylbenzene	1.51	J	ug/l	4.00	0.592	2
1-Methyl-2-N-Propylbenzene	3.17	J	ug/l	4.00	0.498	2
1,4-Dimethyl-2-Ethylbenzene	6.14		ug/l	4.00	0.374	2
Undecane	ND		ug/l	4.00	0.444	2
1,3-Dimethyl-4-Ethylbenzene	0.866	J	ug/l	4.00	0.388	2
1,3-Dimethyl-5-Ethylbenzene	19.8		ug/l	4.00	0.472	2
1,3-Dimethyl-2-Ethylbenzene	3.61	J	ug/l	4.00	0.298	2
1,2-Dimethyl-3-Ethylbenzene	4.05		ug/l	4.00	0.254	2
1,2,4,5-Tetramethylbenzene	15.5		ug/l	4.00	0.310	2
1,2,3,5-Tetramethylbenzene	8.38		ug/l	4.00	0.304	2
N-Pentylbenzene	ND		ug/l	4.00	0.498	2
1,2,3,4-Tetramethylbenzene	16.8		ug/l	4.00	0.428	2
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	4.00	0.570	2
Dodecane (C12)	ND		ug/l	10.0	1.31	2
1,3,5-Triethylbenzene	ND		ug/l	4.00	0.760	2
Naphthalene	225		ug/l	4.00	1.67	2
Benzo thiophene	13.0		ug/l	4.00	2.11	2
1,2,4-Triethylbenzene	ND		ug/l	4.00	0.680	2
Hexylbenzene	ND		ug/l	4.00	0.770	2
MMT	ND		ug/l	10.0	2.57	2
Tridecane	ND		ug/l	10.0	2.79	2
2-Methylnaphthalene	8.85	J	ug/l	10.0	2.64	2

**Project Name:** APPLETON MGP**Lab Number:** L2221332**Project Number:** 1940101019**Report Date:** 05/13/22**SAMPLE RESULTS**

Lab ID: L2221332-04 D

Date Collected: 04/22/22 12:46

Client ID: MW-3

Date Received: 04/23/22

Sample Location: APPLETON, WI

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PIANO Volatile Organics by GC/MS - Mansfield Lab						
1-Methylnaphthalene	71.6		ug/l	10.0	2.94	2
Tetradecane (C14)	ND		ug/l	10.0	1.22	2
Pentadecane	ND		ug/l	10.0	2.23	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	124		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 04/25/22 17:41  
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1630877-5					
3-Methyl-1-butene	ND		ug/l	2.00	0.297
Isopentane	ND		ug/l	2.00	0.366
1-Pentene	ND		ug/l	2.00	0.365
2-Methyl-1-Butene	ND		ug/l	2.00	0.311
Pentane	ND		ug/l	2.00	0.624
trans-2-Pentene	ND		ug/l	2.00	0.270
Isoprene	ND		ug/l	2.00	0.357
cis-2-Pentene	ND		ug/l	2.00	0.322
Tertiary Butanol	17.7	J	ug/l	25.0	3.24
2,2-Dimethylbutane	ND		ug/l	2.00	0.617
4-Methyl-1-pentene	ND		ug/l	2.00	0.311
Cyclopentane	ND		ug/l	2.00	0.519
2,3-Dimethylbutane	ND		ug/l	2.00	0.826
2-Methylpentane	ND		ug/l	2.00	0.542
Methyl tert butyl ether	ND		ug/l	2.00	0.412
3-Methylpentane	ND		ug/l	2.00	0.317
1-Hexene	ND		ug/l	2.00	0.281
n-Hexane	ND		ug/l	2.00	0.329
Isopropyl Ether	ND		ug/l	2.00	0.242
trans-2-Hexene	ND		ug/l	2.00	0.261
2-Methyl-2-pentene	ND		ug/l	2.00	0.306
cis-2-Hexene	ND		ug/l	2.00	0.271
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.00	0.303
2,2-Dimethylpentane	ND		ug/l	2.00	0.269
Methylcyclopentane	ND		ug/l	2.00	0.268
2,4-Dimethylpentane	ND		ug/l	2.00	0.247
2,2,3-Trimethylbutane	ND		ug/l	2.00	0.270
1,2-Dichloroethane	ND		ug/l	2.00	0.295
3,3-Dimethylpentane	ND		ug/l	2.00	0.372

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 04/25/22 17:41  
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1630877-5					
Cyclohexane	ND		ug/l	2.00	0.247
2-Methylhexane	ND		ug/l	2.00	0.315
Benzene	ND		ug/l	2.00	0.305
2,3-Dimethylpentane	ND		ug/l	2.00	0.265
Thiophene	ND		ug/l	2.00	0.284
1,1-Dimethylcyclopentane	ND		ug/l	2.00	0.240
3-Methylhexane	ND		ug/l	2.00	0.320
Tertiary-Amyl Methyl Ether	ND		ug/l	2.00	0.246
3-Ethylpentane	ND		ug/l	2.00	0.289
1-Heptene/1,2-DMCP (trans)	ND		ug/l	4.00	0.585
Isooctane	ND		ug/l	2.00	0.218
trans-3-Heptene	ND		ug/l	2.00	0.311
Heptane	ND		ug/l	2.00	0.348
trans-2-Heptene	ND		ug/l	2.00	0.256
cis-2-Heptene	ND		ug/l	2.00	0.387
2,2-Dimethylhexane	ND		ug/l	2.00	0.290
Methylcyclohexane	ND		ug/l	2.00	0.270
2,5-Dimethylhexane	ND		ug/l	2.00	0.348
2,4-Dimethylhexane	ND		ug/l	2.00	0.243
Ethylcyclopentane	ND		ug/l	2.00	0.265
2,2,3-Trimethylpentane	ND		ug/l	2.00	0.347
2,3,4-Trimethylpentane	ND		ug/l	2.00	0.261
2,3,3-Trimethylpentane	ND		ug/l	2.00	0.397
Xylene (Total) <sup>1</sup>	ND		ug/l	2.00	0.209
2,3-Dimethylhexane	ND		ug/l	2.00	0.485
2-Methylheptane	ND		ug/l	2.00	0.338
4-Methylheptane	ND		ug/l	2.00	0.344
3-Methylheptane	ND		ug/l	2.00	0.385
3-Ethylhexane	ND		ug/l	2.00	0.358

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 04/25/22 17:41  
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1630877-5					
Toluene	ND		ug/l	2.00	0.271
2-Methylthiophene	ND		ug/l	2.00	0.170
1,4-Dimethylcyclohexane (trans)	ND		ug/l	2.00	0.260
3-Methylthiophene	ND		ug/l	2.00	0.234
1-Octene	ND		ug/l	5.00	0.307
Octane	ND		ug/l	2.00	0.235
1,2-Dimethylcyclohexane (trans)	ND		ug/l	2.00	0.294
1,2-Dibromoethane	ND		ug/l	2.00	0.320
cis-2-Octene	ND		ug/l	2.00	0.229
Isopropylcyclopentane	ND		ug/l	2.00	0.293
1,2-Dimethylcyclohexane (cis)	ND		ug/l	2.00	0.581
2,5-Dimethylheptane	ND		ug/l	2.00	0.335
3,5-Dimethylheptane	ND		ug/l	2.00	0.282
3,3-Dimethylheptane	ND		ug/l	2.00	0.242
1,1,4-Trimethylcyclohexane	ND		ug/l	2.00	0.199
2,3-Dimethylheptane	ND		ug/l	2.00	0.228
3,4-Dimethylheptane	ND		ug/l	2.00	0.340
4-Methyloctane	ND		ug/l	2.00	0.334
2-Methyloctane	ND		ug/l	2.00	0.512
Ethylbenzene	ND		ug/l	2.00	0.216
2-Ethylthiophene	ND		ug/l	2.00	0.176
3-Methyloctane	ND		ug/l	2.00	0.224
3,3-Diethylpentane	ND		ug/l	2.00	0.233
p/m-Xylene	ND		ug/l	4.00	0.381
1-Nonene	ND		ug/l	5.00	0.270
trans-3-Nonene	ND		ug/l	2.00	0.237
cis-3-Nonene	ND		ug/l	2.00	0.374
Nonane (C9)	ND		ug/l	2.00	0.311
Styrene	ND		ug/l	2.00	0.202

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 04/25/22 17:41  
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1630877-5					
o-Xylene	ND		ug/l	2.00	0.209
2-Nonene	ND		ug/l	5.00	0.254
Isopropylcyclohexane	ND		ug/l	2.00	0.212
Isopropylbenzene	ND		ug/l	2.00	0.187
3,3-Dimethyloctane	ND		ug/l	2.00	0.202
n-Propylbenzene	ND		ug/l	2.00	0.177
2-Methylnonane	ND		ug/l	2.00	0.283
3-Methylnonane	ND		ug/l	2.00	0.279
1-Methyl-3-Ethylbenzene	ND		ug/l	2.00	0.316
1-Methyl-4-Ethylbenzene	ND		ug/l	2.00	0.282
1,3,5-Trimethylbenzene	ND		ug/l	2.00	0.230
1-Decene	ND		ug/l	2.00	0.260
Isobutylcyclohexane	ND		ug/l	2.00	0.163
1-Methyl-2-Ethylbenzene	ND		ug/l	2.00	0.170
Decane (C10)	ND		ug/l	2.00	0.271
tert-Butylbenzene	ND		ug/l	2.00	0.211
1,2,4-Trimethylbenzene	ND		ug/l	2.00	0.207
Isobutylbenzene	ND		ug/l	2.00	0.270
sec-Butylbenzene	ND		ug/l	2.00	0.259
1-Methyl-3-Isopropylbenzene	ND		ug/l	2.00	0.258
1-Methyl-4-Isopropylbenzene	ND		ug/l	2.00	0.212
1,2,3-Trimethylbenzene	ND		ug/l	2.00	0.223
1-Methyl-2-Isopropylbenzene	ND		ug/l	2.00	0.217
Indane	ND		ug/l	2.00	0.123
1,3-Diethylbenzene	ND		ug/l	2.00	0.249
1-Methyl-3-N-Propylbenzene	ND		ug/l	2.00	0.202
Indene	ND		ug/l	2.00	0.116
1-Methyl-4-N-Propylbenzene	ND		ug/l	2.00	0.250
n-Butylbenzene	ND		ug/l	2.00	0.197



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 04/25/22 17:41  
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1630877-5					
1,2-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	0.245
1,2-Diethylbenzene	ND		ug/l	2.00	0.296
1-Methyl-2-N-Propylbenzene	ND		ug/l	2.00	0.249
1,4-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	0.187
Undecane	ND		ug/l	2.00	0.222
1,3-Dimethyl-4-Ethylbenzene	ND		ug/l	2.00	0.194
1,3-Dimethyl-5-Ethylbenzene	ND		ug/l	2.00	0.236
1,3-Dimethyl-2-Ethylbenzene	ND		ug/l	2.00	0.149
1,2-Dimethyl-3-Ethylbenzene	ND		ug/l	2.00	0.127
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.00	0.155
1,2,3,5-Tetramethylbenzene	ND		ug/l	2.00	0.152
N-Pentylbenzene	ND		ug/l	2.00	0.249
1,2,3,4-Tetramethylbenzene	ND		ug/l	2.00	0.214
1,3-Dimethyl-5-tert-Butylbenzene	ND		ug/l	2.00	0.285
Dodecane (C12)	ND		ug/l	5.00	0.657
1,3,5-Triethylbenzene	ND		ug/l	2.00	0.380
Naphthalene	ND		ug/l	2.00	0.835
Benzothiophene	ND		ug/l	2.00	1.06
1,2,4-Triethylbenzene	ND		ug/l	2.00	0.340
Hexylbenzene	ND		ug/l	2.00	0.385
MMT	ND		ug/l	5.00	1.29
Tridecane	ND		ug/l	5.00	1.39
2-Methylnaphthalene	ND		ug/l	5.00	1.32
1-Methylnaphthalene	ND		ug/l	5.00	1.47
Tetradecane (C14)	ND		ug/l	5.00	0.612
Pentadecane	ND		ug/l	5.00	1.12

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260B  
Analytical Date: 04/25/22 17:41  
Analyst: RY

Parameter	Result	Qualifier	Units	RL	MDL
PIANO Volatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1630877-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Dibromofluoromethane	124		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1630877-3 WG1630877-4								
1-Pentene	108		100		50-130	8		30
Pentane	92		84		50-130	9		30
Tertiary Butanol	95		109		50-130	14		30
Cyclopentane	90		84		50-130	7		30
2-Methylpentane	100		90		50-130	11		30
Methyl tert butyl ether	92		104		50-130	12		30
3-Methylpentane	100		90		50-130	11		30
1-Hexene	96		90		50-130	6		30
n-Hexane	86		80		50-130	7		30
Isopropyl Ether	98		100		50-130	2		30
Ethyl-Tert-Butyl-Ether	84		92		50-130	9		30
Methylcyclopentane	96		91		50-130	5		30
2,4-Dimethylpentane	105		92		50-130	13		30
Cyclohexane	97		89		50-130	9		30
2-Methylhexane	99		90		50-130	10		30
Benzene	89		92		50-130	3		30
2,3-Dimethylpentane	101		89		50-130	13		30
3-Methylhexane	92		82		50-130	11		30
Tertiary-Amyl Methyl Ether	86		95		50-130	10		30
Isooctane	99		91		50-130	8		30
Heptane	100		93		50-130	7		30
Methylcyclohexane	94		86		50-130	9		30
2-Methylheptane	94		96		50-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1630877-3 WG1630877-4								
3-Methylheptane	95		96		50-130	1		30
Toluene	92		91		50-130	1		30
Octane	94		96		50-130	2		30
Ethylbenzene	87		90		50-130	3		30
p/m-Xylene	89		93		50-130	4		30
Nonane (C9)	82		86		50-130	5		30
o-Xylene	89		92		50-130	3		30
Isopropylbenzene	88		92		50-130	4		30
n-Propylbenzene	87		94		50-130	8		30
1-Methyl-3-Ethylbenzene	86		92		50-130	7		30
1-Methyl-4-Ethylbenzene	89		95		50-130	7		30
1,3,5-Trimethylbenzene	88		94		50-130	7		30
1-Decene	69		76		50-130	10		30
1-Methyl-2-Ethylbenzene	88		95		50-130	8		30
Decane (C10)	86		92		50-130	7		30
1,2,4-Trimethylbenzene	84		90		50-130	7		30
sec-Butylbenzene	90		100		50-130	11		30
1-Methyl-4-N-Propylbenzene	86		93		50-130	8		30
n-Butylbenzene	88		94		50-130	7		30
1,2-Diethylbenzene	85		93		50-130	9		30
Undecane	78		88		50-130	12		30
N-Pentylbenzene	88		92		50-130	4		30
Dodecane (C12)	78		93		50-130	18		30



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: APPLETON MGP

Lab Number: L2221332

Project Number: 1940101019

Report Date: 05/13/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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PIANO Volatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1630877-3 WG1630877-4

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Dibromofluoromethane	100		115		70-130
Toluene-d8	101		98		70-130
4-Bromofluorobenzene	98		101		70-130

# SEMIVOLATILES

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-01  
 Client ID: MW-24  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 15:05  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 04/28/22 18:03  
 Analyst: PS

Extraction Method: EPA 3510C  
 Extraction Date: 04/26/22 13:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Mansfield Lab</b>						
Phenol	ND		ug/l	0.500	0.051	1
2-Chlorophenol	ND		ug/l	0.500	0.091	1
2-Methylphenol	ND		ug/l	0.500	0.104	1
4-Methylphenol	ND		ug/l	0.500	0.113	1
2-Nitrophenol	ND		ug/l	0.500	0.115	1
2,4-Dimethylphenol	ND		ug/l	2.00	0.241	1
2,4-Dichlorophenol	ND		ug/l	0.500	0.100	1
4-Chloro-3-methylphenol	ND		ug/l	0.500	0.103	1
2,4,6-Trichlorophenol	ND		ug/l	0.500	0.152	1
2,4,5-Trichlorophenol	ND		ug/l	0.500	0.091	1
2,4-Dinitrophenol	ND		ug/l	5.00	0.728	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	0.500	0.143	1
4-Nitrophenol	ND		ug/l	2.50	0.590	1
4,6-Dinitro-2-methylphenol	ND		ug/l	2.00	0.510	1
Pentachlorophenol	ND		ug/l	2.00	0.430	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		15-115
Phenol-d5	38		15-115
Nitrobenzene-d5	83		30-130
2-Fluorobiphenyl	81		30-130
2,4,6-Tribromophenol	96		15-115
Terphenyl-d14	92		30-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-01  
 Client ID: MW-24  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 15:05  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM(M)  
 Analytical Date: 04/29/22 02:35  
 Analyst: CC

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Naphthalene	4.76	J	ng/l	10.5	2.07	1
C1-Naphthalenes	3.36	J	ng/l	10.5	2.07	1
C2-Naphthalenes	4.41	J	ng/l	10.5	2.07	1
C3-Naphthalenes	3.70	J	ng/l	10.5	2.07	1
C4-Naphthalenes	ND		ng/l	10.5	2.07	1
2-Methylnaphthalene	2.50	J	ng/l	10.5	2.42	1
1-Methylnaphthalene	ND		ng/l	10.5	2.05	1
Biphenyl	ND		ng/l	10.5	2.45	1
2,6-Dimethylnaphthalene	ND		ng/l	10.5	2.45	1
Dibenzofuran	ND		ng/l	10.5	1.92	1
Acenaphthylene	ND		ng/l	10.5	2.10	1
Acenaphthene	ND		ng/l	10.5	1.35	1
2,3,5-Trimethylnaphthalene	ND		ng/l	10.5	1.59	1
Fluorene	ND		ng/l	10.5	1.86	1
C1-Fluorenes	ND		ng/l	10.5	1.86	1
C2-Fluorenes	ND		ng/l	10.5	1.86	1
C3-Fluorenes	ND		ng/l	10.5	1.86	1
Dibenzothiophene	ND		ng/l	10.5	1.54	1
C1-Dibenzothiophenes BS	2.00	J	ng/l	10.5	1.54	1
C2-Dibenzothiophenes	2.86	J	ng/l	10.5	1.54	1
C3-Dibenzothiophenes	ND		ng/l	10.5	1.54	1
C4-Dibenzothiophenes	ND		ng/l	10.5	1.54	1
Phenanthrene	5.37	J	ng/l	10.5	1.26	1
C1-Phenanthrenes/Anthracenes	2.19	J	ng/l	10.5	1.26	1
C2-Phenanthrenes/Anthracenes BS	ND		ng/l	10.5	1.26	1
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.5	1.26	1
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.5	1.26	1
Retene	ND		ng/l	10.5	2.95	1



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-01  
**Client ID:** MW-24  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/21/22 15:05  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Anthracene	ND		ng/l	10.5	1.90	1
Fluoranthene	4.85	J	ng/l	10.5	1.87	1
Pyrene	4.05	J	ng/l	10.5	1.92	1
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.5	1.92	1
C2-Fluoranthenes/Pyrenes	ND		ng/l	10.5	1.92	1
C3-Fluoranthenes/Pyrenes	ND		ng/l	10.5	1.92	1
C4-Fluoranthenes/Pyrenes	ND		ng/l	10.5	1.92	1
Benz(a)anthracene	1.59	J	ng/l	10.5	1.22	1
Chrysene/Triphenylene	3.06	J	ng/l	10.5	1.33	1
C1-Chrysenes	ND		ng/l	10.5	1.33	1
C2-Chrysenes BS	ND		ng/l	10.5	1.33	1
C3-Chrysenes	ND		ng/l	10.5	1.33	1
C4-Chrysenes	ND		ng/l	10.5	1.33	1
Benzo(b)fluoranthene	3.53	J	ng/l	10.5	1.55	1
Benzo(j)+(k)fluoranthene	2.80	J	ng/l	10.5	1.57	1
Benzo(e)pyrene	1.77	J	ng/l	10.5	1.38	1
Benzo(a)pyrene	2.49	J	ng/l	10.5	2.26	1
Perylene	ND		ng/l	10.5	1.93	1
Indeno(1,2,3-cd)pyrene	ND		ng/l	10.5	2.59	1
Dibenz(a,h)+(a,c)anthracene	ND		ng/l	10.5	3.09	1
Benzo(g,h,i)perylene	ND		ng/l	10.5	2.79	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	68		50-130
Phenanthrene-d10	99		50-130
Benzo(a)pyrene-d12	85		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-02  
 Client ID: MW-12R  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 17:18  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 04/28/22 18:32  
 Analyst: PS

Extraction Method: EPA 3510C  
 Extraction Date: 04/26/22 13:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Mansfield Lab</b>						
Phenol	2.37		ug/l	0.500	0.051	1
2-Chlorophenol	ND		ug/l	0.500	0.091	1
2-Methylphenol	ND		ug/l	0.500	0.104	1
4-Methylphenol	1.39		ug/l	0.500	0.113	1
2-Nitrophenol	ND		ug/l	0.500	0.115	1
2,4-Dimethylphenol	ND		ug/l	2.00	0.241	1
2,4-Dichlorophenol	ND		ug/l	0.500	0.100	1
4-Chloro-3-methylphenol	ND		ug/l	0.500	0.103	1
2,4,6-Trichlorophenol	ND		ug/l	0.500	0.152	1
2,4,5-Trichlorophenol	ND		ug/l	0.500	0.091	1
2,4-Dinitrophenol	ND		ug/l	5.00	0.728	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	0.500	0.143	1
4-Nitrophenol	ND		ug/l	2.50	0.590	1
4,6-Dinitro-2-methylphenol	ND		ug/l	2.00	0.510	1
Pentachlorophenol	ND		ug/l	2.00	0.430	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	12	Q	15-115
Phenol-d5	19		15-115
Nitrobenzene-d5	136	Q	30-130
2-Fluorobiphenyl	89		30-130
2,4,6-Tribromophenol	29		15-115
Terphenyl-d14	91		30-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-02 D2  
 Client ID: MW-12R  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 17:18  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM(M)  
 Analytical Date: 04/29/22 15:30  
 Analyst: CC

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Naphthalene	894000		ng/l	1000	197.	100
C1-Naphthalenes	340000		ng/l	1000	197.	100
1-Methylnaphthalene	497000		ng/l	1000	195.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	76		50-130
Phenanthrene-d10	99		50-130
Benzo(a)pyrene-d12	72		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-02 D  
 Client ID: MW-12R  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 17:18  
 Date Received: 04/23/22  
 Field Prep: Not Specified

## Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM(M)  
 Analytical Date: 04/29/22 16:55  
 Analyst: CC

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Naphthalene	710000	E	ng/l	100	19.7	10
C1-Naphthalenes	283000	E	ng/l	100	19.7	10
C2-Naphthalenes	128000		ng/l	100	19.7	10
C3-Naphthalenes	21800		ng/l	100	19.7	10
C4-Naphthalenes	2740		ng/l	100	19.7	10
2-Methylnaphthalene	55000		ng/l	100	23.0	10
1-Methylnaphthalene	411000	E	ng/l	100	19.5	10
Biphenyl	26800		ng/l	100	23.3	10
2,6-Dimethylnaphthalene	59200		ng/l	100	23.3	10
Dibenzofuran	6770		ng/l	100	18.2	10
Acenaphthylene	28900		ng/l	100	20.0	10
Acenaphthene	72500		ng/l	100	12.8	10
2,3,5-Trimethylnaphthalene	3630		ng/l	100	15.1	10
Fluorene	27300		ng/l	100	17.7	10
C1-Fluorenes	8440		ng/l	100	17.7	10
C2-Fluorenes	2210		ng/l	100	17.7	10
C3-Fluorenes	569.		ng/l	100	17.7	10
Dibenzothiophene	4420		ng/l	100	14.6	10
C1-Dibenzothiophenes BS	1870		ng/l	100	14.6	10
C2-Dibenzothiophenes	533.		ng/l	100	14.6	10
C3-Dibenzothiophenes	112.		ng/l	100	14.6	10
C4-Dibenzothiophenes	ND		ng/l	100	14.6	10
Phenanthrene	34600		ng/l	100	12.0	10
C1-Phenanthrenes/Anthracenes	9770		ng/l	100	12.0	10
C2-Phenanthrenes/Anthr BS	1770		ng/l	100	12.0	10
C3-Phenanthrenes/Anthracenes	203.		ng/l	100	12.0	10
C4-Phenanthrenes/Anthracenes	ND		ng/l	100	12.0	10
Retene	ND		ng/l	100	28.0	10



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-02 D  
 Client ID: MW-12R  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 17:18  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Anthracene	5790		ng/l	100	18.1	10
Fluoranthene	1550		ng/l	100	17.8	10
Pyrene	1750		ng/l	100	18.2	10
C1-Fluoranthenes/Pyrenes	748.		ng/l	100	18.2	10
C2-Fluoranthenes/Pyrenes	125.		ng/l	100	18.2	10
C3-Fluoranthenes/Pyrenes	ND		ng/l	100	18.2	10
C4-Fluoranthenes/Pyrenes	ND		ng/l	100	18.2	10
Benz(a)anthracene	97.8	J	ng/l	100	11.6	10
Chrysene/Triphenylene	102.		ng/l	100	12.6	10
C1-Chrysenes	42.1	J	ng/l	100	12.6	10
C2-Chrysenes BS	ND		ng/l	100	12.6	10
C3-Chrysenes	ND		ng/l	100	12.6	10
C4-Chrysenes	ND		ng/l	100	12.6	10
Benzo(b)fluoranthene	ND		ng/l	100	14.7	10
Benzo(j)+(k)fluoranthene	ND		ng/l	100	14.9	10
Benzo(e)pyrene	ND		ng/l	100	13.1	10
Benzo(a)pyrene	ND		ng/l	100	21.5	10
Perylene	ND		ng/l	100	18.3	10
Indeno(1,2,3-cd)pyrene	ND		ng/l	100	24.6	10
Dibenz(a,h)+(a,c)anthracene	ND		ng/l	100	29.4	10
Benzo(g,h,i)perylene	ND		ng/l	100	26.5	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	65		50-130
Phenanthrene-d10	88		50-130
Benzo(a)pyrene-d12	71		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-03 D2  
 Client ID: MW-22  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 07:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM(M)  
 Analytical Date: 04/29/22 18:20  
 Analyst: CC

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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PAHs - Mansfield Lab						
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Naphthalene	2480000		ng/l	2220	438.	200
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	72		50-130
Phenanthrene-d10	97		50-130
Benzo(a)pyrene-d12	71		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-03 D  
 Client ID: MW-22  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 07:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 04/29/22 14:51  
 Analyst: PS

Extraction Method: EPA 3510C  
 Extraction Date: 04/26/22 13:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Mansfield Lab</b>						
Phenol	10.1		ug/l	2.50	0.256	5
2-Chlorophenol	ND		ug/l	2.50	0.456	5
2-Methylphenol	ND		ug/l	2.50	0.520	5
4-Methylphenol	ND		ug/l	2.50	0.565	5
2-Nitrophenol	ND		ug/l	2.50	0.575	5
2,4-Dimethylphenol	ND		ug/l	10.0	1.20	5
2,4-Dichlorophenol	ND		ug/l	2.50	0.498	5
4-Chloro-3-methylphenol	ND		ug/l	2.50	0.515	5
2,4,6-Trichlorophenol	ND		ug/l	2.50	0.760	5
2,4,5-Trichlorophenol	ND		ug/l	2.50	0.456	5
2,4-Dinitrophenol	ND		ug/l	25.0	3.64	5
2,3,4,6-Tetrachlorophenol	ND		ug/l	2.50	0.715	5
4-Nitrophenol	ND		ug/l	12.5	2.95	5
4,6-Dinitro-2-methylphenol	ND		ug/l	10.0	2.55	5
Pentachlorophenol	ND		ug/l	10.0	2.15	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		15-115
Phenol-d5	41		15-115
Nitrobenzene-d5	113		30-130
2-Fluorobiphenyl	94		30-130
2,4,6-Tribromophenol	104		15-115
Terphenyl-d14	83		30-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-03 D  
 Client ID: MW-22  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 07:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM(M)  
 Analytical Date: 04/29/22 19:45  
 Analyst: CC

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Naphthalene	2100000	E	ng/l	222	43.8	20
C1-Naphthalenes	262000		ng/l	222	43.8	20
C2-Naphthalenes	54100		ng/l	222	43.8	20
C3-Naphthalenes	8930		ng/l	222	43.8	20
C4-Naphthalenes	1590		ng/l	222	43.8	20
2-Methylnaphthalene	168000		ng/l	222	51.1	20
1-Methylnaphthalene	261000		ng/l	222	43.3	20
Biphenyl	24300		ng/l	222	51.8	20
2,6-Dimethylnaphthalene	22300		ng/l	222	51.8	20
Dibenzofuran	30100		ng/l	222	40.4	20
Acenaphthylene	2100		ng/l	222	44.4	20
Acenaphthene	72500		ng/l	222	28.4	20
2,3,5-Trimethylnaphthalene	1160		ng/l	222	33.6	20
Fluorene	29200		ng/l	222	39.3	20
C1-Fluorenes	2790		ng/l	222	39.3	20
C2-Fluorenes	692.		ng/l	222	39.3	20
C3-Fluorenes	ND		ng/l	222	39.3	20
Dibenzothiophene	4290		ng/l	222	32.4	20
C1-Dibenzothiophenes BS	1190		ng/l	222	32.4	20
C2-Dibenzothiophenes	343.		ng/l	222	32.4	20
C3-Dibenzothiophenes	ND		ng/l	222	32.4	20
C4-Dibenzothiophenes	ND		ng/l	222	32.4	20
Phenanthrene	30000		ng/l	222	26.7	20
C1-Phenanthrenes/Anthracenes	3640		ng/l	222	26.7	20
C2-Phenanthrenes/Anthr BS	464.		ng/l	222	26.7	20
C3-Phenanthrenes/Anthracenes	118.	J	ng/l	222	26.7	20
C4-Phenanthrenes/Anthracenes	ND		ng/l	222	26.7	20
Retene	ND		ng/l	222	62.2	20

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-03 D  
 Client ID: MW-22  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 07:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Anthracene	4770		ng/l	222	40.2	20
Fluoranthene	3630		ng/l	222	39.6	20
Pyrene	2540		ng/l	222	40.4	20
C1-Fluoranthenes/Pyrenes	408.		ng/l	222	40.4	20
C2-Fluoranthenes/Pyrenes	ND		ng/l	222	40.4	20
C3-Fluoranthenes/Pyrenes	ND		ng/l	222	40.4	20
C4-Fluoranthenes/Pyrenes	ND		ng/l	222	40.4	20
Benz(a)anthracene	100.	J	ng/l	222	25.8	20
Chrysene/Triphenylene	116.	J	ng/l	222	28.0	20
C1-Chrysenes	ND		ng/l	222	28.0	20
C2-Chrysenes BS	ND		ng/l	222	28.0	20
C3-Chrysenes	ND		ng/l	222	28.0	20
C4-Chrysenes	ND		ng/l	222	28.0	20
Benzo(b)fluoranthene	ND		ng/l	222	32.7	20
Benzo(j)+(k)fluoranthene	ND		ng/l	222	33.1	20
Benzo(e)pyrene	ND		ng/l	222	29.1	20
Benzo(a)pyrene	ND		ng/l	222	47.8	20
Perylene	ND		ng/l	222	40.7	20
Indeno(1,2,3-cd)pyrene	ND		ng/l	222	54.7	20
Dibenz(a,h)+(a,c)anthracene	ND		ng/l	222	65.3	20
Benzo(g,h,i)perylene	ND		ng/l	222	58.9	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	69		50-130
Phenanthrene-d10	106		50-130
Benzo(a)pyrene-d12	76		50-130



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-04  
 Client ID: MW-3  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 12:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 04/28/22 19:32  
 Analyst: PS

Extraction Method: EPA 3510C  
 Extraction Date: 04/26/22 13:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Semivolatile Organics by GC/MS - Mansfield Lab</b>						
Phenol	1.41		ug/l	0.500	0.051	1
2-Chlorophenol	ND		ug/l	0.500	0.091	1
2-Methylphenol	ND		ug/l	0.500	0.104	1
4-Methylphenol	ND		ug/l	0.500	0.113	1
2-Nitrophenol	ND		ug/l	0.500	0.115	1
2,4-Dimethylphenol	ND		ug/l	2.00	0.241	1
2,4-Dichlorophenol	ND		ug/l	0.500	0.100	1
4-Chloro-3-methylphenol	ND		ug/l	0.500	0.103	1
2,4,6-Trichlorophenol	ND		ug/l	0.500	0.152	1
2,4,5-Trichlorophenol	ND		ug/l	0.500	0.091	1
2,4-Dinitrophenol	ND		ug/l	5.00	0.728	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	0.500	0.143	1
4-Nitrophenol	ND		ug/l	2.50	0.590	1
4,6-Dinitro-2-methylphenol	ND		ug/l	2.00	0.510	1
Pentachlorophenol	ND		ug/l	2.00	0.430	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		15-115
Phenol-d5	42		15-115
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	82		30-130
2,4,6-Tribromophenol	97		15-115
Terphenyl-d14	72		30-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-04  
 Client ID: MW-3  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 12:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8270D-SIM(M)  
 Analytical Date: 04/29/22 06:49  
 Analyst: CC

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Naphthalene	97800	E	ng/l	9.90	1.95	1
C1-Naphthalenes	26800	E	ng/l	9.90	1.95	1
C2-Naphthalenes	4610		ng/l	9.90	1.95	1
C3-Naphthalenes	385.		ng/l	9.90	1.95	1
C4-Naphthalenes	223.		ng/l	9.90	1.95	1
2-Methylnaphthalene	5200		ng/l	9.90	2.28	1
1-Methylnaphthalene	38900	E	ng/l	9.90	1.93	1
Biphenyl	558.		ng/l	9.90	2.31	1
2,6-Dimethylnaphthalene	2230		ng/l	9.90	2.31	1
Dibenzofuran	518.		ng/l	9.90	1.80	1
Acenaphthylene	89.5		ng/l	9.90	1.98	1
Acenaphthene	2020		ng/l	9.90	1.27	1
2,3,5-Trimethylnaphthalene	40.3		ng/l	9.90	1.50	1
Fluorene	238.		ng/l	9.90	1.75	1
C1-Fluorenes	82.5	G	ng/l	9.90	1.75	1
C2-Fluorenes	30.3		ng/l	9.90	1.75	1
C3-Fluorenes	23.8		ng/l	9.90	1.75	1
Dibenzothiophene	21.5		ng/l	9.90	1.44	1
C1-Dibenzothiophenes BS	8.00	J	ng/l	9.90	1.44	1
C2-Dibenzothiophenes	12.4		ng/l	9.90	1.44	1
C3-Dibenzothiophenes	ND		ng/l	9.90	1.44	1
C4-Dibenzothiophenes	ND		ng/l	9.90	1.44	1
Phenanthrene	108.		ng/l	9.90	1.19	1
C1-Phenanthrenes/Anthracenes	26.4		ng/l	9.90	1.19	1
C2-Phenanthrenes/Anthr BS	16.6		ng/l	9.90	1.19	1
C3-Phenanthrenes/Anthracenes	17.2		ng/l	9.90	1.19	1
C4-Phenanthrenes/Anthracenes	25.4		ng/l	9.90	1.19	1
Retene	12.0		ng/l	9.90	2.77	1

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-04  
**Client ID:** MW-3  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/22/22 12:46  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Anthracene	20.3		ng/l	9.90	1.79	1
Fluoranthene	21.2		ng/l	9.90	1.76	1
Pyrene	17.7		ng/l	9.90	1.80	1
C1-Fluoranthenes/Pyrenes	22.2		ng/l	9.90	1.80	1
C2-Fluoranthenes/Pyrenes	ND		ng/l	9.90	1.80	1
C3-Fluoranthenes/Pyrenes	ND		ng/l	9.90	1.80	1
C4-Fluoranthenes/Pyrenes	ND		ng/l	9.90	1.80	1
Benz(a)anthracene	2.73	J	ng/l	9.90	1.15	1
Chrysene/Triphenylene	3.94	J	ng/l	9.90	1.25	1
C1-Chrysenes	ND		ng/l	9.90	1.25	1
C2-Chrysenes BS	ND		ng/l	9.90	1.25	1
C3-Chrysenes	ND		ng/l	9.90	1.25	1
C4-Chrysenes	ND		ng/l	9.90	1.25	1
Benzo(b)fluoranthene	3.80	J	ng/l	9.90	1.46	1
Benzo(j)+(k)fluoranthene	2.41	J	ng/l	9.90	1.48	1
Benzo(e)pyrene	2.30	J	ng/l	9.90	1.30	1
Benzo(a)pyrene	2.20	J	ng/l	9.90	2.13	1
Perylene	ND		ng/l	9.90	1.81	1
Indeno(1,2,3-cd)pyrene	ND		ng/l	9.90	2.44	1
Dibenz(a,h)+(a,c)anthracene	ND		ng/l	9.90	2.91	1
Benzo(g,h,i)perylene	ND		ng/l	9.90	2.62	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	65		50-130
Phenanthrene-d10	103		50-130
Benzo(a)pyrene-d12	96		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-04 D  
 Client ID: MW-3  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 12:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Water  
 Analytical Method: 1,8270D-SIM(M)  
 Analytical Date: 04/29/22 21:10  
 Analyst: CC

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>PAHs - Mansfield Lab</b>						
Naphthalene	95900		ng/l	99.0	19.5	10
C1-Naphthalenes	24200		ng/l	99.0	19.5	10
1-Methylnaphthalene	35000		ng/l	99.0	19.3	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	59		50-130
Phenanthrene-d10	90		50-130
Benzo(a)pyrene-d12	71		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8270D  
Analytical Date: 04/28/22 15:36  
Analyst: PS

Extraction Method: EPA 3510C  
Extraction Date: 04/26/22 13:01

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Mansfield Lab for sample(s): 01-04 Batch: WG1631124-1					
Phenol	ND		ug/l	0.500	0.051
2-Chlorophenol	ND		ug/l	0.500	0.091
2-Methylphenol	ND		ug/l	0.500	0.104
4-Methylphenol	ND		ug/l	0.500	0.113
2-Nitrophenol	ND		ug/l	0.500	0.115
2,4-Dimethylphenol	ND		ug/l	2.00	0.241
2,4-Dichlorophenol	ND		ug/l	0.500	0.100
4-Chloro-3-methylphenol	ND		ug/l	0.500	0.103
2,4,6-Trichlorophenol	ND		ug/l	0.500	0.152
2,4,5-Trichlorophenol	ND		ug/l	0.500	0.091
2,4-Dinitrophenol	ND		ug/l	5.00	0.728
2,3,4,6-Tetrachlorophenol	ND		ug/l	0.500	0.143
4-Nitrophenol	ND		ug/l	2.50	0.590
4,6-Dinitro-2-methylphenol	ND		ug/l	2.00	0.510
Pentachlorophenol	ND		ug/l	2.00	0.430

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		15-115
Phenol-d5	39		15-115
Nitrobenzene-d5	86		30-130
2-Fluorobiphenyl	85		30-130
2,4,6-Tribromophenol	93		15-115
Terphenyl-d14	102		30-130



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8270D-SIM(M)  
Analytical Date: 04/28/22 22:20  
Analyst: MJS

Extraction Method: EPA 3510C  
Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-04 Batch: WG1632063-1					
Naphthalene	ND		ng/l	10.0	1.97
C1-Naphthalenes	ND		ng/l	10.0	1.97
C2-Naphthalenes	ND		ng/l	10.0	1.97
C3-Naphthalenes	ND		ng/l	10.0	1.97
C4-Naphthalenes	ND		ng/l	10.0	1.97
2-Methylnaphthalene	ND		ng/l	10.0	2.30
1-Methylnaphthalene	ND		ng/l	10.0	1.95
Biphenyl	ND		ng/l	10.0	2.33
2,6-Dimethylnaphthalene	ND		ng/l	10.0	2.33
Dibenzofuran	ND		ng/l	10.0	1.82
Acenaphthylene	ND		ng/l	10.0	2.00
Acenaphthene	ND		ng/l	10.0	1.28
2,3,5-Trimethylnaphthalene	ND		ng/l	10.0	1.51
Fluorene	ND		ng/l	10.0	1.77
C1-Fluorenes	ND		ng/l	10.0	1.77
C2-Fluorenes	ND		ng/l	10.0	1.77
C3-Fluorenes	ND		ng/l	10.0	1.77
Dibenzothiophene	ND		ng/l	10.0	1.46
C1-Dibenzothiophenes BS	ND		ng/l	10.0	1.46
C2-Dibenzothiophenes	2.56	J	ng/l	10.0	1.46
C3-Dibenzothiophenes	ND		ng/l	10.0	1.46
C4-Dibenzothiophenes	ND		ng/l	10.0	1.46
Phenanthrene	1.76	J	ng/l	10.0	1.20
C1-Phenanthrenes/Anthracenes	ND		ng/l	10.0	1.20
C2-Phenanthrenes/Anthr BS	ND		ng/l	10.0	1.20
C3-Phenanthrenes/Anthracenes	ND		ng/l	10.0	1.20
C4-Phenanthrenes/Anthracenes	ND		ng/l	10.0	1.20
Retene	ND		ng/l	10.0	2.80
Anthracene	ND		ng/l	10.0	1.81

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8270D-SIM(M)  
Analytical Date: 04/28/22 22:20  
Analyst: MJS

Extraction Method: EPA 3510C  
Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL
PAHs - Mansfield Lab for sample(s): 01-04 Batch: WG1632063-1					
Fluoranthene	ND		ng/l	10.0	1.78
Pyrene	ND		ng/l	10.0	1.82
C1-Fluoranthenes/Pyrenes	ND		ng/l	10.0	1.82
C2-Fluoranthenes/Pyrenes	ND		ng/l	10.0	1.82
C3-Fluoranthenes/Pyrenes	ND		ng/l	10.0	1.82
C4-Fluoranthenes/Pyrenes	ND		ng/l	10.0	1.82
Benz(a)anthracene	ND		ng/l	10.0	1.16
Chrysene/Triphenylene	ND		ng/l	10.0	1.26
C1-Chrysenes	ND		ng/l	10.0	1.26
C2-Chrysenes BS	ND		ng/l	10.0	1.26
C3-Chrysenes	ND		ng/l	10.0	1.26
C4-Chrysenes	ND		ng/l	10.0	1.26
Benzo(b)fluoranthene	ND		ng/l	10.0	1.47
Benzo(j)+(k)fluoranthene	ND		ng/l	10.0	1.49
Benzo(e)pyrene	ND		ng/l	10.0	1.31
Benzo(a)pyrene	ND		ng/l	10.0	2.15
Perylene	ND		ng/l	10.0	1.83
Indeno(1,2,3-cd)pyrene	ND		ng/l	10.0	2.46
Dibenz(a,h)+(a,c)anthracene	ND		ng/l	10.0	2.94
Benzo(g,h,i)perylene	ND		ng/l	10.0	2.65

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Naphthalene-d8	72		50-130
Phenanthrene-d10	97		50-130
Benzo(a)pyrene-d12	84		50-130

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Semivolatile Organics by GC/MS - Mansfield Lab Associated sample(s): 01-04 Batch: WG1631124-2 WG1631124-3								
Phenol	40		44		18-54	10		20
2-Chlorophenol	73		84		30-130	14		20
2-Methylphenol	73		82		30-130	12		20
4-Methylphenol	68		77		30-130	12		20
2-Nitrophenol	76		90		40-140	17		20
2,4-Dimethylphenol	73		82		40-140	12		20
2,4-Dichlorophenol	77		89		30-130	14		20
4-Chloro-3-methylphenol	84		93		30-130	10		20
2,4,6-Trichlorophenol	78		89		30-130	13		20
2,4,5-Trichlorophenol	88		99		30-130	12		20
2,4-Dinitrophenol	74		85		30-130	14		20
2,3,4,6-Tetrachlorophenol	92		102		30-130	10		20
4-Nitrophenol	47		53		17-65	12		20
4,6-Dinitro-2-methylphenol	86		98		30-130	13		20
Pentachlorophenol	82		94		30-130	14		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2-Fluorophenol	60		61		15-115
Phenol-d5	43		42		15-115
Nitrobenzene-d5	89		90		30-130
2-Fluorobiphenyl	86		88		30-130
2,4,6-Tribromophenol	104		102		15-115
Terphenyl-d14	100		101		30-130



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: APPLETON MGP

Project Number: 1940101019

Lab Number: L2221332

Report Date: 05/13/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PAHs - Mansfield Lab Associated sample(s): 01-04 Batch: WG1632063-2 WG1632063-3								
Naphthalene	66		60		50-130	10		30
2-Methylnaphthalene	70		62		50-130	12		30
Acenaphthylene	77		76		50-130	1		30
Acenaphthene	79		77		50-130	3		30
Fluorene	88		89		50-130	1		30
Phenanthrene	91		93		50-130	2		30
Anthracene	96		99		50-130	3		30
Fluoranthene	95		96		50-130	1		30
Pyrene	94		95		50-130	1		30
Benz(a)anthracene	88		88		50-130	0		30
Chrysene/Triphenylene	86		87		50-130	1		30
Benzo(b)fluoranthene	93		94		50-130	1		30
Benzo(j)+(k)fluoranthene	88		88		50-130	0		30
Benzo(a)pyrene	86		86		50-130	0		30
Indeno(1,2,3-cd)pyrene	85		92		50-130	8		30
Dibenz(a,h)+(a,c)anthracene	90		84		50-130	7		30
Benzo(g,h,i)perylene	91		91		50-130	0		30

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
PAHs - Mansfield Lab Associated sample(s): 01-04 Batch: WG1632063-2 WG1632063-3								

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
Naphthalene-d8	76		71		50-130
Phenanthrene-d10	103		104		50-130
Benzo(a)pyrene-d12	91		89		50-130



# PETROLEUM HYDROCARBONS

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-01  
**Client ID:** MW-24  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/21/22 15:05  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 04/29/22 22:37  
**Analyst:** WR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Nonane (C9)	ND		mg/l	0.0011	0.0003	1
n-Decane (C10)	ND		mg/l	0.0011	0.0001	1
n-Undecane (C11)	ND		mg/l	0.0011	0.0001	1
n-Dodecane (C12)	ND		mg/l	0.0011	0.0001	1
n-Tridecane (C13)	ND		mg/l	0.0053	0.0009	1
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.0011	0.0001	1
n-Tetradecane (C14)	ND		mg/l	0.0011	0.0001	1
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.0011	0.0002	1
n-Pentadecane (C15)	ND		mg/l	0.0011	0.0002	1
n-Hexadecane (C16)	ND		mg/l	0.0011	0.0002	1
Norpristane (1650)	ND		mg/l	0.0011	0.0001	1
n-Heptadecane (C17)	ND		mg/l	0.0011	0.0001	1
Pristane	ND		mg/l	0.0011	0.0002	1
n-Octadecane (C18)	0.0009	JC	mg/l	0.0011	0.0001	1
Phytane	ND		mg/l	0.0011	0.0001	1
n-Nonadecane (C19)	ND		mg/l	0.0011	0.0002	1
n-Eicosane (C20)	ND		mg/l	0.0011	0.0001	1
n-Heneicosane (C21)	ND		mg/l	0.0011	0.0001	1
n-Docosane (C22)	ND		mg/l	0.0011	0.00004	1
n-Tricosane (C23)	0.0002	J	mg/l	0.0011	0.0001	1
n-Tetracosane (C24)	ND		mg/l	0.0011	0.0001	1
n-Pentacosane (C25)	ND		mg/l	0.0053	0.0006	1
n-Hexacosane (C26)	ND		mg/l	0.0011	0.0001	1
n-Heptacosane (C27)	ND		mg/l	0.0011	0.0001	1
n-Octacosane (C28)	ND		mg/l	0.0011	0.0002	1
n-Nonacosane (C29)	ND		mg/l	0.0011	0.0001	1
n-Triacontane (C30)	ND		mg/l	0.0011	0.0001	1
n-Hentriacontane (C31)	ND		mg/l	0.0011	0.0001	1

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-01  
**Client ID:** MW-24  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/21/22 15:05  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Dotriacontane (C32)	ND		mg/l	0.0011	0.0001	1
n-Tritriacontane (C33)	ND		mg/l	0.0011	0.0001	1
n-Tetratriacontane (C34)	ND		mg/l	0.0011	0.0002	1
n-Pentatriacontane (C35)	ND		mg/l	0.0011	0.0002	1
n-Hexatriacontane (C36)	ND		mg/l	0.0011	0.0001	1
n-Heptatriacontane (C37)	ND		mg/l	0.0011	0.0002	1
n-Octatriacontane (C38)	ND		mg/l	0.0011	0.0002	1
n-Nonatriacontane (C39)	ND		mg/l	0.0011	0.0002	1
n-Tetracontane (C40)	ND		mg/l	0.0011	0.0002	1
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/l	0.0347	0.0059	1
Total Saturated Hydrocarbons	0.0011	JB	mg/l	0.0011	0.00004	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	90		50-130
d50-Tetracosane	89		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-01      **RE**  
**Client ID:** MW-24  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/21/22 15:05  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 05/07/22 00:17  
**Analyst:** WR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/05/22 04:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Nonane (C9)	ND		mg/l	0.0010	0.0003	1
n-Decane (C10)	ND		mg/l	0.0010	0.0001	1
n-Undecane (C11)	ND		mg/l	0.0010	0.0001	1
n-Dodecane (C12)	ND		mg/l	0.0010	0.0001	1
n-Tridecane (C13)	ND		mg/l	0.0050	0.0009	1
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.0010	0.0001	1
n-Tetradecane (C14)	ND		mg/l	0.0010	0.0001	1
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.0010	0.0001	1
n-Pentadecane (C15)	ND		mg/l	0.0010	0.0001	1
n-Hexadecane (C16)	ND		mg/l	0.0010	0.0001	1
Norpristane (1650)	ND		mg/l	0.0010	0.0001	1
n-Heptadecane (C17)	ND		mg/l	0.0010	0.0001	1
Pristane	ND		mg/l	0.0010	0.0002	1
n-Octadecane (C18)	0.0010	JC	mg/l	0.0010	0.0001	1
Phytane	ND		mg/l	0.0010	0.0001	1
n-Nonadecane (C19)	ND		mg/l	0.0010	0.0002	1
n-Eicosane (C20)	ND		mg/l	0.0010	0.0001	1
n-Heneicosane (C21)	ND		mg/l	0.0010	0.0001	1
n-Docosane (C22)	ND		mg/l	0.0010	0.00004	1
n-Tricosane (C23)	ND		mg/l	0.0010	0.0001	1
n-Tetracosane (C24)	ND		mg/l	0.0010	0.0001	1
n-Pentacosane (C25)	ND		mg/l	0.0050	0.0006	1
n-Hexacosane (C26)	ND		mg/l	0.0010	0.0001	1
n-Heptacosane (C27)	ND		mg/l	0.0010	0.0001	1
n-Octacosane (C28)	ND		mg/l	0.0010	0.0002	1
n-Nonacosane (C29)	ND		mg/l	0.0010	0.0001	1
n-Triacontane (C30)	ND		mg/l	0.0010	0.0001	1
n-Hentriacontane (C31)	ND		mg/l	0.0010	0.0001	1

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-01 RE  
 Client ID: MW-24  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 15:05  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Dotriacontane (C32)	ND		mg/l	0.0010	0.0001	1
n-Tritriacontane (C33)	ND		mg/l	0.0010	0.0001	1
n-Tettratriacontane (C34)	ND		mg/l	0.0010	0.0002	1
n-Pentatriacontane (C35)	ND		mg/l	0.0010	0.0002	1
n-Hexatriacontane (C36)	ND		mg/l	0.0010	0.0001	1
n-Heptatriacontane (C37)	ND		mg/l	0.0010	0.0002	1
n-Octatriacontane (C38)	ND		mg/l	0.0010	0.0002	1
n-Nonatriacontane (C39)	ND		mg/l	0.0010	0.0002	1
n-Tetracontane (C40)	ND		mg/l	0.0010	0.0002	1
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/l	0.0330	0.0056	1
Total Saturated Hydrocarbons	0.0010	J	mg/l	0.0010	0.00004	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	101		50-130
d50-Tetracosane	100		50-130



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-02  
**Client ID:** MW-12R  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/21/22 17:18  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 04/30/22 00:06  
**Analyst:** WR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Nonane (C9)	ND		mg/l	0.0010	0.0003	1
n-Decane (C10)	0.0149		mg/l	0.0010	0.0001	1
n-Undecane (C11)	0.0145		mg/l	0.0010	0.0001	1
n-Dodecane (C12)	ND		mg/l	0.0010	0.0001	1
n-Tridecane (C13)	0.0086		mg/l	0.0050	0.0009	1
2,6,10-Trimethyldodecane (1380)	0.0022		mg/l	0.0010	0.0001	1
n-Tetradecane (C14)	0.0028		mg/l	0.0010	0.0001	1
2,6,10-Trimethyltridecane (1470)	0.0333		mg/l	0.0010	0.0001	1
n-Pentadecane (C15)	0.0983		mg/l	0.0010	0.0001	1
n-Hexadecane (C16)	0.0369		mg/l	0.0010	0.0001	1
Norpristane (1650)	0.0020		mg/l	0.0010	0.0001	1
n-Heptadecane (C17)	ND		mg/l	0.0010	0.0001	1
Pristane	0.0006	J	mg/l	0.0010	0.0002	1
n-Octadecane (C18)	0.0407		mg/l	0.0010	0.0001	1
Phytane	0.0066		mg/l	0.0010	0.0001	1
n-Nonadecane (C19)	ND		mg/l	0.0010	0.0002	1
n-Eicosane (C20)	ND		mg/l	0.0010	0.0001	1
n-Heneicosane (C21)	ND		mg/l	0.0010	0.0001	1
n-Docosane (C22)	ND		mg/l	0.0010	0.00004	1
n-Tricosane (C23)	0.0004	J	mg/l	0.0010	0.0001	1
n-Tetracosane (C24)	ND		mg/l	0.0010	0.0001	1
n-Pentacosane (C25)	ND		mg/l	0.0050	0.0006	1
n-Hexacosane (C26)	0.0003	J	mg/l	0.0010	0.0001	1
n-Heptacosane (C27)	ND		mg/l	0.0010	0.0001	1
n-Octacosane (C28)	ND		mg/l	0.0010	0.0002	1
n-Nonacosane (C29)	ND		mg/l	0.0010	0.0001	1
n-Triacontane (C30)	ND		mg/l	0.0010	0.0001	1
n-Hentriacontane (C31)	ND		mg/l	0.0010	0.0001	1

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-02  
**Client ID:** MW-12R  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/21/22 17:18  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Dotriacontane (C32)	ND		mg/l	0.0010	0.0001	1
n-Tritriacontane (C33)	ND		mg/l	0.0010	0.0001	1
n-Tettratriacontane (C34)	ND		mg/l	0.0010	0.0002	1
n-Pentatriacontane (C35)	ND		mg/l	0.0010	0.0002	1
n-Hexatriacontane (C36)	ND		mg/l	0.0010	0.0001	1
n-Heptatriacontane (C37)	ND		mg/l	0.0010	0.0002	1
n-Octatriacontane (C38)	ND		mg/l	0.0010	0.0002	1
n-Nonatriacontane (C39)	ND		mg/l	0.0010	0.0002	1
n-Tetracontane (C40)	ND		mg/l	0.0010	0.0002	1
Total Petroleum Hydrocarbons (C9-C44)	4.230		mg/l	0.0330	0.0056	1
Total Saturated Hydrocarbons	0.2621	J	mg/l	0.0010	0.00004	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	90		50-130
d50-Tetracosane	86		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-02 RE  
 Client ID: MW-12R  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 17:18  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 05/07/22 01:46  
 Analyst: WR

Extraction Method: EPA 3510C  
 Extraction Date: 05/05/22 04:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Nonane (C9)	ND		mg/l	0.0010	0.0003	1
n-Decane (C10)	0.0043		mg/l	0.0010	0.0001	1
n-Undecane (C11)	0.0117		mg/l	0.0010	0.0001	1
n-Dodecane (C12)	ND		mg/l	0.0010	0.0001	1
n-Tridecane (C13)	0.0146		mg/l	0.0050	0.0009	1
2,6,10-Trimethyldodecane (1380)	0.0033		mg/l	0.0010	0.0001	1
n-Tetradecane (C14)	0.0021		mg/l	0.0010	0.0001	1
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.0010	0.0001	1
n-Pentadecane (C15)	0.0903		mg/l	0.0010	0.0001	1
n-Hexadecane (C16)	0.0377		mg/l	0.0010	0.0001	1
Norpristane (1650)	ND		mg/l	0.0010	0.0001	1
n-Heptadecane (C17)	ND		mg/l	0.0010	0.0001	1
Pristane	0.0005	J	mg/l	0.0010	0.0002	1
n-Octadecane (C18)	0.0392		mg/l	0.0010	0.0001	1
Phytane	0.0074		mg/l	0.0010	0.0001	1
n-Nonadecane (C19)	0.0011		mg/l	0.0010	0.0002	1
n-Eicosane (C20)	0.0016		mg/l	0.0010	0.0001	1
n-Heneicosane (C21)	0.0003	J	mg/l	0.0010	0.0001	1
n-Docosane (C22)	0.0003	J	mg/l	0.0010	0.00004	1
n-Tricosane (C23)	ND		mg/l	0.0010	0.0001	1
n-Tetracosane (C24)	ND		mg/l	0.0010	0.0001	1
n-Pentacosane (C25)	ND		mg/l	0.0050	0.0006	1
n-Hexacosane (C26)	ND		mg/l	0.0010	0.0001	1
n-Heptacosane (C27)	ND		mg/l	0.0010	0.0001	1
n-Octacosane (C28)	ND		mg/l	0.0010	0.0002	1
n-Nonacosane (C29)	ND		mg/l	0.0010	0.0001	1
n-Triacontane (C30)	ND		mg/l	0.0010	0.0001	1
n-Hentriacontane (C31)	ND		mg/l	0.0010	0.0001	1

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-02 RE  
 Client ID: MW-12R  
 Sample Location: APPLETON, WI

Date Collected: 04/21/22 17:18  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Dotriacontane (C32)	ND		mg/l	0.0010	0.0001	1
n-Tritriacontane (C33)	ND		mg/l	0.0010	0.0001	1
n-Tetratriacontane (C34)	ND		mg/l	0.0010	0.0002	1
n-Pentatriacontane (C35)	ND		mg/l	0.0010	0.0002	1
n-Hexatriacontane (C36)	ND		mg/l	0.0010	0.0001	1
n-Heptatriacontane (C37)	ND		mg/l	0.0010	0.0002	1
n-Octatriacontane (C38)	ND		mg/l	0.0010	0.0002	1
n-Nonatriacontane (C39)	ND		mg/l	0.0010	0.0002	1
n-Tetracontane (C40)	ND		mg/l	0.0010	0.0002	1
Total Petroleum Hydrocarbons (C9-C44)	2.660		mg/l	0.0330	0.0056	1
Total Saturated Hydrocarbons	0.2145	J	mg/l	0.0010	0.00004	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	93		50-130
d50-Tetracosane	92		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-03  
**Client ID:** MW-22  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/22/22 07:46  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 04/30/22 01:34  
**Analyst:** WR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Nonane (C9)	ND		mg/l	0.0011	0.0004	1
n-Decane (C10)	0.0040		mg/l	0.0011	0.0001	1
n-Undecane (C11)	0.0014		mg/l	0.0011	0.0001	1
n-Dodecane (C12)	2.810	E	mg/l	0.0011	0.0001	1
n-Tridecane (C13)	ND		mg/l	0.0056	0.0010	1
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.0011	0.0001	1
n-Tetradecane (C14)	ND		mg/l	0.0011	0.0001	1
2,6,10-Trimethyltridecane (1470)	0.0020		mg/l	0.0011	0.0002	1
n-Pentadecane (C15)	0.0804		mg/l	0.0011	0.0002	1
n-Hexadecane (C16)	0.0299		mg/l	0.0011	0.0002	1
Norpristane (1650)	0.0027		mg/l	0.0011	0.0002	1
n-Heptadecane (C17)	0.0002	J	mg/l	0.0011	0.0002	1
Pristane	0.0033		mg/l	0.0011	0.0002	1
n-Octadecane (C18)	0.0298		mg/l	0.0011	0.0001	1
Phytane	0.0046		mg/l	0.0011	0.0001	1
n-Nonadecane (C19)	0.0007	J	mg/l	0.0011	0.0002	1
n-Eicosane (C20)	ND		mg/l	0.0011	0.0001	1
n-Heneicosane (C21)	ND		mg/l	0.0011	0.0001	1
n-Docosane (C22)	ND		mg/l	0.0011	0.00005	1
n-Tricosane (C23)	0.0005	J	mg/l	0.0011	0.0001	1
n-Tetracosane (C24)	ND		mg/l	0.0011	0.0001	1
n-Pentacosane (C25)	0.0010	J	mg/l	0.0056	0.0007	1
n-Hexacosane (C26)	0.0009	J	mg/l	0.0011	0.0001	1
n-Heptacosane (C27)	ND		mg/l	0.0011	0.0001	1
n-Octacosane (C28)	ND		mg/l	0.0011	0.0002	1
n-Nonacosane (C29)	ND		mg/l	0.0011	0.0001	1
n-Triacontane (C30)	ND		mg/l	0.0011	0.0001	1
n-Hentriacontane (C31)	ND		mg/l	0.0011	0.0001	1



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-03  
**Client ID:** MW-22  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/22/22 07:46  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Dotriacontane (C32)	ND		mg/l	0.0011	0.0001	1
n-Tritriacontane (C33)	ND		mg/l	0.0011	0.0001	1
n-Tetracontane (C34)	ND		mg/l	0.0011	0.0002	1
n-Pentatriacontane (C35)	ND		mg/l	0.0011	0.0002	1
n-Hexatriacontane (C36)	ND		mg/l	0.0011	0.0002	1
n-Heptatriacontane (C37)	ND		mg/l	0.0011	0.0002	1
n-Octatriacontane (C38)	ND		mg/l	0.0011	0.0002	1
n-Nonatriacontane (C39)	ND		mg/l	0.0011	0.0002	1
n-Tetracontane (C40)	ND		mg/l	0.0011	0.0002	1
Total Petroleum Hydrocarbons (C9-C44)	5.730		mg/l	0.0367	0.0062	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	93		50-130
d50-Tetracosane	89		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-03      **RE**  
**Client ID:** MW-22  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/22/22 07:46  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 1,8015D(M)  
**Analytical Date:** 05/07/22 03:15  
**Analyst:** WR

**Extraction Method:** EPA 3510C  
**Extraction Date:** 05/05/22 04:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Nonane (C9)	ND		mg/l	0.0010	0.0003	1
n-Decane (C10)	0.0060		mg/l	0.0010	0.0001	1
n-Undecane (C11)	0.0015		mg/l	0.0010	0.0001	1
n-Dodecane (C12)	0.0053		mg/l	0.0010	0.0001	1
n-Tridecane (C13)	0.0112		mg/l	0.0052	0.0009	1
2,6,10-Trimethyldodecane (1380)	0.0012		mg/l	0.0010	0.0001	1
n-Tetradecane (C14)	0.0022		mg/l	0.0010	0.0001	1
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.0010	0.0001	1
n-Pentadecane (C15)	0.0787		mg/l	0.0010	0.0001	1
n-Hexadecane (C16)	0.0319		mg/l	0.0010	0.0002	1
Norpristane (1650)	ND		mg/l	0.0010	0.0001	1
n-Heptadecane (C17)	ND		mg/l	0.0010	0.0001	1
Pristane	ND		mg/l	0.0010	0.0002	1
n-Octadecane (C18)	0.0281		mg/l	0.0010	0.0001	1
Phytane	0.0043		mg/l	0.0010	0.0001	1
n-Nonadecane (C19)	0.0008	J	mg/l	0.0010	0.0002	1
n-Eicosane (C20)	0.0009	J	mg/l	0.0010	0.0001	1
n-Heneicosane (C21)	0.0003	J	mg/l	0.0010	0.0001	1
n-Docosane (C22)	ND		mg/l	0.0010	0.00004	1
n-Tricosane (C23)	ND		mg/l	0.0010	0.0001	1
n-Tetracosane (C24)	ND		mg/l	0.0010	0.0001	1
n-Pentacosane (C25)	ND		mg/l	0.0052	0.0006	1
n-Hexacosane (C26)	ND		mg/l	0.0010	0.0001	1
n-Heptacosane (C27)	ND		mg/l	0.0010	0.0001	1
n-Octacosane (C28)	ND		mg/l	0.0010	0.0002	1
n-Nonacosane (C29)	ND		mg/l	0.0010	0.0001	1
n-Triacontane (C30)	ND		mg/l	0.0010	0.0001	1
n-Hentriacontane (C31)	ND		mg/l	0.0010	0.0001	1

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-03 RE  
 Client ID: MW-22  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 07:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Dotriacontane (C32)	ND		mg/l	0.0010	0.0001	1
n-Tritriacontane (C33)	ND		mg/l	0.0010	0.0001	1
n-Tetratriacontane (C34)	ND		mg/l	0.0010	0.0002	1
n-Pentatriacontane (C35)	ND		mg/l	0.0010	0.0002	1
n-Hexatriacontane (C36)	ND		mg/l	0.0010	0.0001	1
n-Heptatriacontane (C37)	ND		mg/l	0.0010	0.0002	1
n-Octatriacontane (C38)	ND		mg/l	0.0010	0.0002	1
n-Nonatriacontane (C39)	ND		mg/l	0.0010	0.0002	1
n-Tetracontane (C40)	ND		mg/l	0.0010	0.0002	1
Total Petroleum Hydrocarbons (C9-C44)	2.880		mg/l	0.0340	0.0057	1
Total Saturated Hydrocarbons	0.1723	J	mg/l	0.0010	0.00004	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	98		50-130
d50-Tetracosane	94		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-03 D  
 Client ID: MW-22  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 07:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 05/03/22 06:12  
 Analyst: WR

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Saturated Hydrocarbons by GC-FID - Mansfield Lab						
n-Dodecane (C12)	0.322		mg/l	0.056	0.007	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	121		50-130
d50-Tetracosane	120		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-04  
 Client ID: MW-3  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 12:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 04/30/22 03:03  
 Analyst: WR

Extraction Method: EPA 3510C  
 Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Nonane (C9)	ND		mg/l	0.0010	0.0003	1
n-Decane (C10)	0.0010	J	mg/l	0.0010	0.0001	1
n-Undecane (C11)	ND		mg/l	0.0010	0.0001	1
n-Dodecane (C12)	ND		mg/l	0.0010	0.0001	1
n-Tridecane (C13)	ND		mg/l	0.0050	0.0009	1
2,6,10-Trimethyldodecane (1380)	0.0001	J	mg/l	0.0010	0.0001	1
n-Tetradecane (C14)	0.0016		mg/l	0.0010	0.0001	1
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.0010	0.0001	1
n-Pentadecane (C15)	0.0024		mg/l	0.0010	0.0001	1
n-Hexadecane (C16)	ND		mg/l	0.0010	0.0001	1
Norpristane (1650)	ND		mg/l	0.0010	0.0001	1
n-Heptadecane (C17)	ND		mg/l	0.0010	0.0001	1
Pristane	ND		mg/l	0.0010	0.0002	1
n-Octadecane (C18)	0.0009	JC	mg/l	0.0010	0.0001	1
Phytane	ND		mg/l	0.0010	0.0001	1
n-Nonadecane (C19)	ND		mg/l	0.0010	0.0002	1
n-Eicosane (C20)	ND		mg/l	0.0010	0.0001	1
n-Heneicosane (C21)	ND		mg/l	0.0010	0.0001	1
n-Docosane (C22)	0.0001	J	mg/l	0.0010	0.00004	1
n-Tricosane (C23)	0.0006	J	mg/l	0.0010	0.0001	1
n-Tetracosane (C24)	ND		mg/l	0.0010	0.0001	1
n-Pentacosane (C25)	ND		mg/l	0.0050	0.0006	1
n-Hexacosane (C26)	ND		mg/l	0.0010	0.0001	1
n-Heptacosane (C27)	ND		mg/l	0.0010	0.0001	1
n-Octacosane (C28)	ND		mg/l	0.0010	0.0002	1
n-Nonacosane (C29)	ND		mg/l	0.0010	0.0001	1
n-Triacontane (C30)	ND		mg/l	0.0010	0.0001	1
n-Hentriacontane (C31)	ND		mg/l	0.0010	0.0001	1



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

**Lab ID:** L2221332-04  
**Client ID:** MW-3  
**Sample Location:** APPLETON, WI

**Date Collected:** 04/22/22 12:46  
**Date Received:** 04/23/22  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Dotriacontane (C32)	ND		mg/l	0.0010	0.0001	1
n-Tritriacontane (C33)	ND		mg/l	0.0010	0.0001	1
n-Tetatriacontane (C34)	ND		mg/l	0.0010	0.0002	1
n-Pentatriacontane (C35)	ND		mg/l	0.0010	0.0002	1
n-Hexatriacontane (C36)	ND		mg/l	0.0010	0.0001	1
n-Heptatriacontane (C37)	ND		mg/l	0.0010	0.0002	1
n-Octatriacontane (C38)	ND		mg/l	0.0010	0.0002	1
n-Nonatriacontane (C39)	ND		mg/l	0.0010	0.0002	1
n-Tetracontane (C40)	ND		mg/l	0.0010	0.0002	1
Total Petroleum Hydrocarbons (C9-C44)	0.9940		mg/l	0.0327	0.0055	1
Total Saturated Hydrocarbons	0.0067	JB	mg/l	0.0010	0.00004	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	89		50-130
d50-Tetracosane	88		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-04 RE  
 Client ID: MW-3  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 12:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8015D(M)  
 Analytical Date: 05/07/22 04:43  
 Analyst: WR

Extraction Method: EPA 3510C  
 Extraction Date: 05/05/22 04:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Nonane (C9)	ND		mg/l	0.0010	0.0003	1
n-Decane (C10)	0.0009	J	mg/l	0.0010	0.0001	1
n-Undecane (C11)	ND		mg/l	0.0010	0.0001	1
n-Dodecane (C12)	0.001		mg/l	0.0010	0.0001	1
n-Tridecane (C13)	0.0013	J	mg/l	0.0051	0.0009	1
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.0010	0.0001	1
n-Tetradecane (C14)	0.0011		mg/l	0.0010	0.0001	1
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.0010	0.0001	1
n-Pentadecane (C15)	0.0018		mg/l	0.0010	0.0001	1
n-Hexadecane (C16)	0.0002	J	mg/l	0.0010	0.0002	1
Norpristane (1650)	ND		mg/l	0.0010	0.0001	1
n-Heptadecane (C17)	ND		mg/l	0.0010	0.0001	1
Pristane	ND		mg/l	0.0010	0.0002	1
n-Octadecane (C18)	0.0007	JC	mg/l	0.0010	0.0001	1
Phytane	ND		mg/l	0.0010	0.0001	1
n-Nonadecane (C19)	ND		mg/l	0.0010	0.0002	1
n-Eicosane (C20)	ND		mg/l	0.0010	0.0001	1
n-Heneicosane (C21)	0.0002	J	mg/l	0.0010	0.0001	1
n-Docosane (C22)	0.0001	J	mg/l	0.0010	0.00004	1
n-Tricosane (C23)	0.0004	J	mg/l	0.0010	0.0001	1
n-Tetracosane (C24)	ND		mg/l	0.0010	0.0001	1
n-Pentacosane (C25)	ND		mg/l	0.0051	0.0006	1
n-Hexacosane (C26)	ND		mg/l	0.0010	0.0001	1
n-Heptacosane (C27)	ND		mg/l	0.0010	0.0001	1
n-Octacosane (C28)	ND		mg/l	0.0010	0.0002	1
n-Nonacosane (C29)	ND		mg/l	0.0010	0.0001	1
n-Triacontane (C30)	ND		mg/l	0.0010	0.0001	1
n-Hentriacontane (C31)	ND		mg/l	0.0010	0.0001	1

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**SAMPLE RESULTS**

Lab ID: L2221332-04 RE  
 Client ID: MW-3  
 Sample Location: APPLETON, WI

Date Collected: 04/22/22 12:46  
 Date Received: 04/23/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Saturated Hydrocarbons by GC-FID - Mansfield Lab</b>						
n-Dotriacontane (C32)	ND		mg/l	0.0010	0.0001	1
n-Tritriacontane (C33)	ND		mg/l	0.0010	0.0001	1
n-Tetatriacontane (C34)	ND		mg/l	0.0010	0.0002	1
n-Pentatriacontane (C35)	ND		mg/l	0.0010	0.0002	1
n-Hexatriacontane (C36)	ND		mg/l	0.0010	0.0001	1
n-Heptatriacontane (C37)	ND		mg/l	0.0010	0.0002	1
n-Octatriacontane (C38)	ND		mg/l	0.0010	0.0002	1
n-Nonatriacontane (C39)	ND		mg/l	0.0010	0.0002	1
n-Tetracontane (C40)	ND		mg/l	0.0010	0.0002	1
Total Petroleum Hydrocarbons (C9-C44)	0.7190		mg/l	0.0333	0.0056	1
Total Saturated Hydrocarbons	0.0077	J	mg/l	0.0010	0.00004	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	97		50-130
d50-Tetracosane	97		50-130

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8015D(M)  
Analytical Date: 04/29/22 16:42  
Analyst: WR

Extraction Method: EPA 3510C  
Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01-04 Batch: WG1632063-1					
n-Nonane (C9)	ND		mg/l	0.0010	0.0003
n-Decane (C10)	ND		mg/l	0.0010	0.0001
n-Undecane (C11)	ND		mg/l	0.0010	0.0001
n-Dodecane (C12)	ND		mg/l	0.0010	0.0001
n-Tridecane (C13)	ND		mg/l	0.0050	0.0009
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.0010	0.0001
n-Tetradecane (C14)	ND		mg/l	0.0010	0.0001
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.0010	0.0001
n-Pentadecane (C15)	ND		mg/l	0.0010	0.0001
n-Hexadecane (C16)	ND		mg/l	0.0010	0.0001
Norpristane (1650)	ND		mg/l	0.0010	0.0001
n-Heptadecane (C17)	ND		mg/l	0.0010	0.0001
Pristane	ND		mg/l	0.0010	0.0002
n-Octadecane (C18)	0.0008	JC	mg/l	0.0010	0.0001
Phytane	ND		mg/l	0.0010	0.0001
n-Nonadecane (C19)	ND		mg/l	0.0010	0.0002
n-Eicosane (C20)	ND		mg/l	0.0010	0.0001
n-Heneicosane (C21)	ND		mg/l	0.0010	0.0001
n-Docosane (C22)	ND		mg/l	0.0010	0.00004
n-Tricosane (C23)	0.0002	J	mg/l	0.0010	0.0001
n-Tetracosane (C24)	ND		mg/l	0.0010	0.0001
n-Pentacosane (C25)	ND		mg/l	0.0050	0.0006
n-Hexacosane (C26)	ND		mg/l	0.0010	0.0001
n-Heptacosane (C27)	ND		mg/l	0.0010	0.0001
n-Octacosane (C28)	ND		mg/l	0.0010	0.0002
n-Nonacosane (C29)	ND		mg/l	0.0010	0.0001
n-Triacontane (C30)	ND		mg/l	0.0010	0.0001
n-Hentriacontane (C31)	ND		mg/l	0.0010	0.0001
n-Dotriacontane (C32)	ND		mg/l	0.0010	0.0001

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8015D(M)  
Analytical Date: 04/29/22 16:42  
Analyst: WR

Extraction Method: EPA 3510C  
Extraction Date: 04/28/22 10:51

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01-04 Batch: WG1632063-1					
n-Tritriacontane (C33)	ND		mg/l	0.0010	0.0001
n-Tetratriacontane (C34)	ND		mg/l	0.0010	0.0002
n-Pentatriacontane (C35)	ND		mg/l	0.0010	0.0002
n-Hexatriacontane (C36)	ND		mg/l	0.0010	0.0001
n-Heptatriacontane (C37)	ND		mg/l	0.0010	0.0002
n-Octatriacontane (C38)	ND		mg/l	0.0010	0.0002
n-Nonatriacontane (C39)	ND		mg/l	0.0010	0.0002
n-Tetracontane (C40)	ND		mg/l	0.0010	0.0002
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/l	0.0330	0.0056
Total Saturated Hydrocarbons	0.0011	J	mg/l	0.0010	0.00004

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	88		50-130
d50-Tetracosane	86		50-130



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8015D(M)  
Analytical Date: 05/06/22 18:23  
Analyst: WR

Extraction Method: EPA 3510C  
Extraction Date: 05/05/22 04:18

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01-04 Batch: WG1634624-1					
n-Nonane (C9)	ND		mg/l	0.001	0.0003
n-Decane (C10)	ND		mg/l	0.001	0.0001
n-Undecane (C11)	ND		mg/l	0.001	0.0001
n-Dodecane (C12)	ND		mg/l	0.001	0.0001
n-Tridecane (C13)	ND		mg/l	0.005	0.001
2,6,10-Trimethyldodecane (1380)	ND		mg/l	0.001	0.0001
n-Tetradecane (C14)	ND		mg/l	0.001	0.0001
2,6,10-Trimethyltridecane (1470)	ND		mg/l	0.001	0.0001
n-Pentadecane (C15)	ND		mg/l	0.001	0.0001
n-Hexadecane (C16)	ND		mg/l	0.001	0.0001
Norpristane (1650)	ND		mg/l	0.001	0.0001
n-Heptadecane (C17)	ND		mg/l	0.001	0.0001
Pristane	ND		mg/l	0.001	0.0002
n-Octadecane (C18)	0.001	JC	mg/l	0.001	0.0001
Phytane	ND		mg/l	0.001	0.0001
n-Nonadecane (C19)	ND		mg/l	0.001	0.0002
n-Eicosane (C20)	ND		mg/l	0.001	0.0001
n-Heneicosane (C21)	ND		mg/l	0.001	0.0001
n-Docosane (C22)	ND		mg/l	0.001	0.00004
n-Tricosane (C23)	ND		mg/l	0.001	0.0001
n-Tetracosane (C24)	ND		mg/l	0.001	0.0001
n-Pentacosane (C25)	ND		mg/l	0.005	0.001
n-Hexacosane (C26)	ND		mg/l	0.001	0.0001
n-Heptacosane (C27)	ND		mg/l	0.001	0.0001
n-Octacosane (C28)	ND		mg/l	0.001	0.0002
n-Nonacosane (C29)	ND		mg/l	0.001	0.0001
n-Triacontane (C30)	ND		mg/l	0.001	0.0001
n-Hentriacontane (C31)	ND		mg/l	0.001	0.0001
n-Dotriacontane (C32)	ND		mg/l	0.001	0.0001

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8015D(M)  
Analytical Date: 05/06/22 18:23  
Analyst: WR

Extraction Method: EPA 3510C  
Extraction Date: 05/05/22 04:18

Parameter	Result	Qualifier	Units	RL	MDL
Saturated Hydrocarbons by GC-FID - Mansfield Lab for sample(s): 01-04 Batch: WG1634624-1					
n-Tritriacontane (C33)	ND		mg/l	0.001	0.0001
n-Tetratriacontane (C34)	ND		mg/l	0.001	0.0002
n-Pentatriacontane (C35)	ND		mg/l	0.001	0.0002
n-Hexatriacontane (C36)	ND		mg/l	0.001	0.0001
n-Heptatriacontane (C37)	ND		mg/l	0.001	0.0002
n-Octatriacontane (C38)	ND		mg/l	0.001	0.0002
n-Nonatriacontane (C39)	ND		mg/l	0.001	0.0002
n-Tetracontane (C40)	ND		mg/l	0.001	0.0002
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/l	0.033	0.006
Total Saturated Hydrocarbons	0.001	J	mg/l	0.001	0.00004

Surrogate	%Recovery	Qualifier	Acceptance Criteria
ortho-terphenyl	94		50-130
d50-Tetracosane	94		50-130

## Lab Control Sample Analysis Batch Quality Control

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 01-04 Batch: WG1632063-2 WG1632063-3								
Nonane (C9)	42	Q	25	Q	50-130	51	Q	30
n-Decane (C10)	49	Q	28	Q	50-130	55	Q	30
n-Dodecane (C12)	56		36	Q	50-130	43	Q	30
n-Tetradecane (C14)	72		62		50-130	15		30
n-Hexadecane (C16)	89		91		50-130	2		30
n-Octadecane (C18)	96		101		50-130	5		30
n-Nonadecane (C19)	92		93		50-130	1		30
n-Eicosane (C20)	91		92		50-130	1		30
n-Docosane (C22)	92		92		50-130	0		30
n-Tetracosane (C24)	94		95		50-130	1		30
n-Hexacosane (C26)	93		94		50-130	1		30
n-Octacosane (C28)	92		92		50-130	0		30
n-Triacontane (C30)	92		93		50-130	1		30
n-Hexatriacontane (C36)	84		83		50-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	92		92		50-130
d50-Tetracosane	90		90		50-130

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Saturated Hydrocarbons by GC-FID - Mansfield Lab Associated sample(s): 01-04 Batch: WG1634624-2 WG1634624-3								
Nonane (C9)	87		82		50-130	6		30
n-Decane (C10)	90		87		50-130	3		30
n-Dodecane (C12)	91		90		50-130	1		30
n-Tetradecane (C14)	98		97		50-130	1		30
n-Hexadecane (C16)	107		107		50-130	0		30
n-Octadecane (C18)	112		112		50-130	0		30
n-Nonadecane (C19)	101		101		50-130	0		30
n-Eicosane (C20)	102		102		50-130	0		30
n-Docosane (C22)	102		102		50-130	0		30
n-Tetracosane (C24)	108		108		50-130	0		30
n-Hexacosane (C26)	104		104		50-130	0		30
n-Octacosane (C28)	105		104		50-130	1		30
n-Triacontane (C30)	103		102		50-130	1		30
n-Hexatriacontane (C36)	89		89		50-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
ortho-terphenyl	99		99		50-130
d50-Tetracosane	99		98		50-130



**Project Name:** APPLETON MGP**Lab Number:** L2221332**Project Number:** 1940101019**Report Date:** 05/13/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Present/Intact
B	Present/Intact

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2221332-01A	Vial HCl preserved	A	NA		5.3	Y	Present/Intact		A2-PIANO8260(14)
L2221332-01B	Vial HCl preserved	A	NA		5.3	Y	Present/Intact		A2-PIANO8260(14)
L2221332-01C	Vial HCl preserved	A	NA		5.3	Y	Present/Intact		A2-PIANO8260(14)
L2221332-01D	Amber 1000ml unpreserved	A	7	7	5.3	Y	Present/Intact		A2-SHC(7),A2-ALKPAH(7)
L2221332-01E	Amber 1000ml unpreserved	A	7	7	5.3	Y	Present/Intact		A2-SHC(7),A2-ALKPAH(7)
L2221332-01F	Amber 1000ml unpreserved	A	7	7	5.3	Y	Present/Intact		A2-SVOC-8270(7),8270TCL(7),8270TCL-SIM(7)
L2221332-01G	Amber 1000ml unpreserved	A	7	7	5.3	Y	Present/Intact		A2-SVOC-8270(7),8270TCL(7),8270TCL-SIM(7)
L2221332-02A	Vial HCl preserved	A	NA		5.3	Y	Present/Intact		A2-PIANO8260(14)
L2221332-02B	Vial HCl preserved	A	NA		5.3	Y	Present/Intact		A2-PIANO8260(14)
L2221332-02C	Vial HCl preserved	A	NA		5.3	Y	Present/Intact		A2-PIANO8260(14)
L2221332-02D	Amber 1000ml unpreserved	A	7	7	5.3	Y	Present/Intact		A2-SHC(7),A2-ALKPAH(7)
L2221332-02E	Amber 1000ml unpreserved	A	7	7	5.3	Y	Present/Intact		A2-SHC(7),A2-ALKPAH(7)
L2221332-02F	Amber 1000ml unpreserved	A	7	7	5.3	Y	Present/Intact		A2-SVOC-8270(7),8270TCL(7),8270TCL-SIM(7)
L2221332-02G	Amber 1000ml unpreserved	A	7	7	5.3	Y	Present/Intact		A2-SVOC-8270(7),8270TCL(7),8270TCL-SIM(7)
L2221332-03A	Vial HCl preserved	B	NA		3.8	Y	Present/Intact		A2-PIANO8260(14)
L2221332-03B	Vial HCl preserved	B	NA		3.8	Y	Present/Intact		A2-PIANO8260(14)
L2221332-03C	Vial HCl preserved	B	NA		3.8	Y	Present/Intact		A2-PIANO8260(14)
L2221332-03D	Amber 1000ml unpreserved	B	7	7	3.8	Y	Present/Intact		A2-SHC(7),A2-ALKPAH(7)
L2221332-03E	Amber 1000ml unpreserved	B	7	7	3.8	Y	Present/Intact		A2-SHC(7),A2-ALKPAH(7)
L2221332-03F	Amber 1000ml unpreserved	B	7	7	3.8	Y	Present/Intact		A2-SVOC-8270(7),8270TCL(7),8270TCL-SIM(7)



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Serial\_No:**05132212:48  
**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2221332-03G	Amber 1000ml unpreserved	B	7	7	3.8	Y	Present/Intact		A2-SVOC-8270(7),8270TCL(7),8270TCL-SIM(7)
L2221332-04A	Vial HCl preserved	B	NA		3.8	Y	Present/Intact		A2-PIANO8260(14)
L2221332-04B	Vial HCl preserved	B	NA		3.8	Y	Present/Intact		A2-PIANO8260(14)
L2221332-04C	Vial HCl preserved	B	NA		3.8	Y	Present/Intact		A2-PIANO8260(14)
L2221332-04D	Amber 1000ml unpreserved	B	7	7	3.8	Y	Present/Intact		A2-SHC(7),A2-ALKPAH(7)
L2221332-04E	Amber 1000ml unpreserved	B	7	7	3.8	Y	Present/Intact		A2-SHC(7),A2-ALKPAH(7)
L2221332-04F	Amber 1000ml unpreserved	B	7	7	3.8	Y	Present/Intact		A2-SVOC-8270(7),8270TCL(7),8270TCL-SIM(7)
L2221332-04G	Amber 1000ml unpreserved	B	7	7	3.8	Y	Present/Intact		A2-SVOC-8270(7),8270TCL(7),8270TCL-SIM(7)

\*Values in parentheses indicate holding time in days



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)  Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

#### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

#### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

#### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

**Data Qualifiers**

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

**Project Name:** APPLETON MGP  
**Project Number:** 1940101019

**Lab Number:** L2221332  
**Report Date:** 05/13/22

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.





## Certification Information

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The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene

**EPA 625/625.1:** alpha-Terpineol

**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### Mansfield Facility

**SM 2540D:** TSS

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

**EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

**SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

**EPA 522, EPA 537.1.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

---

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/23/22 ALPHA Job #: C2221332

8 Walkup Drive  
Westboro, MA 01581  
Tel: 508-898-9220

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-822-9300

## Project Information

Project Name: APPLETON MGP

## Report Information - Data Deliverables

ADEX  EMAIL  Same as Client info PO #:

Project Location: APPLETON, WI

## Regulatory Requirements & Project Information Requirements

Yes  No MA MCP Analytical Methods  Yes  No CT RCP Analytical Methods  
 Yes  No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
 Yes  No GW1 Standards (Info Required for Metals & EPH with Targets)  
 Yes  No NPDES RGP  
 Other State /Fed Program Criteria

Project #: 1940101019

Project Manager: ANDREW CAWRISE

ALPHA Quote #:

## Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)

Date Due:

QC: KTA

## Client Information

Client: RAMBOLL

Address: 234 W FLORIDA ST 5TH FLOOR

MILWAUKEE, WI 53204

Phone: 414 837 3645

Email: ANDREW.CAWRISE@RAMBOLL.COM

Additional Project Information:  
 CUSTODY SEAL: 422-001  
 422-002  
 2 CODERS

ANALYSIS	Criteria	TOTAL # BOTTLES
VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 924.2		
SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH		
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15		
METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8		
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> PPT13		
VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only		
PCB <input type="checkbox"/> PEST		
TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint		
PIANO 8260B		
SVOC 8270D		
ALKYLATED PAH 8270D		
SAT HYDROCARBONS 8015D (m)		
	SAMPLE INFO	
	Filtration	
	<input type="checkbox"/> Field	
	<input type="checkbox"/> Lab to do	
	Preservation	
	<input type="checkbox"/> Lab to do	
	Sample Comments	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
21332-01	MW-24	4-21-22	1505	GW	DGR
02	MW-12 R	↓	1718	↓	↓
03	MW-22	4-22-22	746	↓	↓
04	MW-3	↓	1246	↓	↓

**Container Type**  
 P= Plastic  
 A= Amber glass  
 V= Vial  
 G= Glass  
 B= Bacteria cup  
 C= Cube  
 O= Other  
 E= Encore  
 D= BOD Bottle

**Preservative**  
 A= None  
 B= HCl  
 C= HNO<sub>3</sub>  
 D= H<sub>2</sub>SO<sub>4</sub>  
 E= NaOH  
 F= MeOH  
 G= NaHSO<sub>4</sub>  
 H= Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub>  
 I= Ascorbic Acid  
 J= NH<sub>4</sub>Cl  
 K= Zn Acetate  
 O= Other

Container Type: VAAA  
 Preservative: BAAA

Relinquished By: Andrew Cawrise / RAMBOLL Date/Time: 1800 4-22-22  
 Received By: FEDEX / C. Chean Date/Time: 4-22-22 1800

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
 FORM NO: 01-01 (rev. 12-Mar-2012)

Part # 156297-435 RRDW2 EXP 04/22

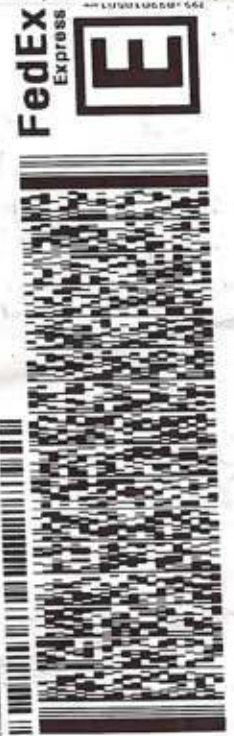
SHIP DATE: 22APR22  
ACTWGT: 52.25 LB  
CAD: 6994541/SSE2300  
DIMS: 25x14x15 IN  
BILL THIRD PARTY

ORIGIN ID: MKEA (262) 573-6315  
NATURAL RESOURCE TECH INC  
234 W FLORIDA ST  
MILWAUKEE, WI 53204  
UNITED STATES US

TO  
ALPHA ANALYTICAL INC  
ALPHA ANALYTICAL INC  
8 WALKUP DR

WESTBOROUGH MA 01581

(508) 898-9220 REF: DEPT: 1901 PG1



**SD**

FedEx® Saturday Delivery

SATURDAY 12:00P  
PRIORITY OVERNIGHT  
AHS  
01581  
MA-US BOS

1 of 2  
TRK# 2723 2783 7189  
0201  
## MASTER ##  
**XO BBFA**





**CUSTODY SEAL**  
 DATE 4-27-02 Debra R  
 SIGNATURE 4.22.22  
 Quality Environmental Containers  
 800-255-3950 • www.qecusa.com

**CUSTODY SEAL**  
 DATE 4-22-02 Debra R  
 SIGNATURE 4.22.22  
 Quality Environmental Containers  
 800-255-3950 • www.qecusa.com

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**CUSTODY SEAL**  
 DATE 4-22-02 Debra R  
 SIGNATURE 4.22.22  
 Quality Environmental Containers  
 800-255-350 • www.qecusa.com



# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/23/22

ALPHA Job #: L2221332

8 Walkup Drive  
Westboro, MA 01581  
Tel: 508-898-9220

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-822-9300

### Project Information

Project Name: APPLETON MGP

Project Location: APPLETON, WI

Project #: 1940101019

Project Manager: ANDREW CAWRISE

ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)

Date Due:

QC: KTA

### Report Information - Data Deliverables

ADEX  EMAIL

### Billing Information

Same as Client info PO #:

### Client Information

Client: RAMBOLL

Address: 234 W FLORIDA ST 5TH FLOOR

MILWAUKEE, WI 53204

Phone: 414 837 3645

Email: ANDREW.CAWRISE@RAMBOLL.COM

Additional Project Information:  
CUSTODY SEAL: 422-001  
422-002  
2 CODERS

### Regulatory Requirements & Project Information Requirements

Yes  No MA MCP Analytical Methods  Yes  No CT RCP Analytical Methods  
 Yes  No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
 Yes  No GW1 Standards (Info Required for Metals & EPH with Targets)  
 Yes  No NPDES RGP  
 Other State /Fed Program

ANALYSIS	Criteria		SAMPLE INFO	TOTAL # BOTTLES
	Filtration	Preservation		
VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 924.2	<input type="checkbox"/> Field	<input type="checkbox"/> Lab to do		
SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	<input type="checkbox"/> Lab to do	<input type="checkbox"/> Lab to do		
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15				
METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8				
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only				
VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only				
PCB: <input type="checkbox"/> PEST				
TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint				
PIANO 8260B				
SVOC 8270D				
ALKYLATED PAH 8270D SIM/M				
SAT HYDROCARBONS 8015D (m)				

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
21332-01	MW-24	4-21-22	1505	GW	DGR
02	MW-12 R	↓	1718	↓	↓
03	MW-22	4-22-22	746	↓	↓
04	MW-3	↓	1246	↓	↓

Container Type	Preservative
P= Plastic	A= None
A= Amber glass	B= HCl
V= Vial	C= HNO <sub>3</sub>
G= Glass	D= H <sub>2</sub> SO <sub>4</sub>
B= Bacteria cup	E= NaOH
C= Cube	F= MeOH
O= Other	G= NaHSO <sub>4</sub>
E= Encore	H= Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>
D= BOD Bottle	I= Ascorbic Acid
	J= NH <sub>4</sub> Cl
	K= Zn Acetate
	O= Other

Container Type	Preservative
VAAA	BAAA

Relinquished By:	Date/Time	Received By:	Date/Time
Andrew / RAMBOLL	1800 4-22-22	FEDER	4-22-22 1800
		C. Chean	4/22/22 1030

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.  
FORM NO: 01-01 (rev. 12-Mar-2012)



Part # 156297-435 RRDW2 EXP 04/22

SHIP DATE: 22APR22  
ACTWGT: 52.25 LB  
CAD: 6994541/SSE2300  
DIMS: 25x14x15 IN  
BILL THIRD PARTY

ORIGIN ID: MKEA (262) 573-6315  
NATURAL RESOURCE TECH INC  
234 W FLORIDA ST  
MILWAUKEE, WI 53204  
UNITED STATES US

TO  
ALPHA ANALYTICAL INC  
ALPHA ANALYTICAL INC  
8 WALKUP DR

WESTBOROUGH MA 01581

(508) 898-9220 REF: DEPT: 1901 PG1

FedEx Express



SATURDAY 12:00P  
PRIORITY OVERNIGHT  
AHS  
01581  
MA-US BOS

1 of 2  
TRK# 2723 2783 7189  
0201  
## MASTER ##  
**XO BBFA**



**SD**

FedEx® Saturday Delivery

**CUSTODY SEAL**

DATE

SIGNATURE

422-002 *[Signature]* 4.22.22

Quality Environmental Containers  
800-255-3950 • www.qecusa.com

**CUSTODY SEAL**

DATE

SIGNATURE

422-001 *[Signature]* 4.22.22

Quality Environmental Containers  
800-255-3950 • www.qecusa.com

**CUSTODY SEAL**

DATE

SIGNATURE

422-002 *[Signature]* 4.22.22

Quality Environmental Containers  
800-255-3950 • www.qecusa.com

**CUSTODY SEAL**

DATE

SIGNATURE

422-001 *[Signature]* 4.22.22

Quality Environmental Containers  
800-255-350 • www.qecusa.com

**APPENDIX D**  
**O&M FORM 4400-194**

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Department of Natural Resources  
PO Box 7921, Madison WI 53707-7921  
[dnr.wi.gov](http://dnr.wi.gov)

Form 4400-194 (R 07/19)

Page 1 of 29

**GENERAL INSTRUCTIONS, PURPOSE AND APPLICABILITY OF THIS FORM:**

Completion of the applicable portions of this form is required under Wis. Admin. Code § NR 724.13(3). Failure to submit this form as required is a violation of that rule section and is subject to the penalties in Wis. Stats. § 292.99. This form must be submitted every six months for remediation projects that report operation and maintenance progress, in accordance with Wis. Admin. Code §. NR 724.13(3). A narrative report or letter containing the equivalent information required in this form may be submitted in lieu of the actual form. Submittal of this form is not a substitute for reporting required by department programs such as Waste Water or Air Management.

**Notes:**

1. Long-term monitoring results submitted in accordance with Wis. Admin. Code § NR 724.17(3) are required to be submitted within 10 business days of receiving sampling results and are not required to be submitted using this form. However, portions of this form require monitoring data summary information that may be based on information previously submitted in accordance with that section of code.
2. Responsible parties should check with the department Project Manager assigned to the site to determine if this form is required to be submitted at sites responded to under the Federal Comprehensive Environmental Response and Compensation Act (commonly known as Superfund) or an equivalent state-lead response.
3. Responsible parties should check with the department Project Manager assigned to the site to determine if any of the information required in this form may be omitted or changed and should obtain prior written approval for any omissions or changes.
4. Responsible parties are required to report separately on a semi-annual basis under Wis. Admin. Code § NR 700.11(1). Reporting under that provision is through an internet-based form. More information can be found at: <http://dnr.wi.gov/topic/Brownfields/documents/regs/NR700progreport.pdf>.
5. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by Remediation and Redevelopment Program. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (Wis. Stats. §§ 19.31–19.39).

**Section GI - General Site Information**

**A. General Information**

1. Site name

Appleton City (Coal Tar), aka Appleton MGP

2. Reporting period from:	10/8/2021	To:	12/31/2022	Days in period:	449
3. Regulatory agency (enter DNR, DATCP and/or other)			4. BRRTS ID No. (2 digit program-2 digit county-6 digit site specific)		
DNR			02-45-000042		

5. Site location

Region	County	Address			
Northeast Region	Outagamie	337 Water Street			
Municipality name <input type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village		Township	Range <input type="radio"/> E <input type="radio"/> W	Section	¼ <input type="radio"/> ¼ <input type="radio"/>
City of Appleton		21 N	17	35	

6. Responsible party

Name  
We Energies

Mailing address  
333 W. Everett, Street, A231

Phone number  
(414) 221-2156

7. Consultant

Select if the following information has changed since the last submittal

Company name  
Ramboll

Mailing address  
234 W Florida St, Milwaukee, WI 53204

Phone number  
(414) 837-3607

8. Contaminants

Benzene, Naphthalene

9. Soil types (USCS or USDA)

Fill: solidified soil (cement), Native: CL,ML,SP,GW,GP,Dolomite

10. Hydraulic conductivity(cm/sec):

2E-7 to 9E-10 cm/s (solidified soil), 1E-3 to 1E-2 cm/s (till 0.003ft/yr (solidified soil), 50 ft/yr (lower till)

11. Average linear velocity of groundwater (ft/yr)

Site name: Appleton City (Coal Tar), aka Appleton MGP

Reporting period from: 10/08/2021 To: 12/31/2022

Days in period: 449

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 07/19)

Page 2 of 29

12. If soil is treated ex situ, is the treatment location off site?  Yes  No

If yes, give location: Region

County

Municipality name  City  Town  Village

Township

Range

E

Section

$\frac{1}{4}$

$\frac{1}{4}$

$\frac{1}{4}$

N

W

### B. Remediation Method

Only submit sections that apply to an individual site. Check all that apply:

- Groundwater extraction (submit a completed Section GW-1).
- Free product recovery (submit a completed Section GW-1).
- In situ air sparging (submit a completed Section GW-2).
- Groundwater natural attenuation (submit a completed Section GW-3).
- Other groundwater remediation method (submit a completed Section GW-4).
- Soil venting (including soil vapor extraction building venting and bioventing submit a completed Section IS-1).
- Soil natural attenuation (submit a completed Section IS-2).
- Other in situ soil remediation method (submit a completed Section IS-3).
- Biopiles (submit a completed Section ES-1).
- Landspreading/thinspreading of petroleum contaminated soil (submit a completed Section ES-2).
- Other ex situ remediation method (submit a completed Section ES-3).
- Site is a landfill (submit a completed Section LF-1).

### C. General Effectiveness Evaluation for All Active Systems

If the remediation is active (not natural attenuation), complete this subsection.

1. Is the system operating at design rates and specifications?  Yes  No

If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.

2. Are modifications to the system warranted to improve effectiveness  Yes  No

If yes, explain:

3. Is natural attenuation an effective low cost option at this time?  Yes  No

4. Is closure sampling warranted at this time?  Yes  No

5. Are there any modifications that can be made to the remediation to improve cost effectiveness?  Yes  No

If yes, explain:



Site name: Appleton City (Coal Tar), aka Appleton MGP

Reporting period from: 10/08/2021 To: 12/31/2022

Days in period: 449

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 07/19)

Page 3 of 29

### D. Economic and Cost Data to Date

- Total investigation cost: \$1,340,000.00
- Implementation costs (design, capital and installation costs, excluding investigation costs): \$10,000,000.00
- Total costs during the previous reporting period: \$33,000.00
- Total costs during this reporting period: \$27,000
- Total anticipated costs for the next reporting period: \$35,000.00
- Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above?  Yes  No  
If yes, explain:


7. If closure is anticipated within 12 months, estimated costs for project closeout: \_\_\_\_\_

### E. Name(s), Signature(s) and Date of Person(s) Submitting Form

Legibly print name, date and sign. Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form for sites with any ongoing active remediation, monitoring or an investigation. Other persons may sign this form for sites with no response activities during the six month reporting period.


#### Registered Professional Engineers:

I hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Jay F. Karls PhD PE	Managing Engineer
Signature 	Date
	2/14/2023

#### Hydrogeologists:

I hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Brian G. Hennings PG	Managing Hydrogeologist
Signature 	Date
	2/9/2023

#### Scientists:

I hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Signature	Date

#### Other Persons:

Print name	Title
Signature	Date

Site name: Appleton City (Coal Tar), aka Appleton MGP

Reporting period from: 10/08/2021 To: 12/31/2022

Days in period: 449

# Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 07/19)

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**Professional Seal(s), if applicable:**



Site name: Appleton City (Coal Tar), aka Appleton MGP

Reporting period from: 10/08/2021 To: 12/31/2022

Days in period: 449

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 07/19)

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### Section GW-1, Groundwater Pump and Treat Systems and Free Product Recovery Systems

#### A. Groundwater Extraction System Operation:

1. Total number of groundwater extraction wells or trenches available: \_\_\_\_\_ and the number in use during period: \_\_\_\_\_

2. Number of days of operation (only list the number of days the system actually operated, if unknown explain: \_\_\_\_\_)

3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain: \_\_\_\_\_

4. Quantity of groundwater extracted during this time period: \_\_\_\_\_ gallons

5. Average groundwater extraction rate: \_\_\_\_\_ gpm

6. Quantity of dissolved phase contaminants removed during this time period in pounds: \_\_\_\_\_ lbs

#### B. Free Product Recovery System Operation

1. Is free product (nonaqueous phase liquid) being recovered at this site?  Yes  No

If yes, explain: \_\_\_\_\_

2. Quantity of free product extracted during this time period (enter none if none): \_\_\_\_\_ gallons

3. Average free product extraction rate: \_\_\_\_\_ gpm

#### C. System Effectiveness Evaluation

1. Is a contaminated groundwater plume fully contained in the capture zone?  Yes  No

If no, explain: \_\_\_\_\_

2. If free product is present, is the free product fully contained in capture zone?  Yes  No

If no, explain: \_\_\_\_\_

3. If free product is present in any wells at the site, but free product was not recovered during reporting period, explain: \_\_\_\_\_

4. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in C.4.a.

a. Contaminant: \_\_\_\_\_

b. Percent reduction necessary to reach ch. NR 140 ES and PAL: \_\_\_\_\_ %

c. Maximum contaminant concentration level in any monitoring well of that contaminant: \_\_\_\_\_ µg/L

d. Maximum contaminant concentration level in any extraction well of that contaminant: \_\_\_\_\_ µg/L

Site name: Appleton City (Coal Tar), aka Appleton MGP

Reporting period from: 10/08/2021 To: 12/31/2022

Days in period: 449

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

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- e. If the maximum concentration in a monitoring well is more than one order of magnitude above the concentration measured in an extraction well, explain why the extracted groundwater contamination levels are significantly less than the levels at other locations within the aquifer.

### D. Additional Attachments

Attach the following to this form:

- Most recent report to the DNR Wastewater Program, if applicable.
- Groundwater contour map with capture zone indicated.
- Groundwater contaminant distribution map (may be combined with contour map).
- Graph of cumulative contaminant removal, if both free product recovery and ground water extraction are used, provide separate graphs.
- Time versus groundwater contaminant concentration graphs for the contaminant listed in C.4.a. (above), as follows:
  - Graph of contaminant concentrations versus time for each extraction well in use during the period.
  - Graph of contaminant concentrations versus time for the monitoring well with the greatest level of contamination.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- System operational data table.

Site name: Appleton City (Coal Tar), aka Appleton MGP

Reporting period from: 10/08/2021 To: 12/31/2022

Days in period: 449

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 07/19)

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### Section GW-2, In Situ Air Sparging Systems

#### A. In Situ Air Sparging System Operation

1. Number of air injection wells at the site and the number actually in use during the period: \_\_\_\_\_
2. Number of days of operation (only list the number of days the system actually operated, if unknown explain): \_\_\_\_\_
3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain: \_\_\_\_\_

#### B. System Effectiveness Evaluation

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in B.1.a.
  - a. Contaminant: \_\_\_\_\_
  - b. Percent reduction necessary to reach ch. NR 140 ES and PAL: \_\_\_\_\_ %
  - c. Maximum contaminant concentration level in any monitoring well: \_\_\_\_\_ µg/L
2. Is there any evidence that air is short circuiting through natural or man-made pathways?  Yes  No  
If yes, explain: \_\_\_\_\_
3. Is the size of the plume:  Increasing  Stabalized  Decreasing ?  
If increasing, explain: \_\_\_\_\_

#### C. Additional Attachments

Attach the following to this form:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Site map with all air injection wells and groundwater monitoring points.
- Graph of contaminant concentrations versus time for the contaminant listed in B.1.a. (above) for the monitoring point with the greatest level of contamination.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- System operational data table.



Site name: Appleton City (Coal Tar), aka Appleton MGP

Reporting period from: 01/01/2020 To: 10/08/2021

Days in period: 646

## Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 07/19)

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### Section GW-3, Natural Attenuation (Passive Bioremediation) in Groundwater

#### A. Effectiveness Evaluation

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in A.1.a

a. Contaminant: Benzene-Free product observed in 3 wells, see attached Annal Report Section 3.0 GW Quality

b. Percent reduction necessary to reach ch. NR 140 ES and PAL: 99.97 %

c. Maximum contaminant concentration level in any monitoring well of that contaminant: 2,480  $\mu\text{g/L}$

2. Aquifer parameters:

a. Hydraulic conductivity: 0.0033 cm/sec

b. Groundwater average linear velocity: 50 ft/yr

3. Is there a downgradient monitoring well that meets ch. NR 140 standards?  Yes  No

4. Based on water chemistry results, is the plume:  Expanding  Stabalized  Contracting ?

5. If the answer in 4. (above) is "expanding," is natural attenuation still the best option?  Yes  No

If yes, explain:

6. Biodegradation parameters:

a. Upgradient (or other site specific background) DO level: 140  $\mu\text{g/L}$

b. DO levels in the part of the plume that is most heavily contaminated 40  $\mu\text{g/L}$

7. Is site closure a viable option within 12 months from the date of this form?  Yes

8. Are there any modifications that can improve cost effectiveness?  Yes  No

If yes, explain:

9. Have groundwater table fluctuations changed the contaminant level trends over time?  Yes  No

If yes, explain:

localized variable flow affects individual wells, site-wide trends are stable to decreasing

10. Has the direction of groundwater flow changed during the reporting period?  Yes  No

If yes, approximate change in degrees: \_\_\_\_\_

#### B. Additional Attachments

Attach the following:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Graph of contaminant concentrations versus time for the contaminant listed in A.1.a. (above) for the monitoring point with the greatest level of contamination.

Note: This is the minimum required graph; however, it is recommended that multiple time versus contamination concentration graphs as described in the instructions on page 24 for Natural Attenuation of Groundwater be submitted.

- Graph of contaminant concentrations versus distance.
- Groundwater contaminant chemistry table.
- Groundwater biological parameters.
- Groundwater elevations table.

**APPENDIX E  
BENZENE AND NAPHTHALENE GROUNDWATER TRENDS  
SUMMARY**

**APPENDIX E. BENZENE AND NAPHTHALENE GROUNDWATER TRENDS**

2022 ANNUAL REPORT

WE ENERGIES APPLETON FORMER MANUFACTURED GAS PLANT SITE

APPLETON, WI

Area	Well Location	Well	Log <sub>10</sub> [Benzene] vs. Time				Log <sub>10</sub> [Naphthalene] vs. Time				Log <sub>10</sub> [Benzene] vs. Groundwater Elevation		Log <sub>10</sub> [Naphthalene] vs. Groundwater Elevation	
			Long-Term R <sup>2</sup> (coefficient of determination)	Long-Term General Trend	Short-Term R <sup>2</sup> (coefficient of determination)	Short-Term General Trend	Long-Term R <sup>2</sup> (coefficient of determination)	Long-Term General Trend	Short-Term R <sup>2</sup> (coefficient of determination)	Short-Term General Trend	Long-Term R <sup>2</sup>	Short-Term R <sup>2</sup>	Long-Term R <sup>2</sup>	Short-Term R <sup>2</sup>
Area 1	Lower Till	MW-02R	0.2487	Flat	0.2826	Increasing	0.3548	Decreasing	0.0197	Increasing	0.1261	0.4237	0.0683	0.1055
		MW-12R	0.2888	Flat	0.3588	Increasing	0.3327	Increasing	0.2664	Increasing	0.2253	0.7995	0.1328	0.9274
		MW-13R	0.0565	Flat	0.3564	Increasing	0.4711	Flat	0.4061	Increasing	0.0168	0.0200	0.0730	0.0008
		MW-19	0.1283	Decreasing	0.1340	Decreasing	0.5073	Decreasing	0.3309	Decreasing	0.0137	0.1495	0.0028	0.0039
		MW-20	0.0650	Flat	0.8388	Decreasing	0.0211	Flat	0.8460	Decreasing	0.0047	0.0688	0.0101	0.2563
		MW-21	0.8347	Decreasing	0.3578	Decreasing	0.0208	Flat	0.8319	Flat	0.2919	0.5020	0.0003	0.2306
		MW-22	0.7652	Flat	0.7768	Decreasing	0.0336	Flat	0.1295	Flat	0.1398	0.0128	0.0114	0.0551
		MW-24	0.6131	Decreasing*	ND		ND		ND		0.5790	NA	NA	NA
	MW-25	0.0116	Flat	0.5373	Decreasing	0.1331	Increasing	0.8074	Decreasing	0.0975	0.4384	0.0051	0.1537	
	Bedrock	PZ-20B	0.7170	Decreasing	0.0020	Flat	0.0232	Flat	0.1197	Decreasing	0.6675	0.1180	0.0231	0.0891
PZ-21B		0.6790	Decreasing	0.1437	Flat	0.1057	Flat	0.2489	Decreasing	0.4936	0.0318	0.0493	0.2292	
PZ-22B		0.8020	Decreasing	0.4503	Flat	0.1169	Flat	0.5333	Flat	0.6627	0.0043	0.1084	0.2169	
Area 2	Water Table	MW-26	0.2481	Decreasing	0.2125	Decreasing	0.1828	Decreasing	0.0614	Decreasing	0.0050	0.0000	0.0000	0.0200
		MW-27	0.3653	Decreasing	0.5268	Decreasing	0.3539	Decreasing	0.4757	Decreasing	0.0720	0.0230	0.0923	0.0340
	Upper Weathered Bedrock	PZ-23	0.1616	Decreasing	0.5210	Decreasing	0.2648	Decreasing	0.5531	Decreasing	0.0254	0.0074	0.0619	0.0265
		PZ-27	0.4485	Decreasing	0.5134	Decreasing	0.4154	Decreasing	0.6563	Decreasing	0.0134	0.1074	0.0526	0.0095

[O: EDP 2/16/17, C/U: ANS 2/17/17, C: EDP 2/21/17 ][U: KLT 1/11/18,C:EDP 4/29/20], [U:KJS 8/11/21, C: ABB 8/19/21], [U: KJS 7/28/22, C: ]

**Notes:**

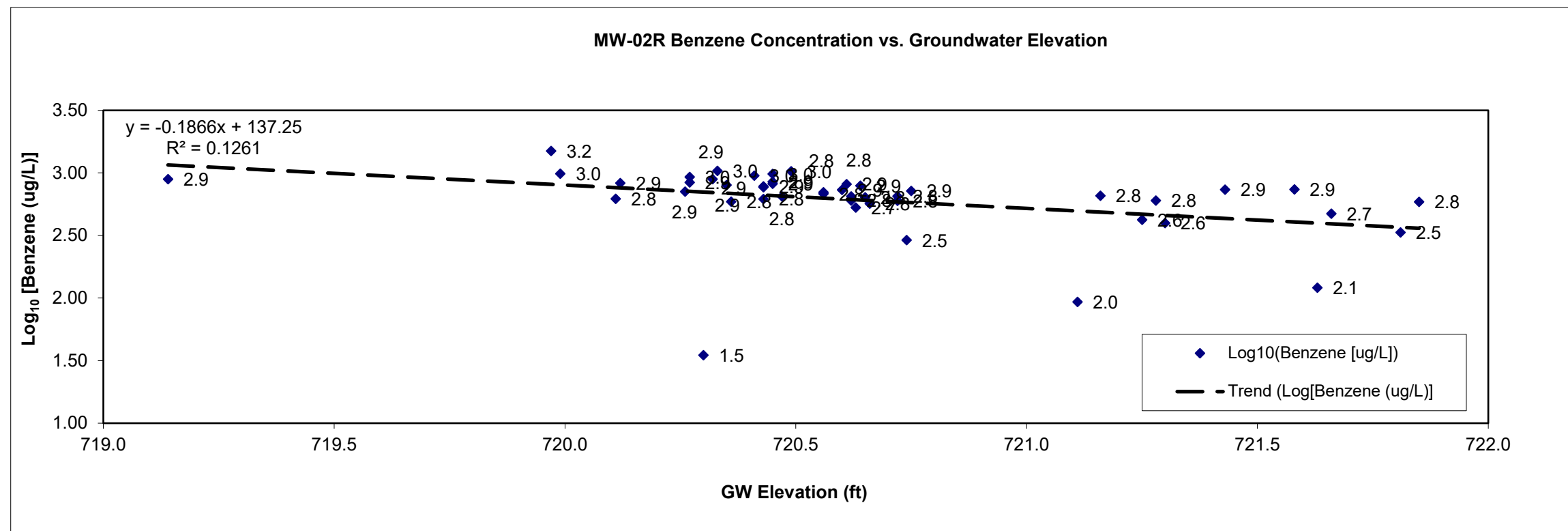
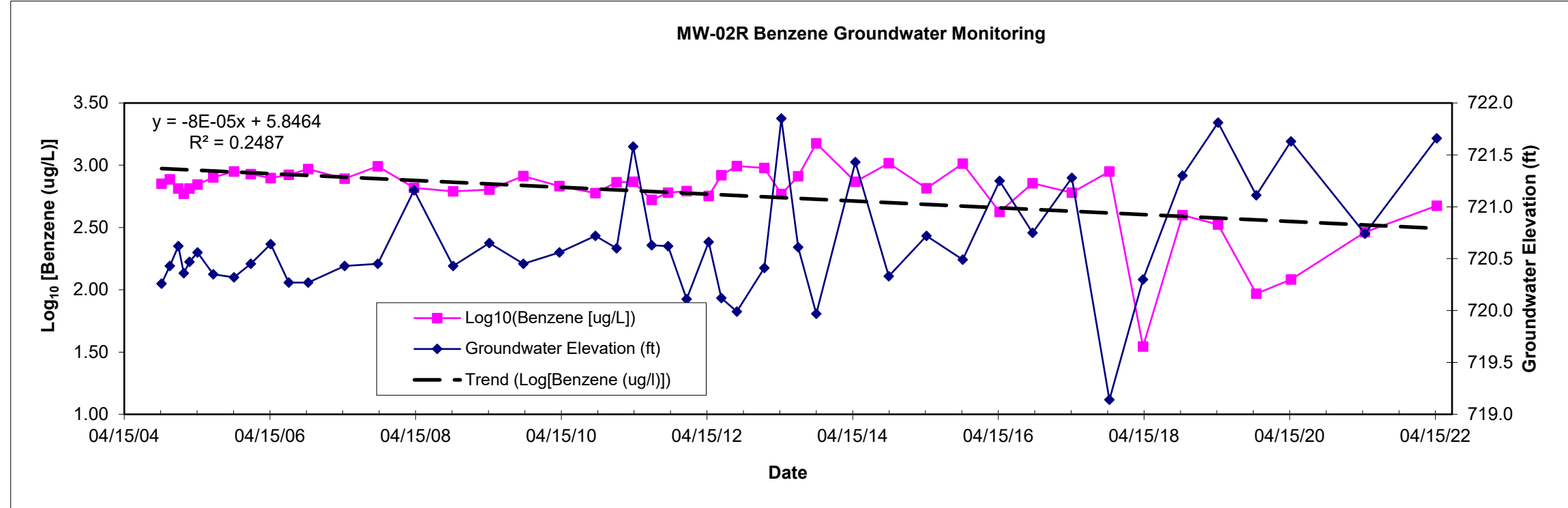
1. Non-detect results were included in the regression plots using the full reporting limit (e.g., <0.41 = 0.41)
2. Long-term trends include all sample data collected for the duration of the wells installation.
3. Short-term trends include sample data from the last five years (from the beginning of 2018 through the end of 2022).
4. If -0.0001 < trendline slope < 0.0001 general trend is considered Stable.
5. If trendline slope < -0.0001 general trend is considered Decreasing.
6. If trendline slope > 0.0001 general trend is considered Increasing.

\* = greater than 50% non-detect results

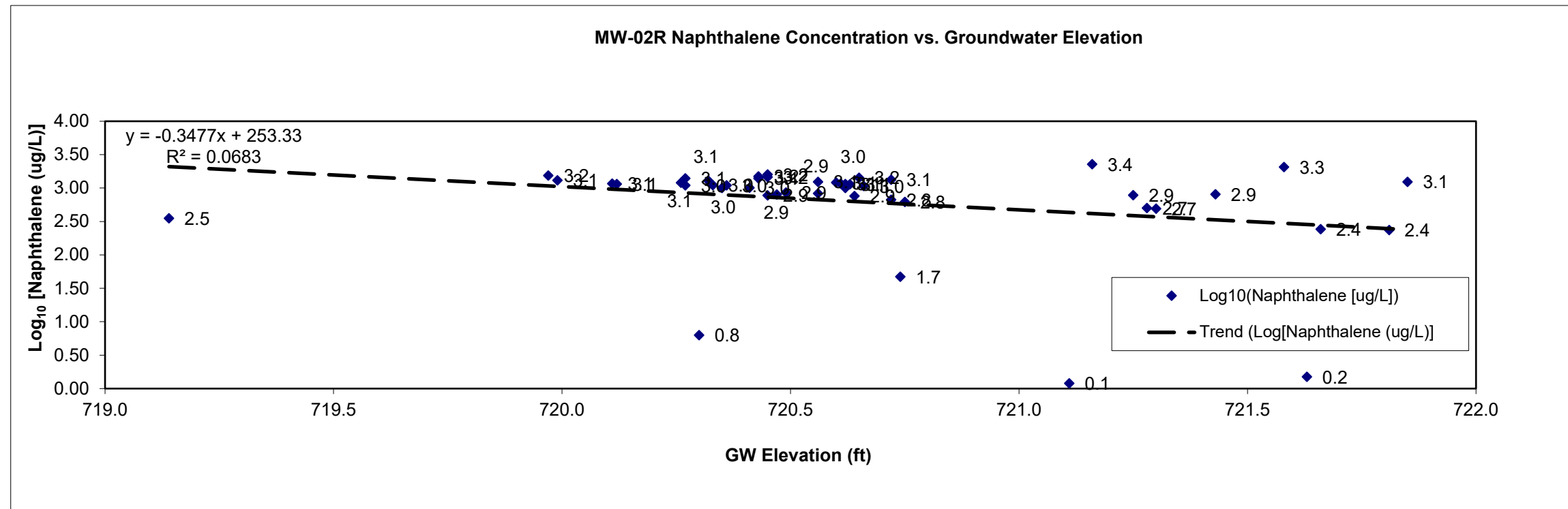
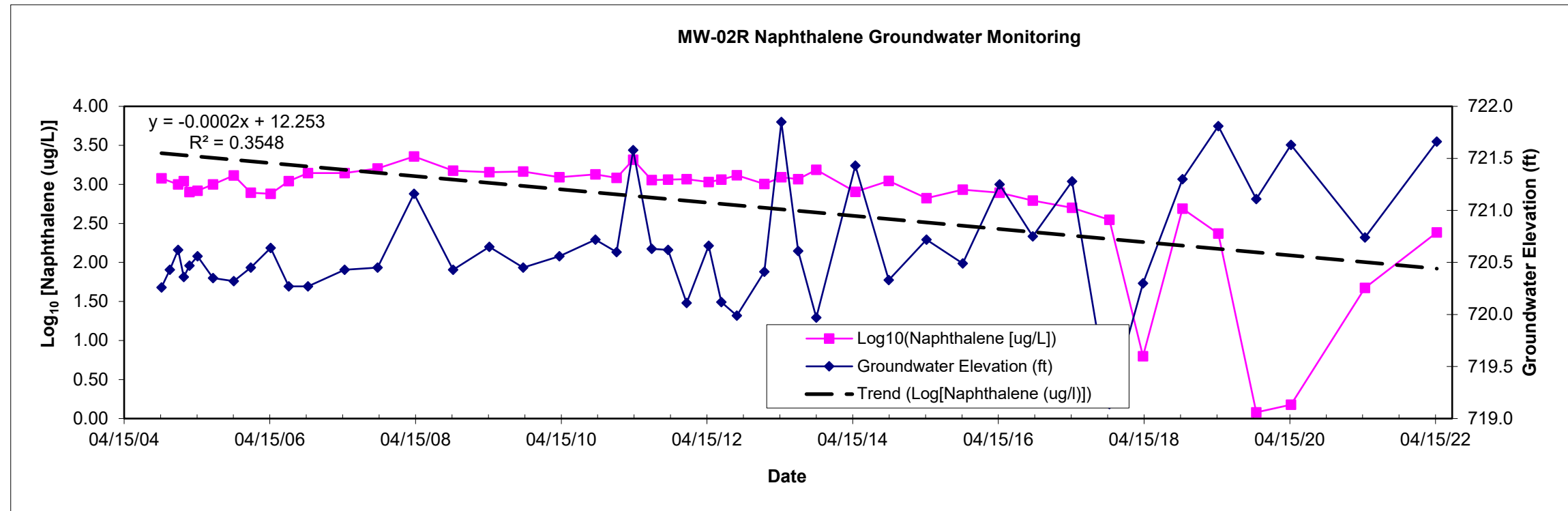
NA = not applicable, contaminant vs. groundwater R<sup>2</sup> listed as NA if all data is ND

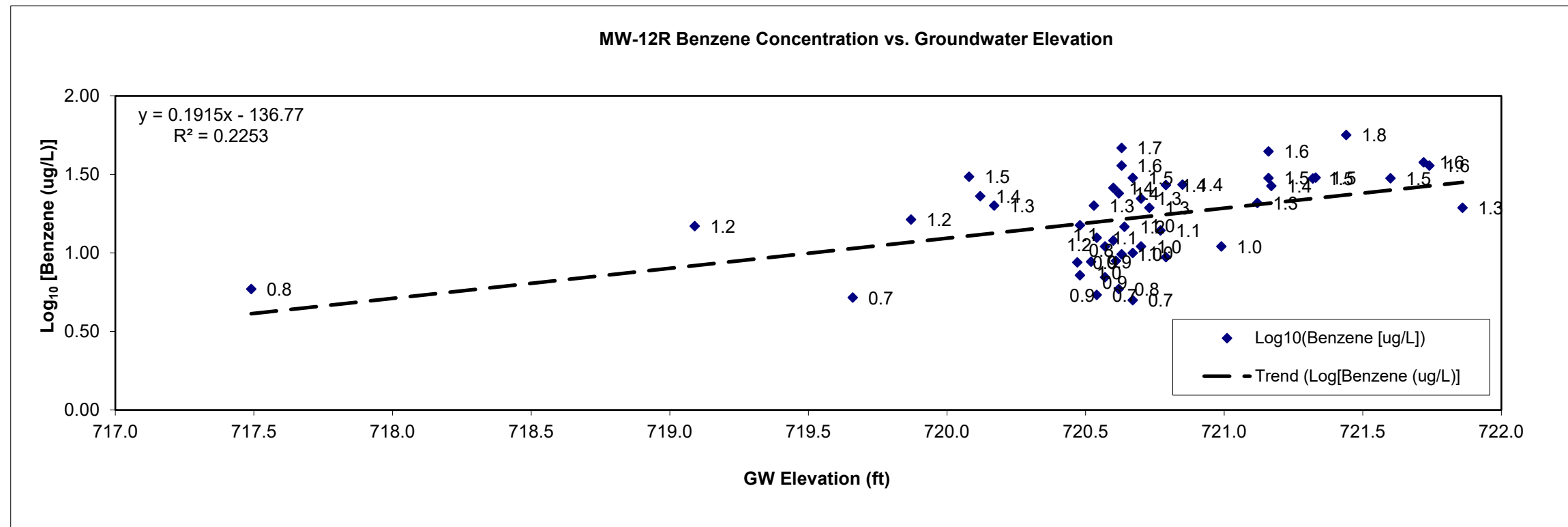
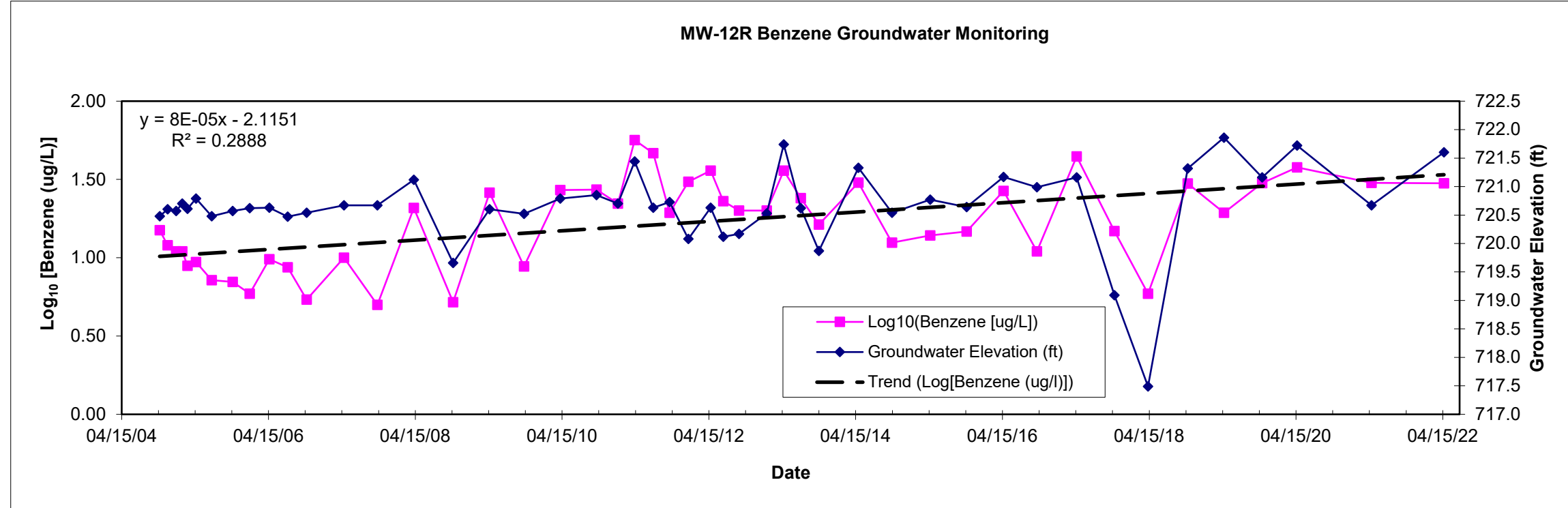
ND = all data is non-detect

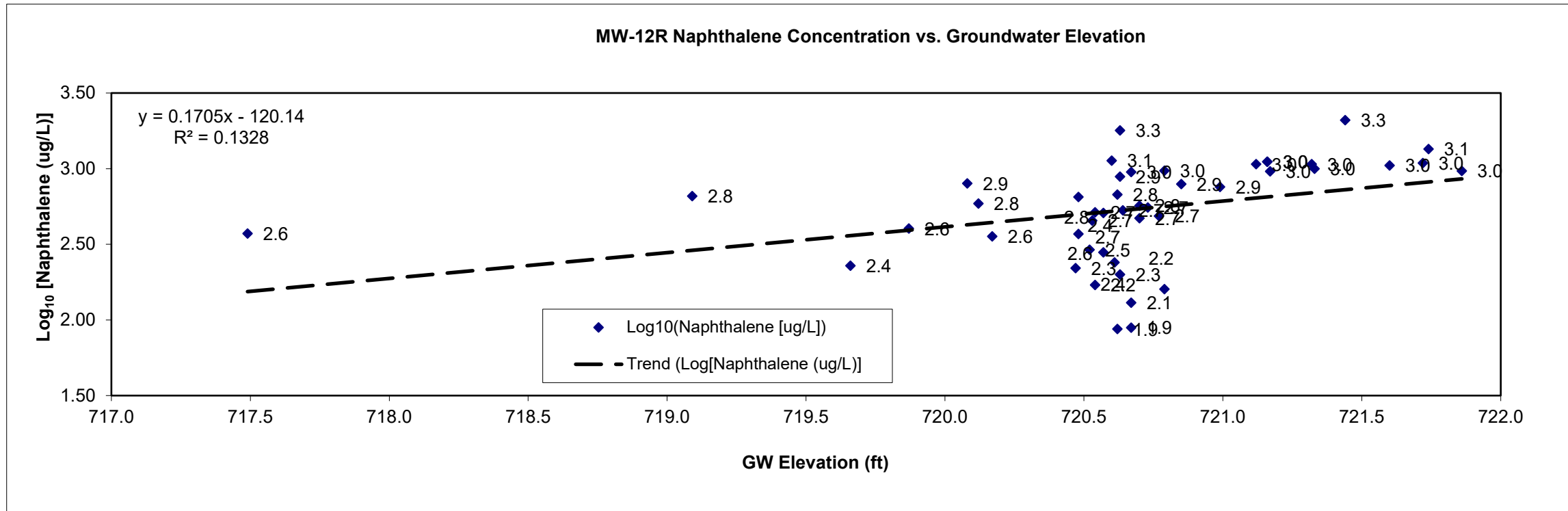
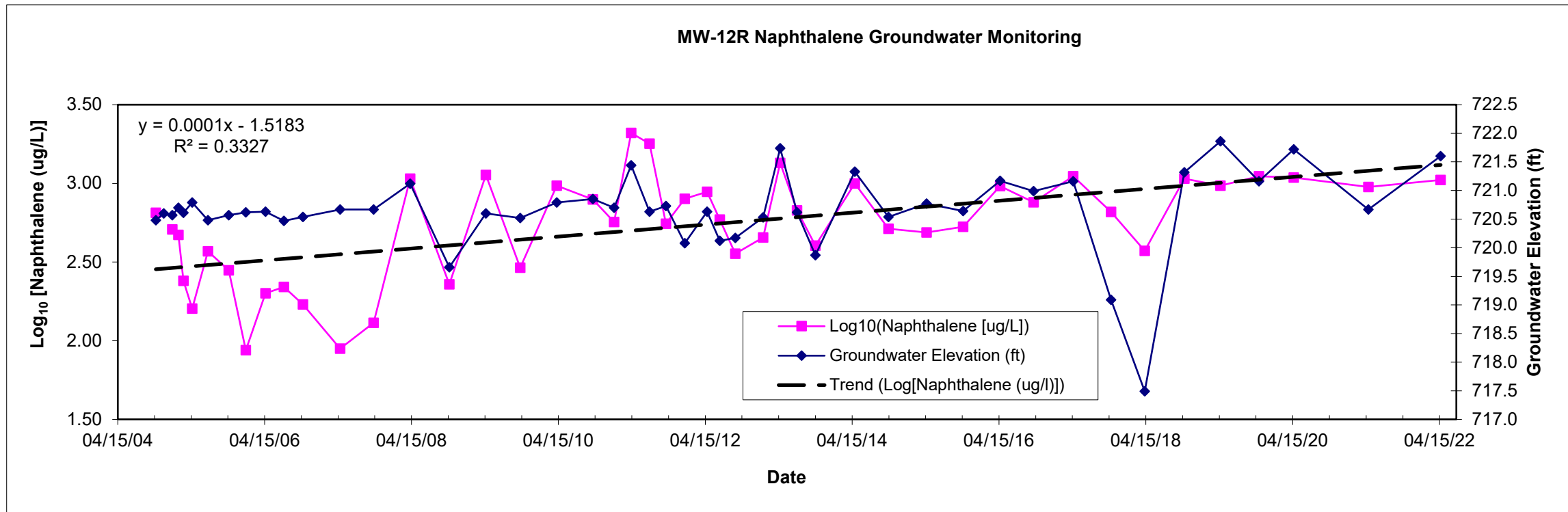
**APPENDIX E1  
LONG-TERM TREND GRAPHS**

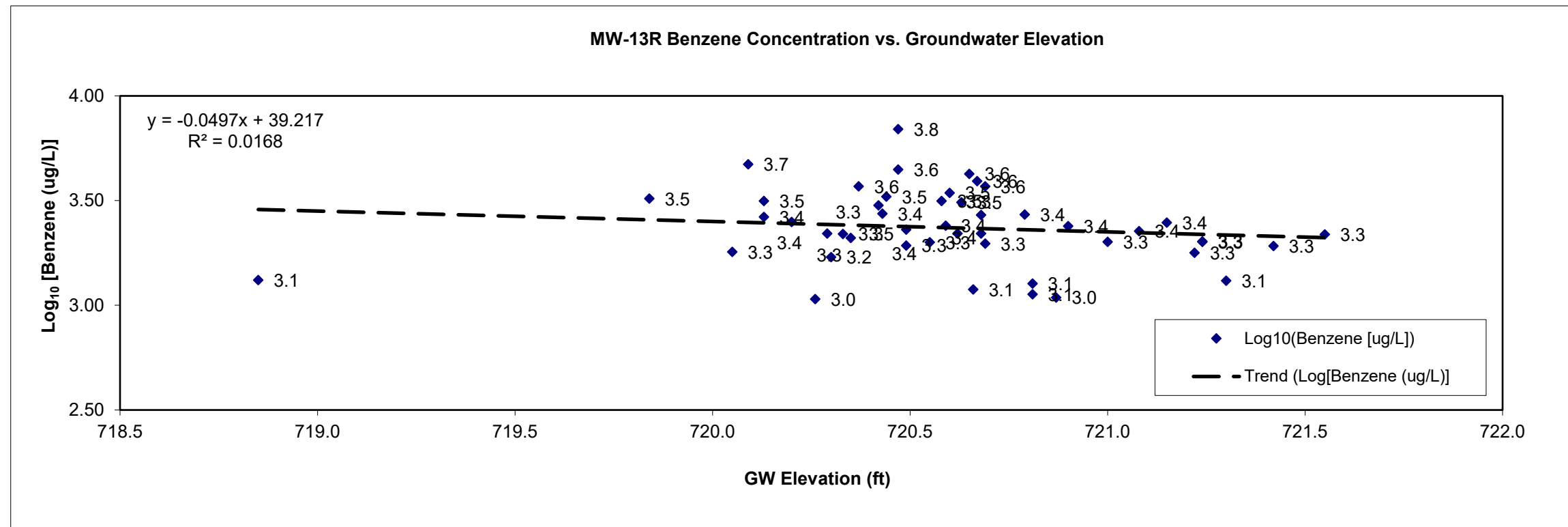
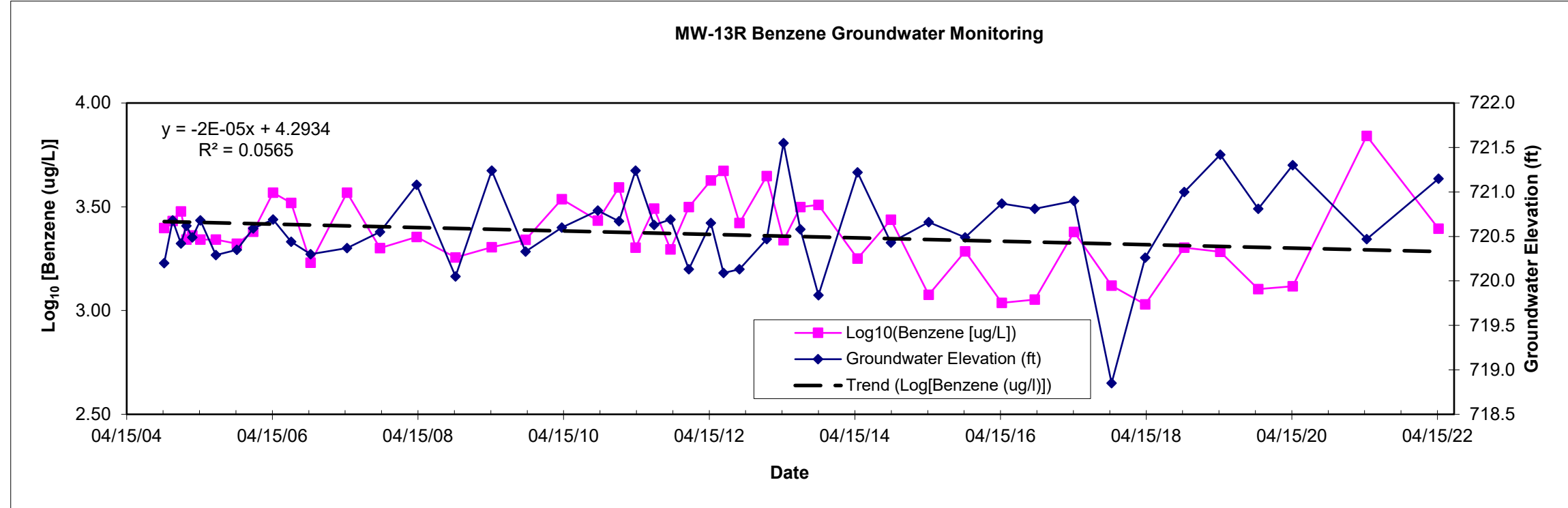


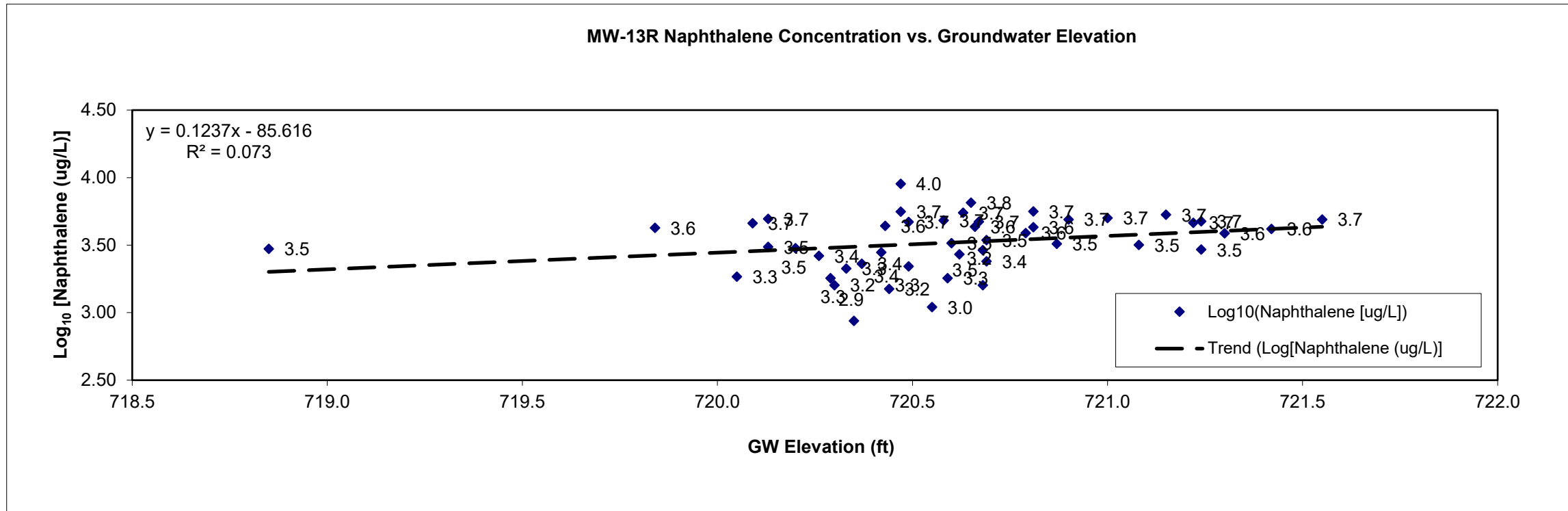
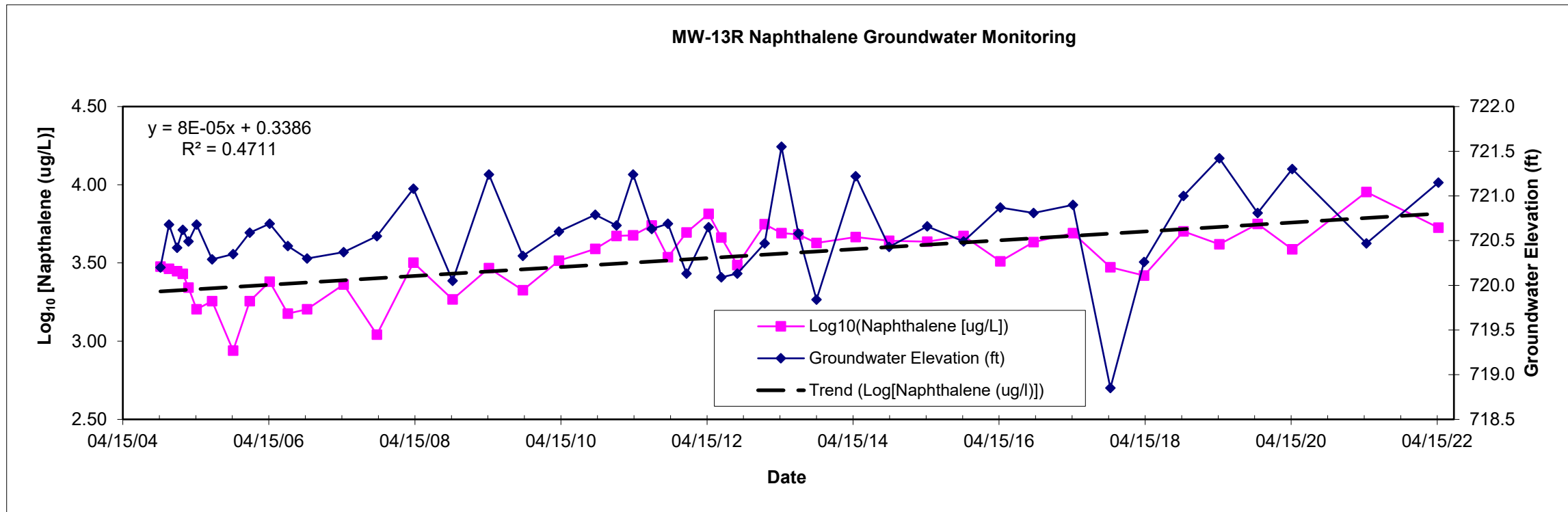




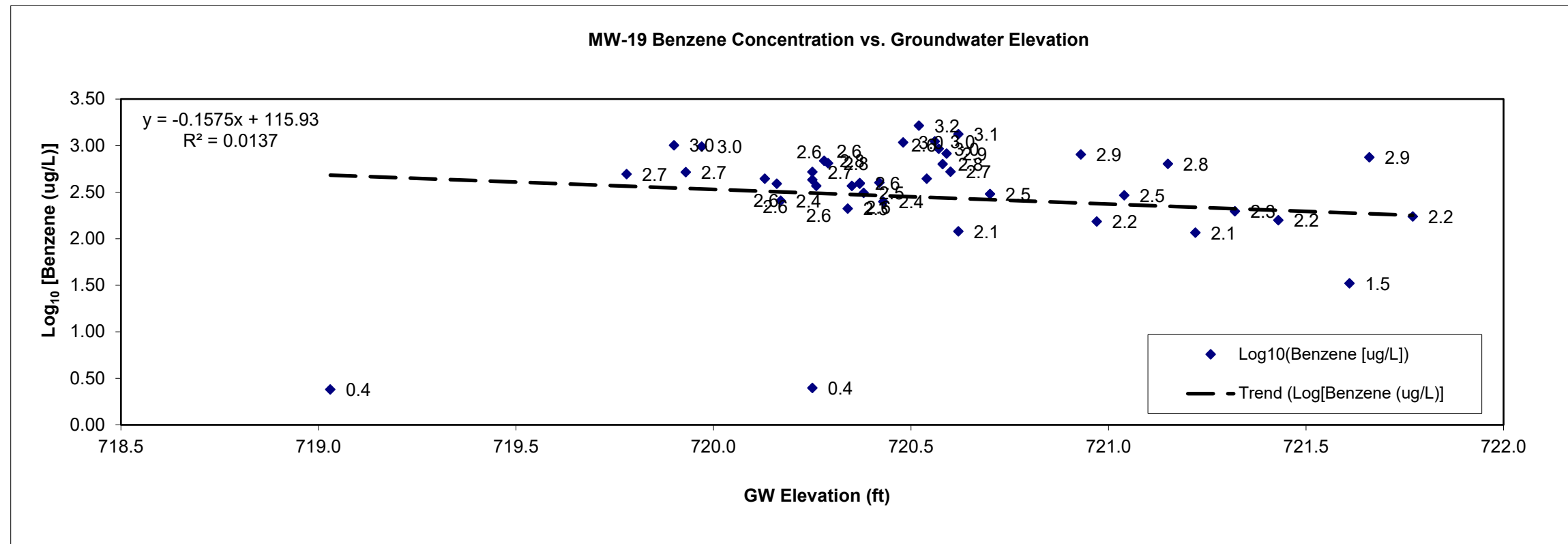
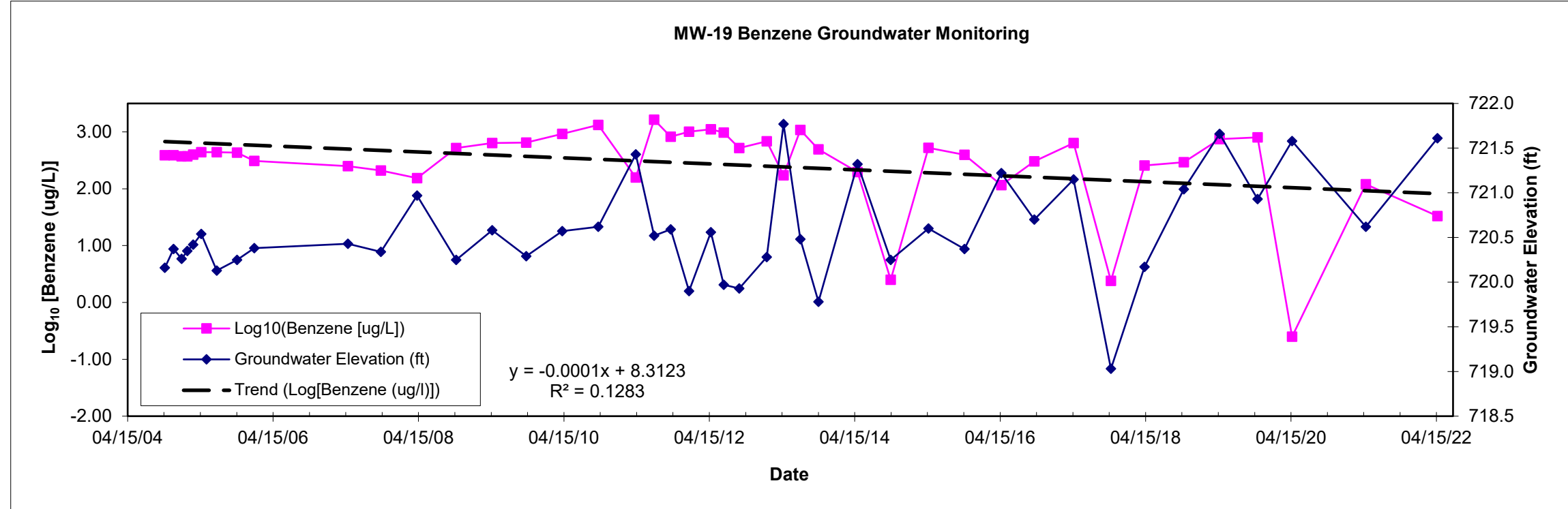




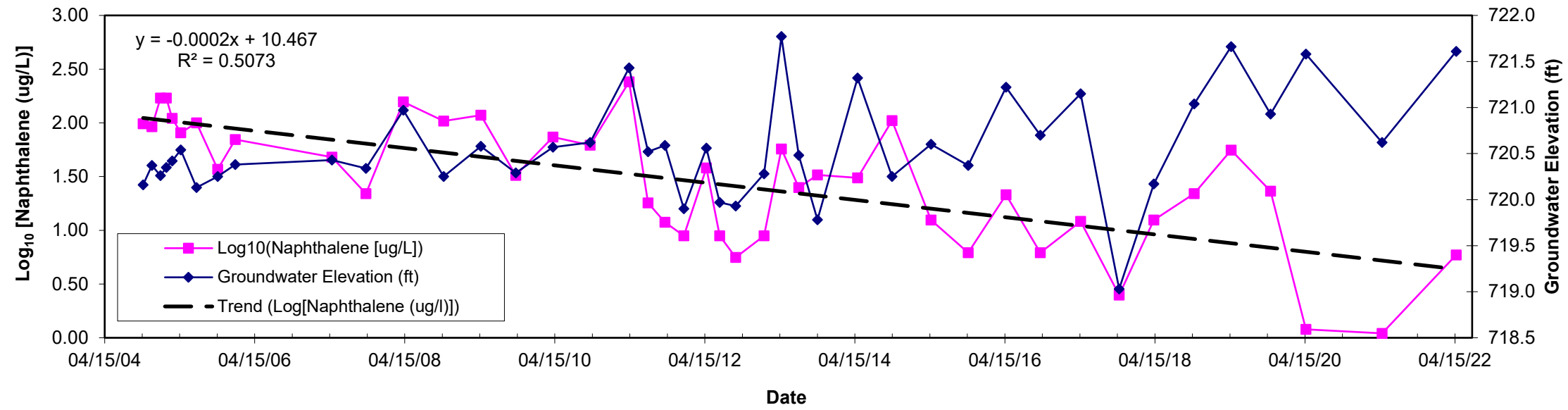




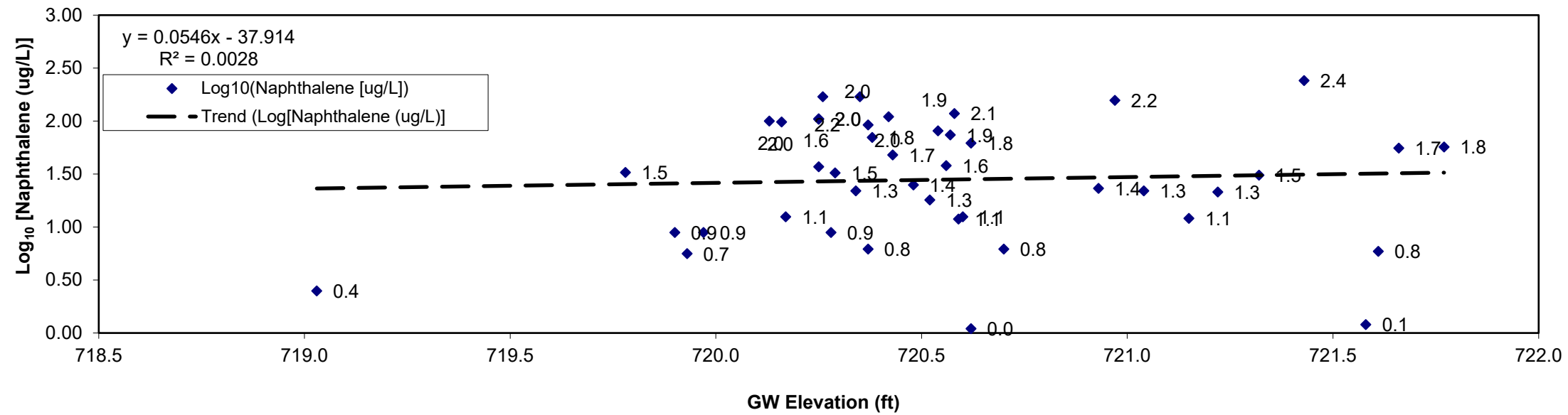




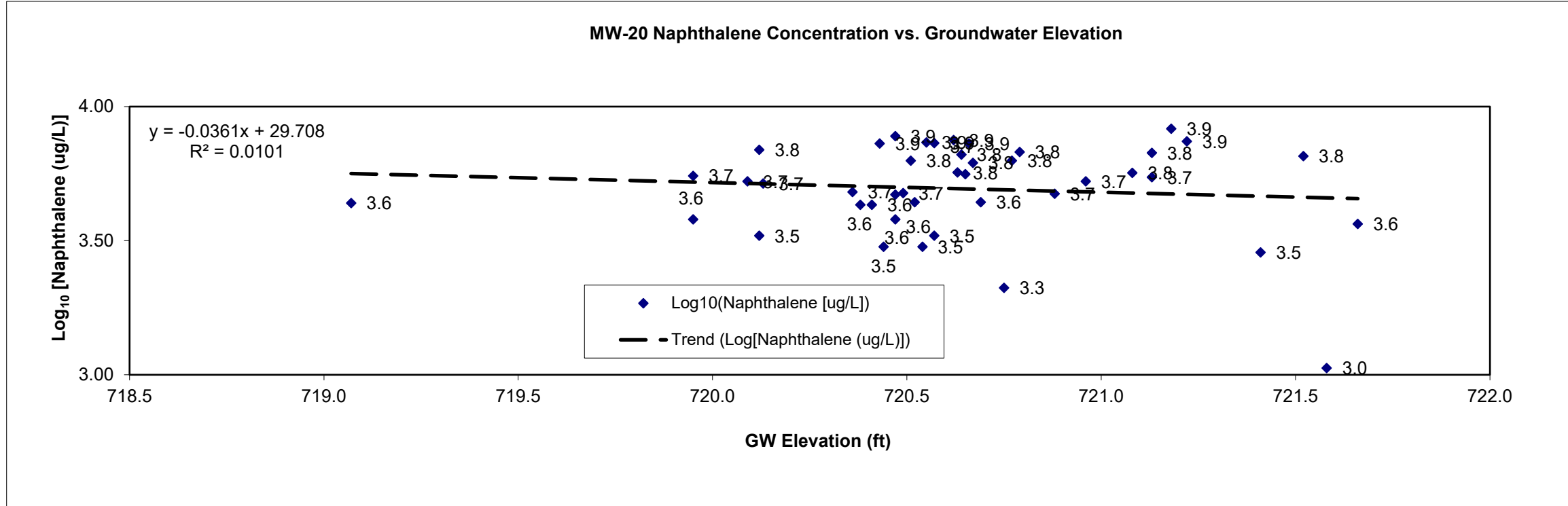
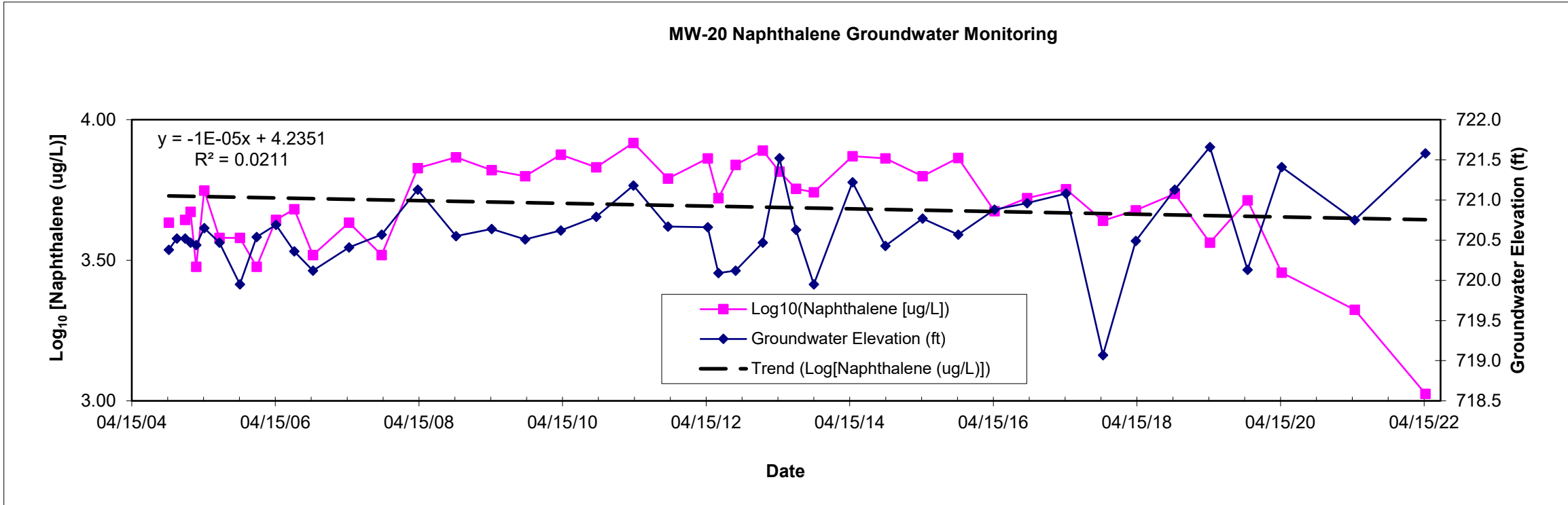
MW-19 Naphthalene Groundwater Monitoring

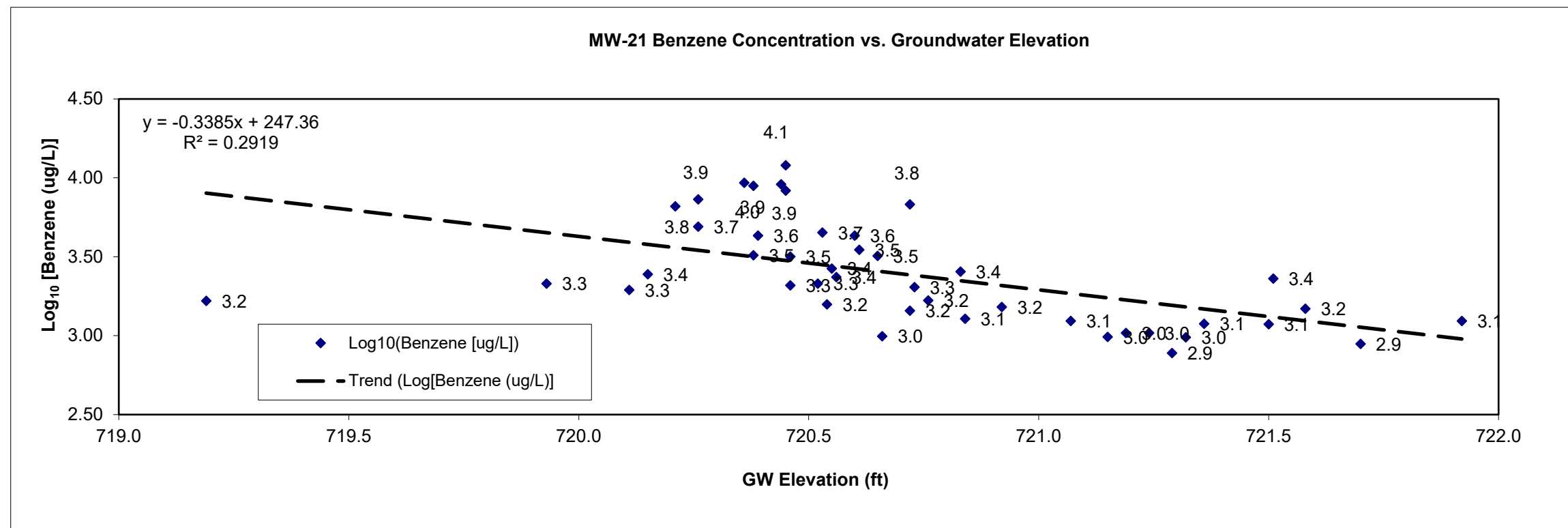
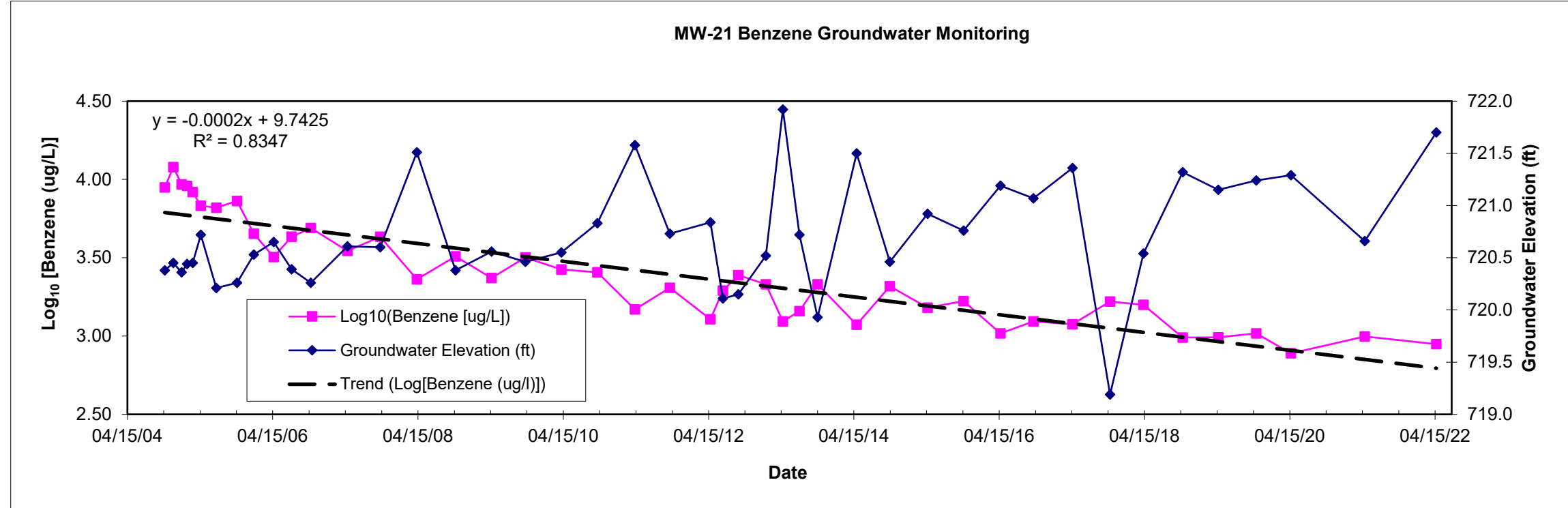


MW-19 Naphthalene Concentration vs. Groundwater Elevation

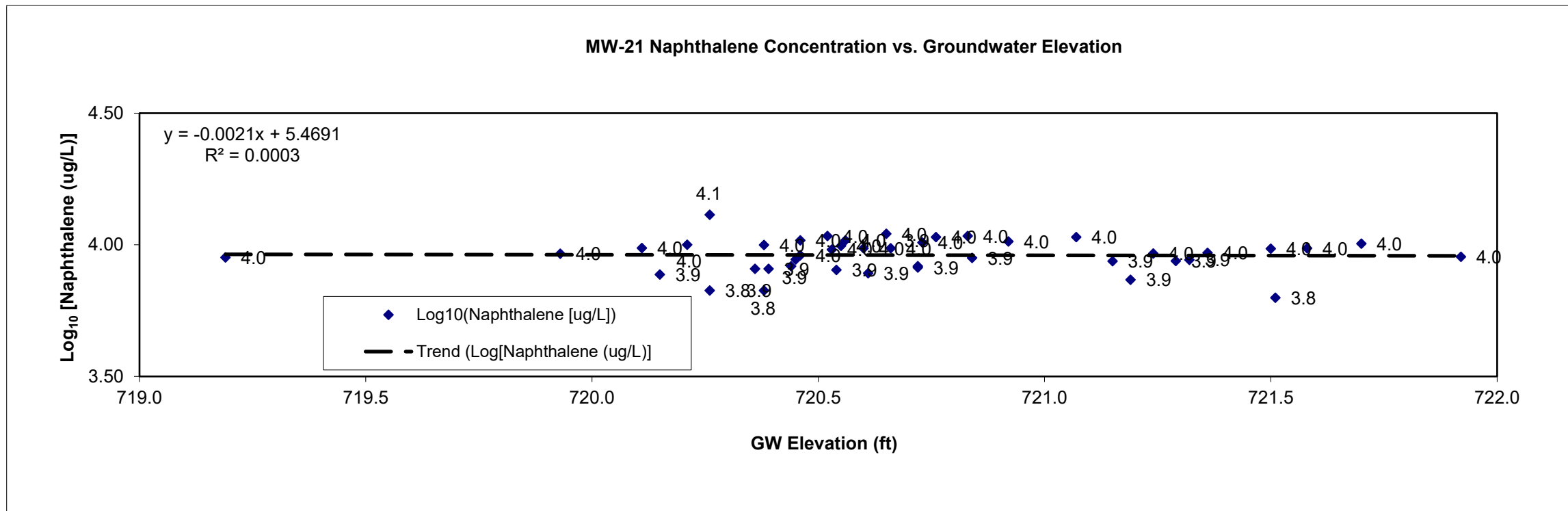
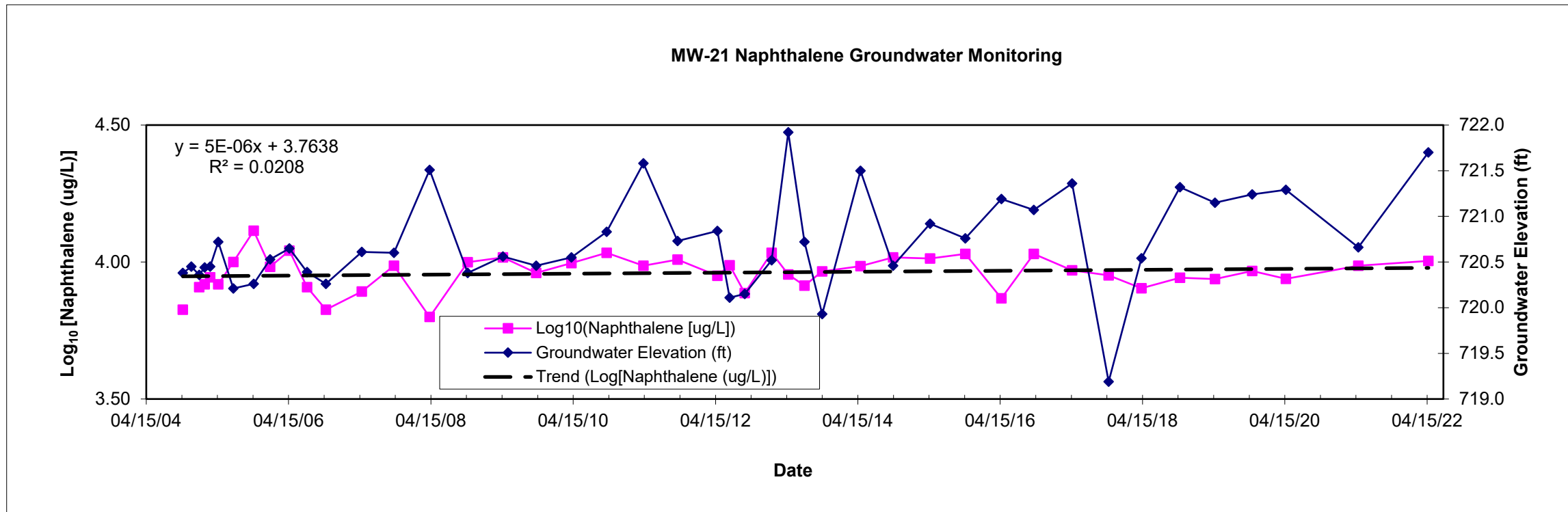


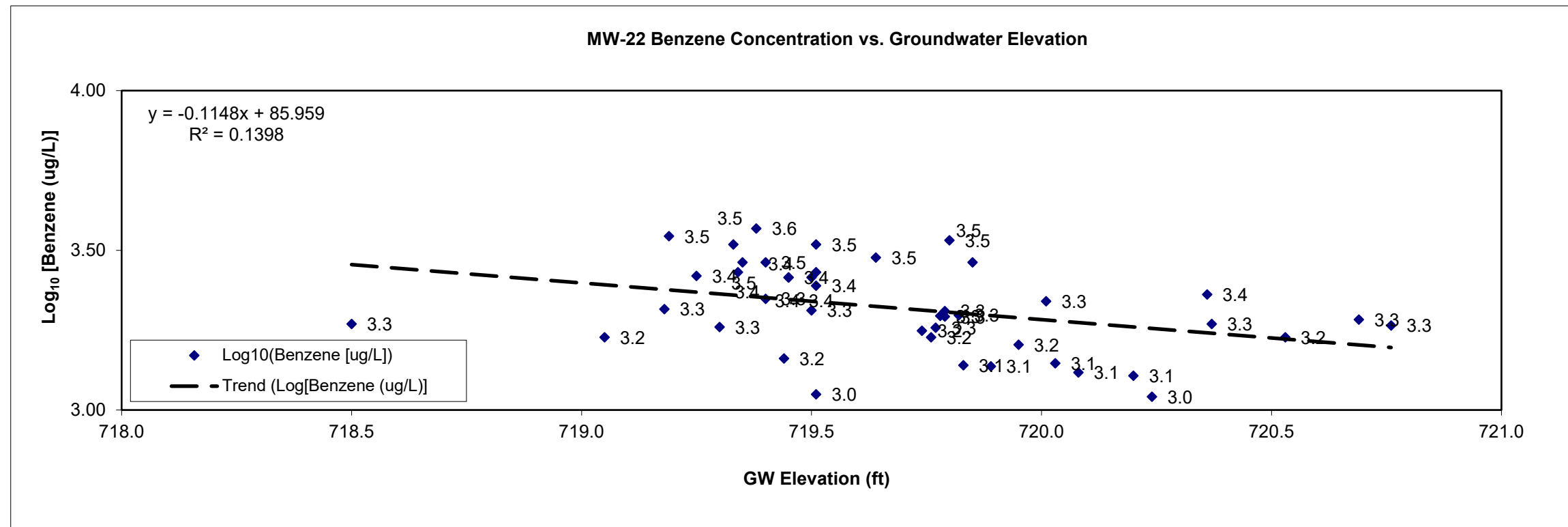
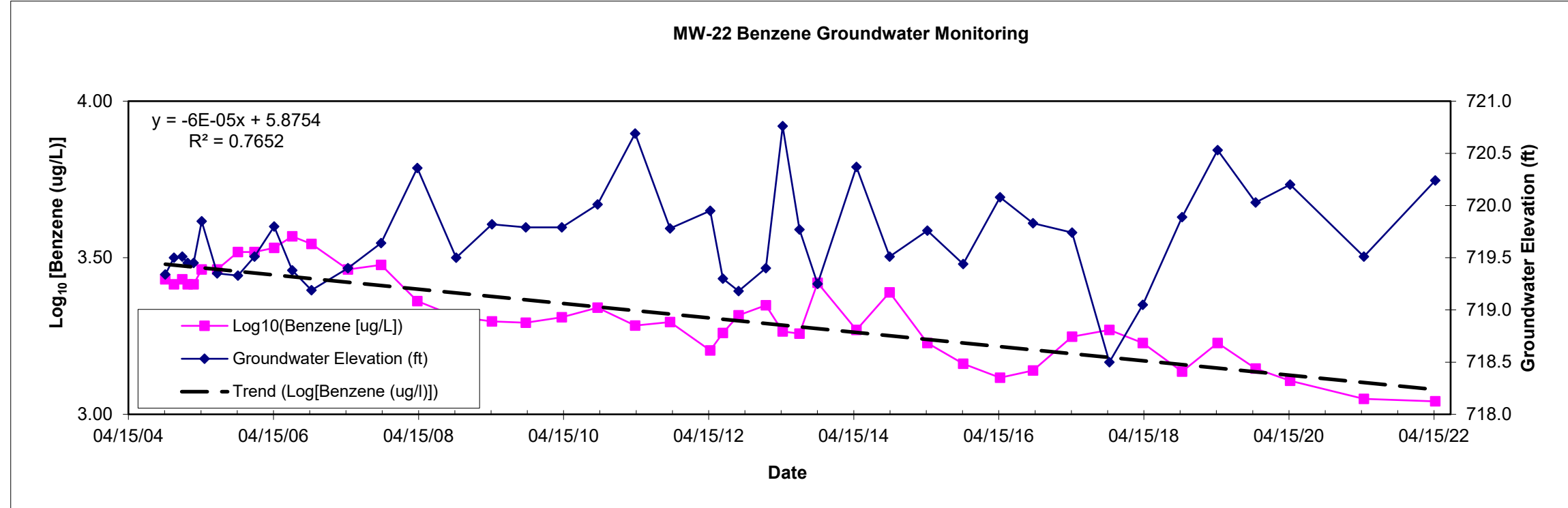


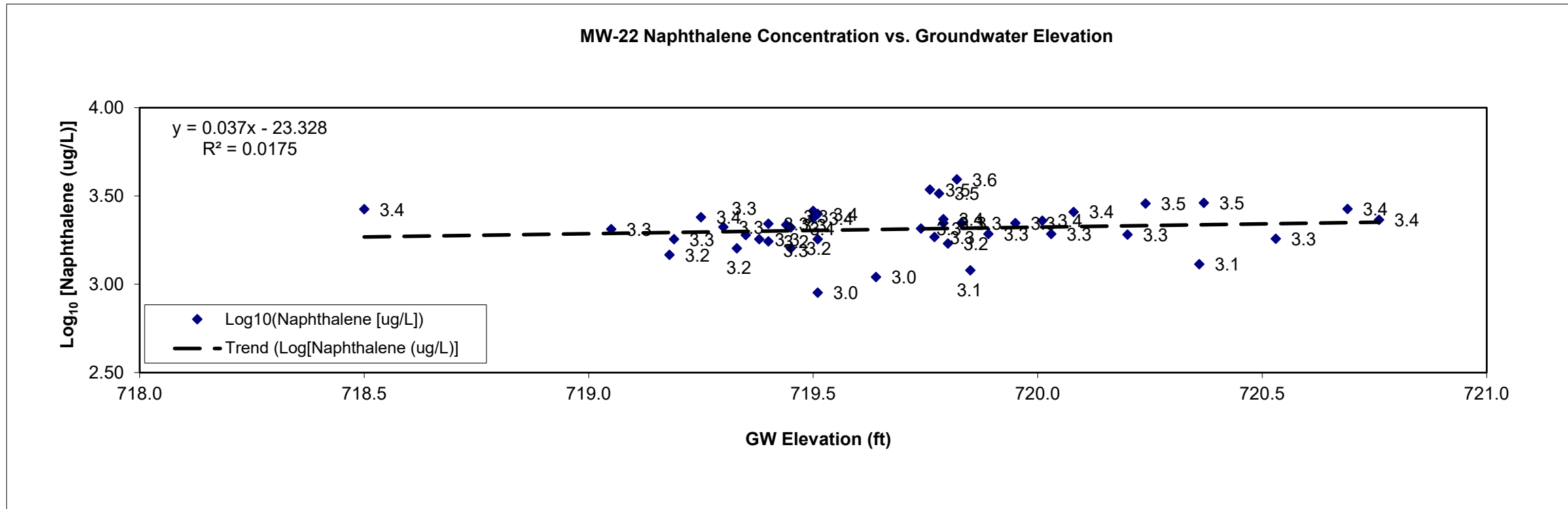
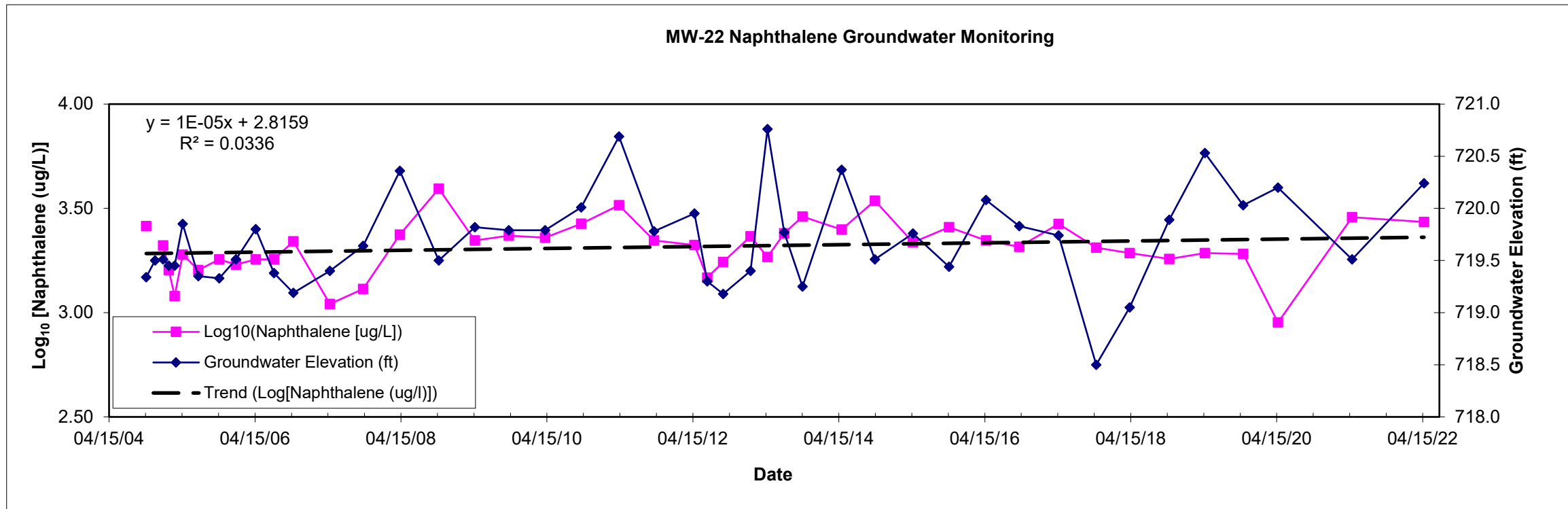


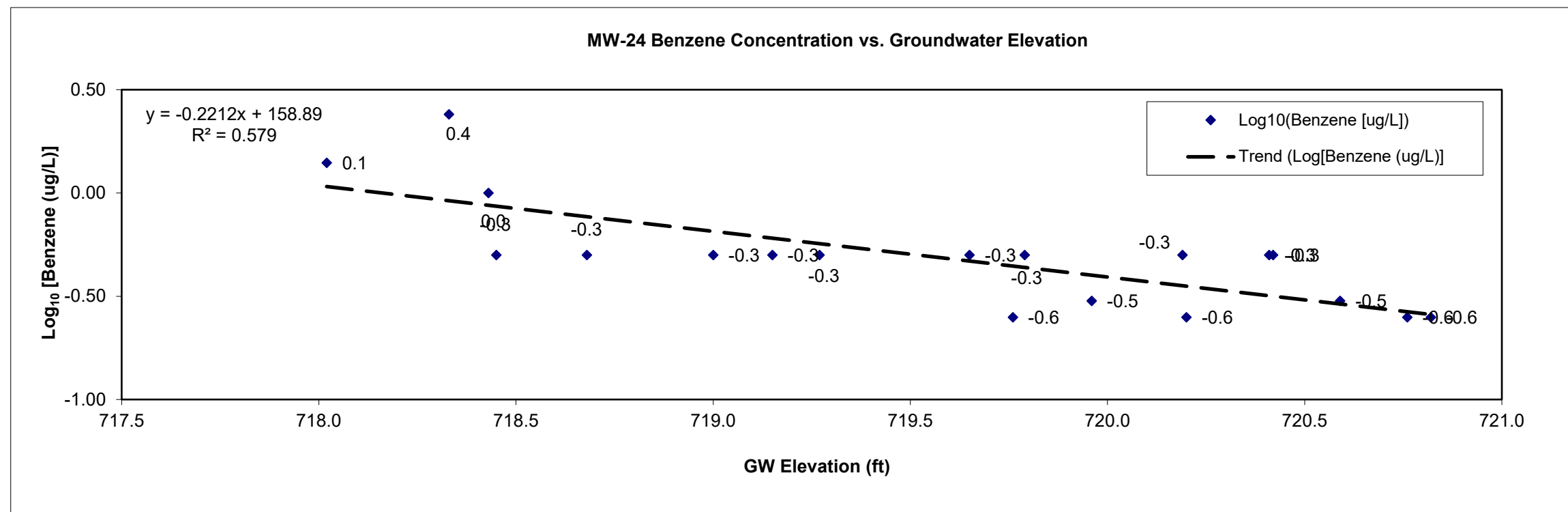
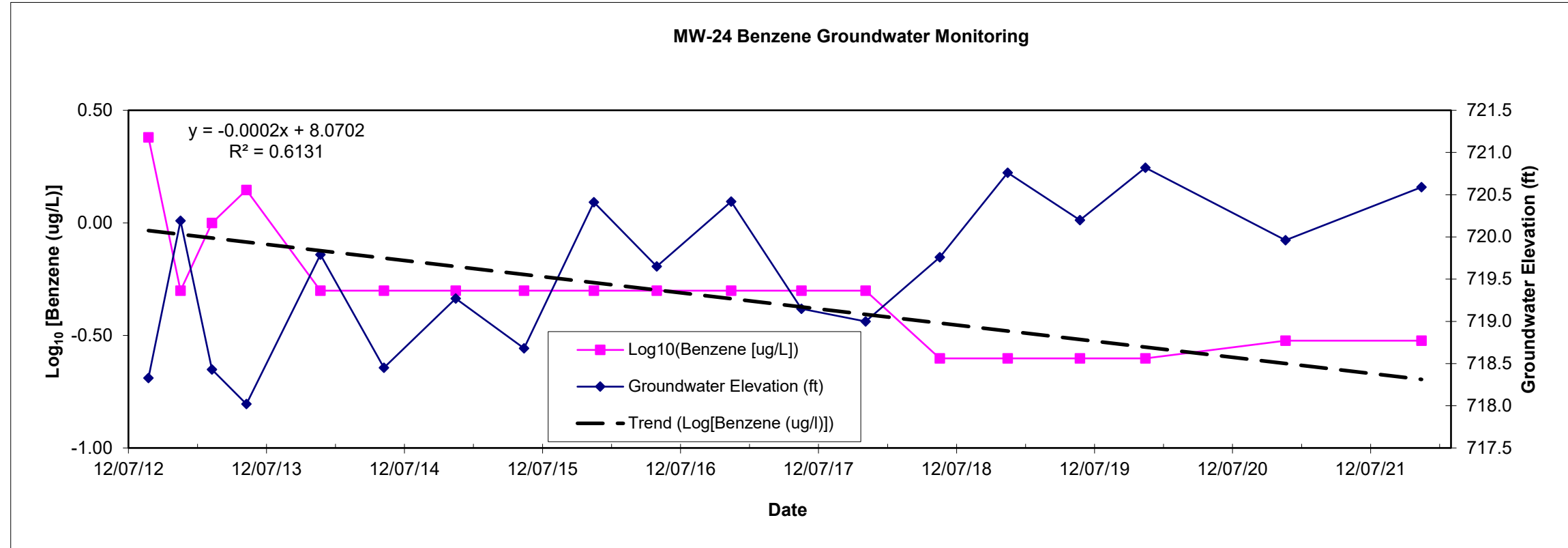


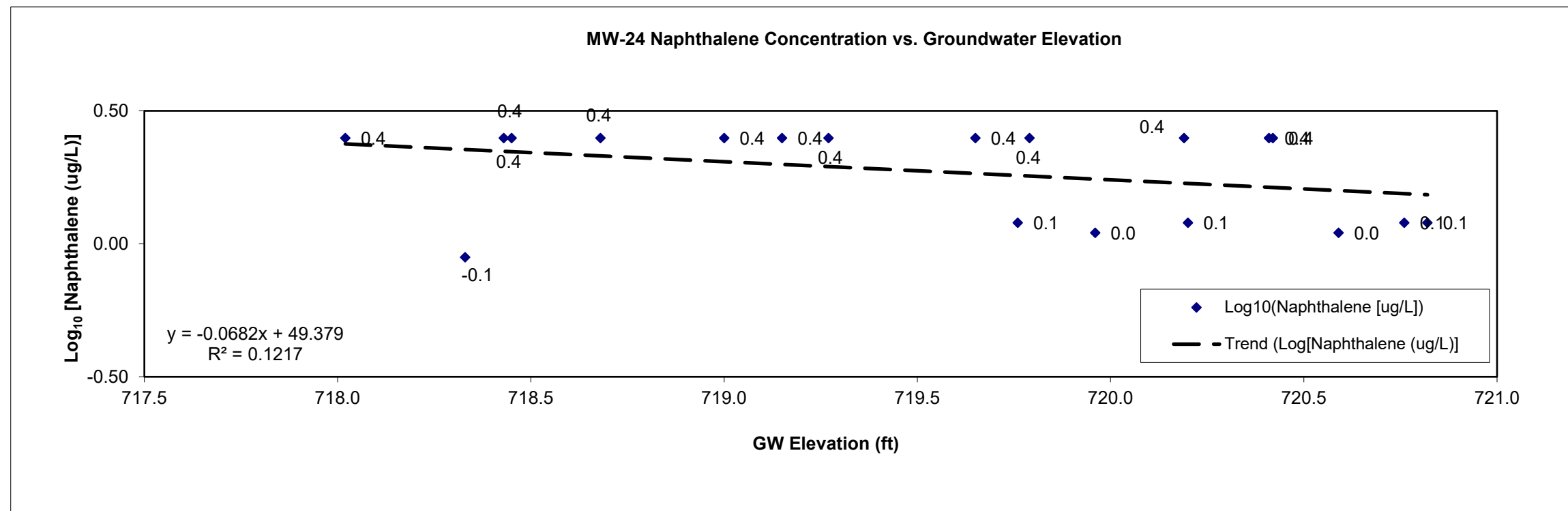
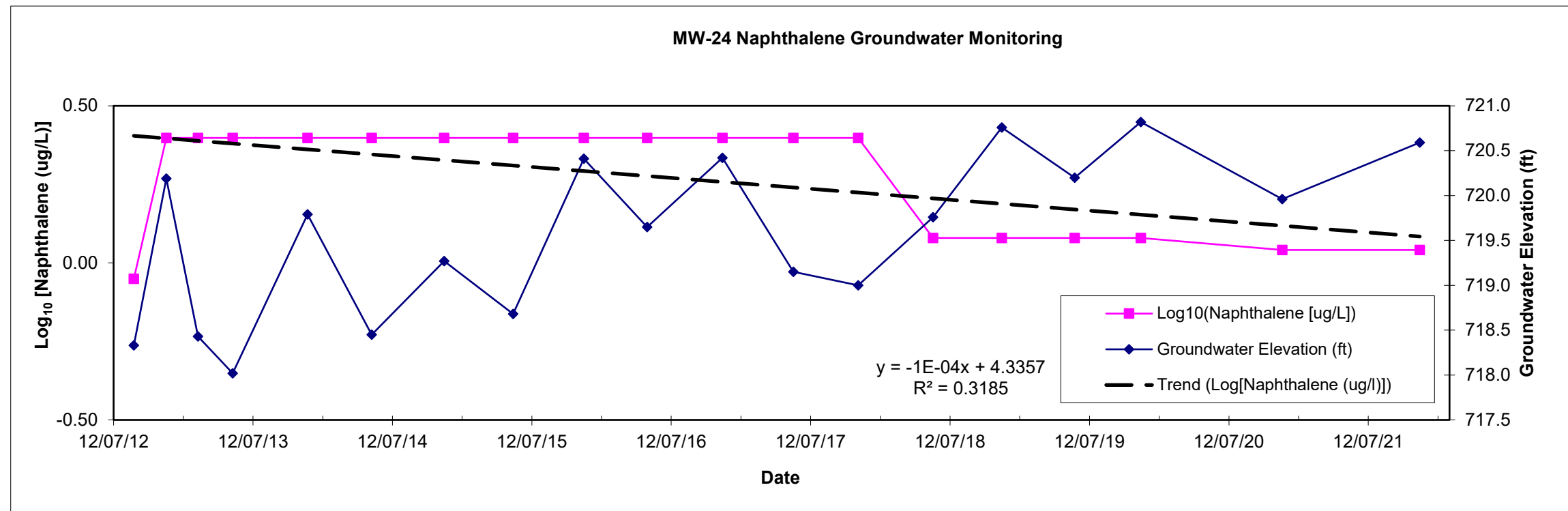




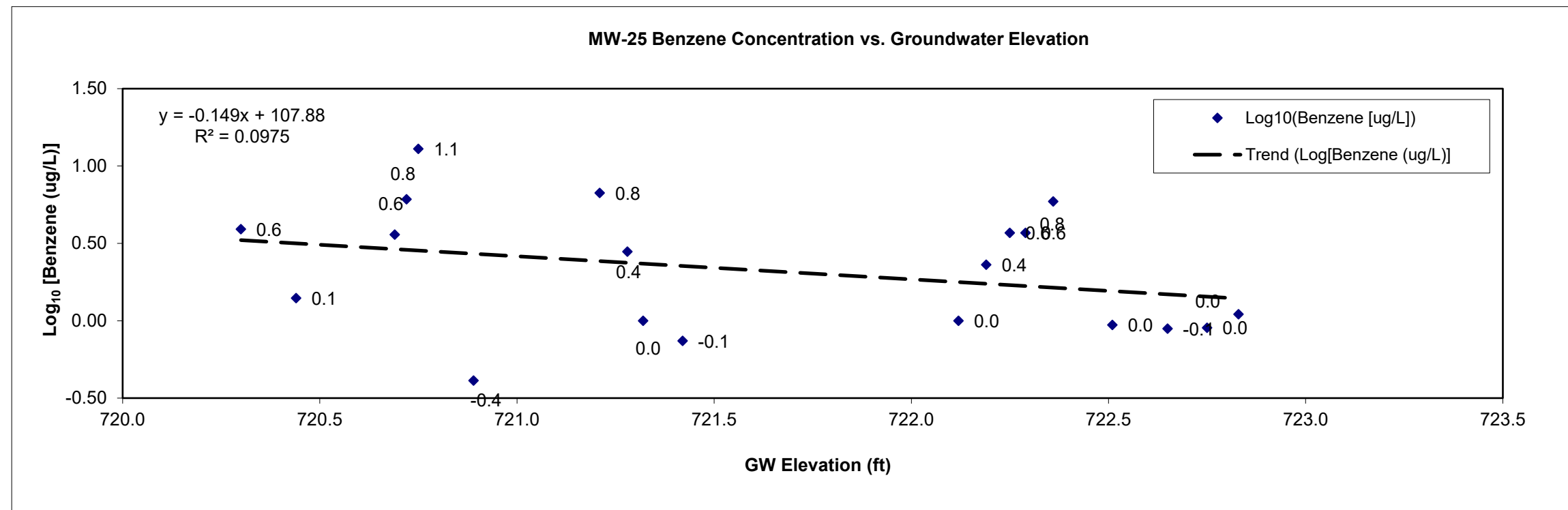
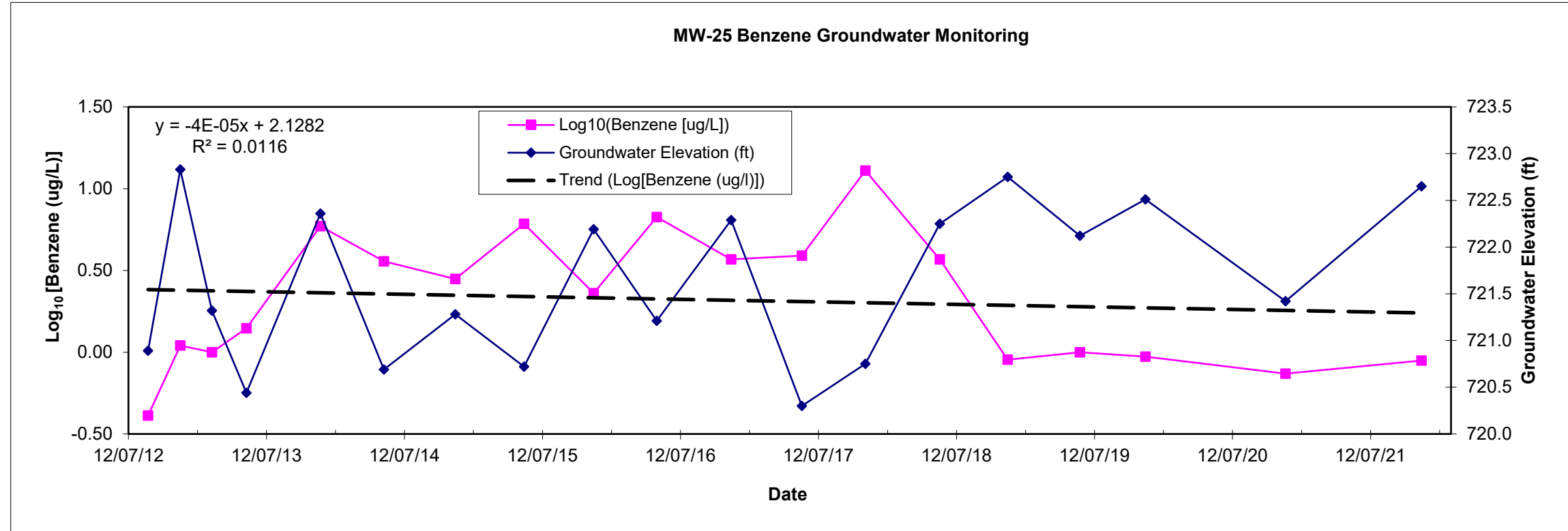


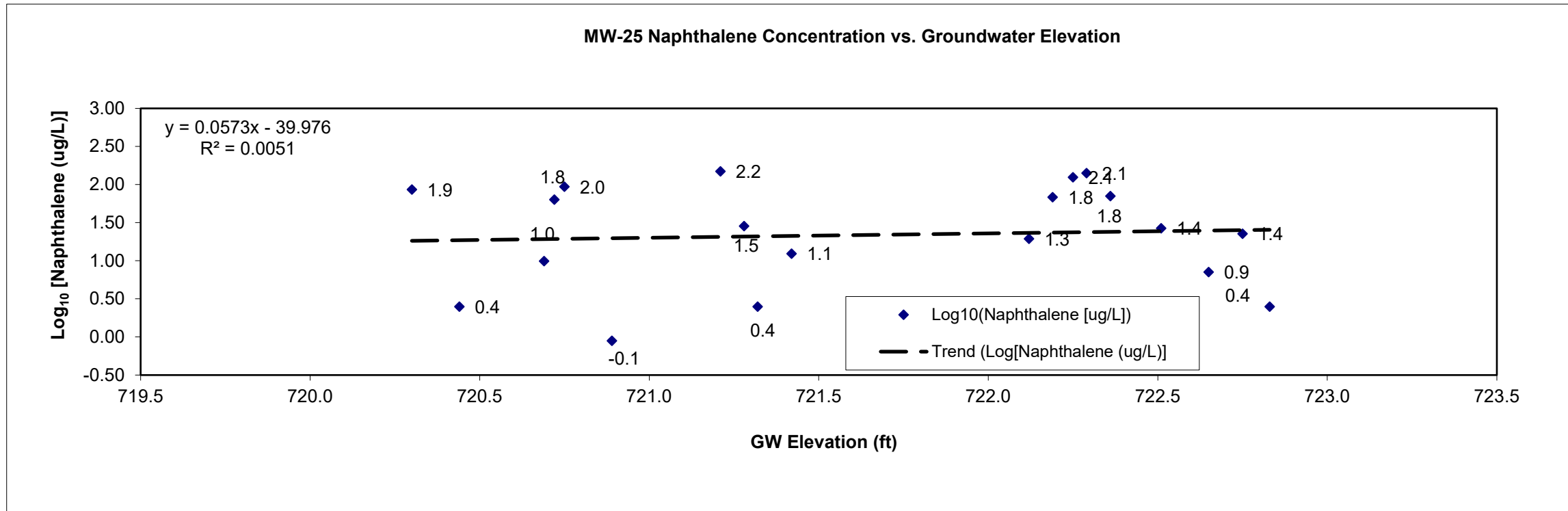
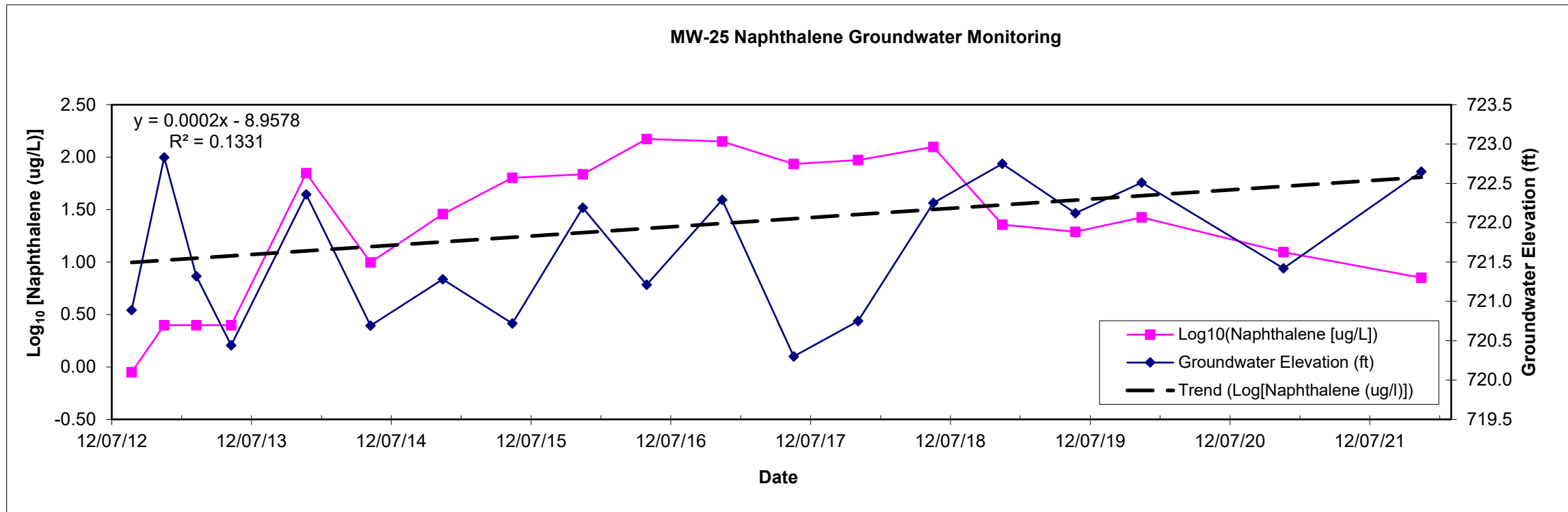


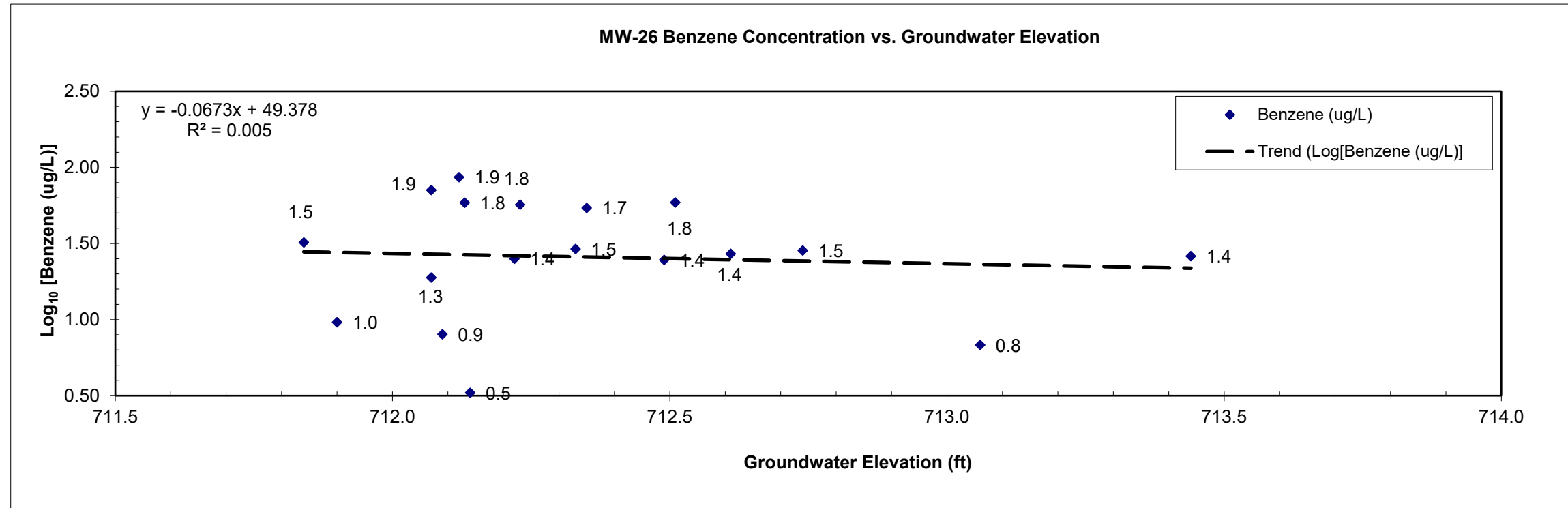
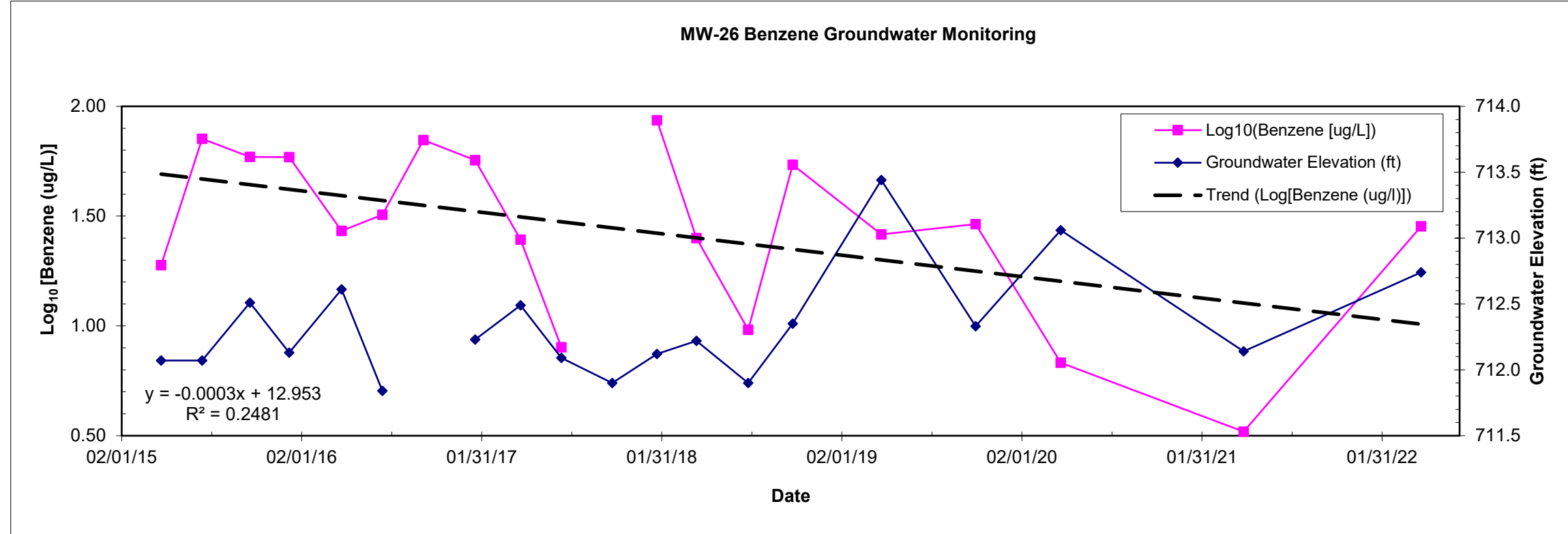


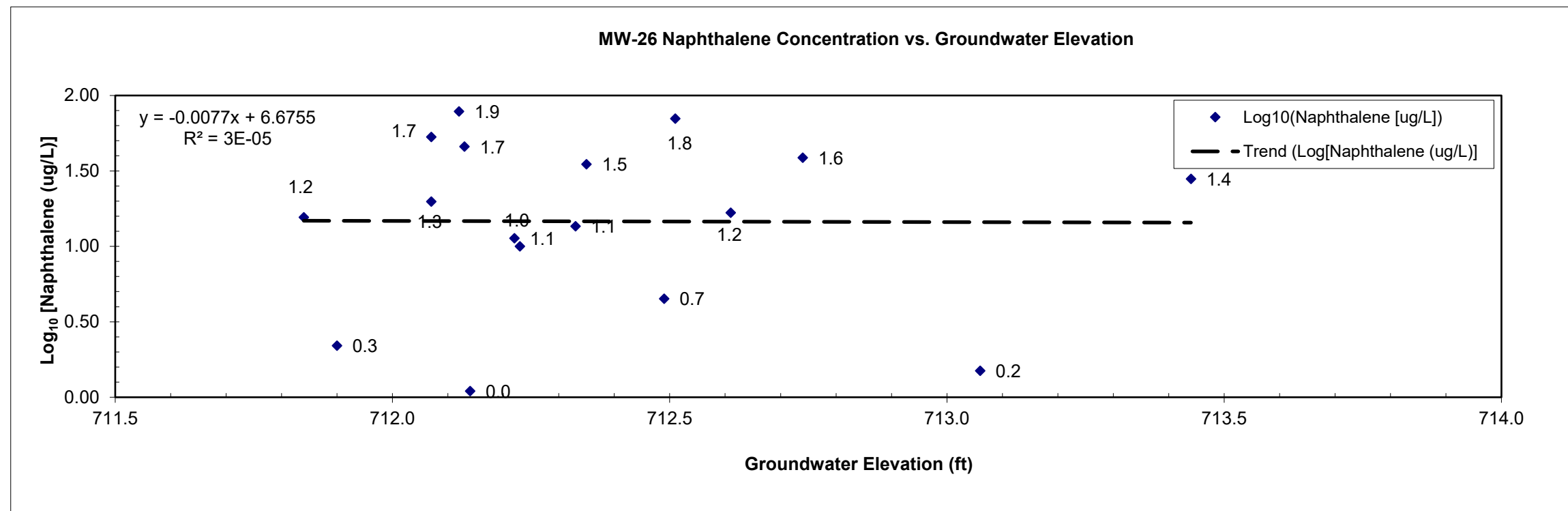
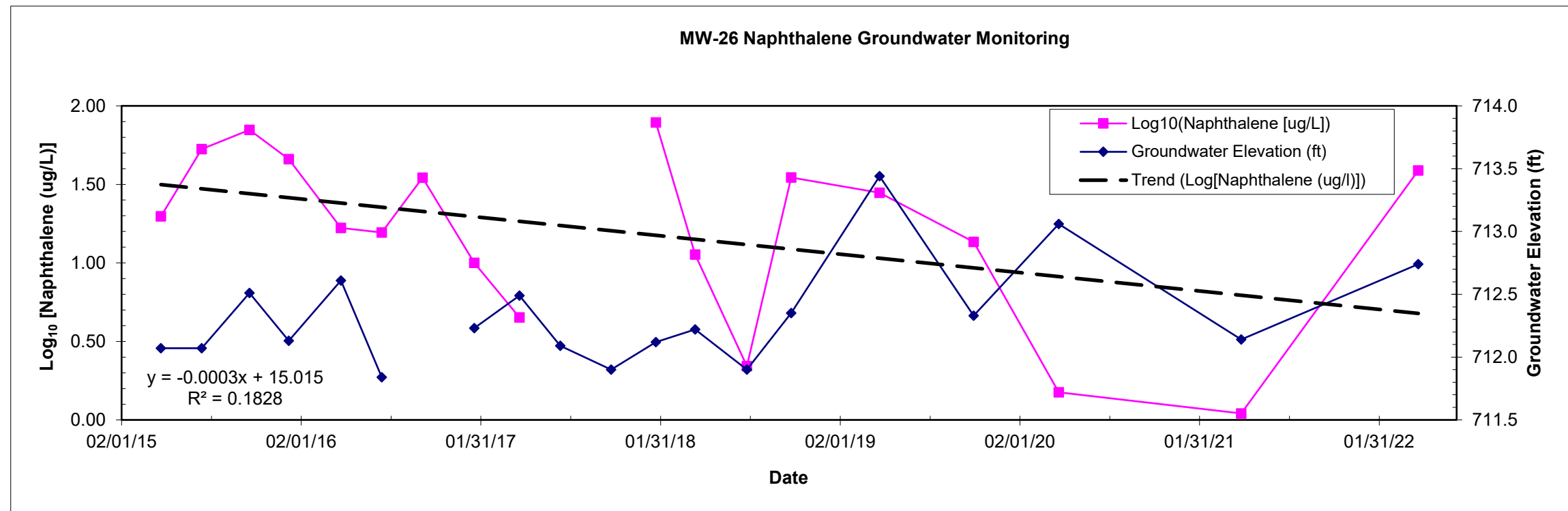


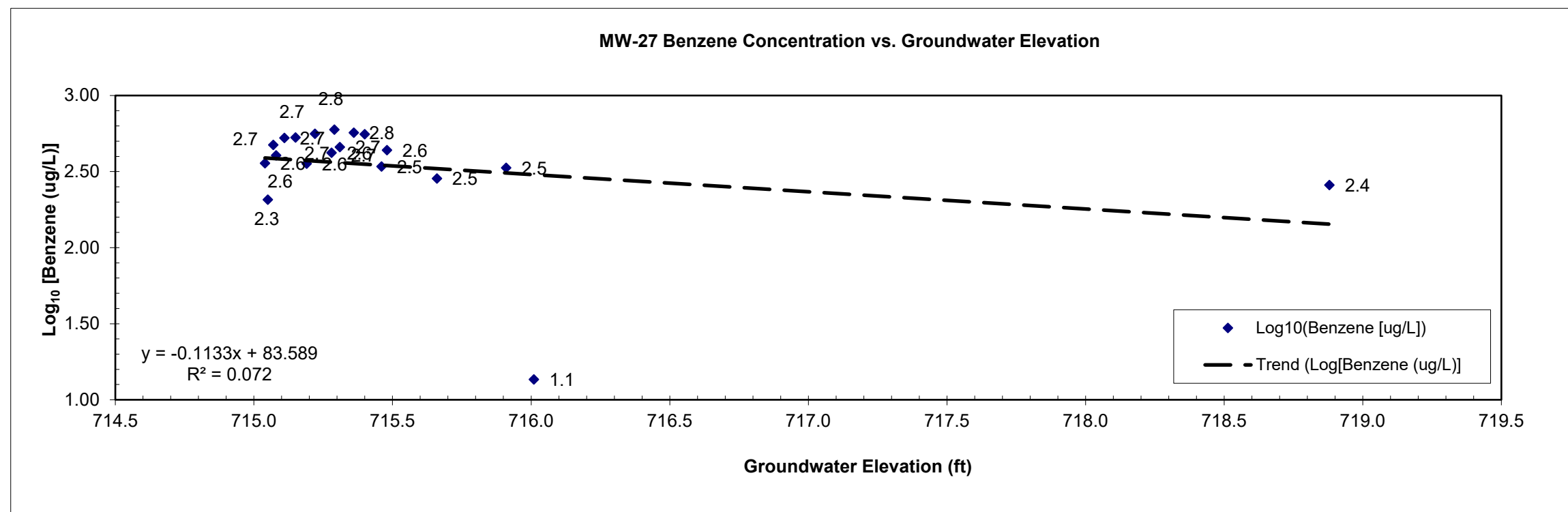
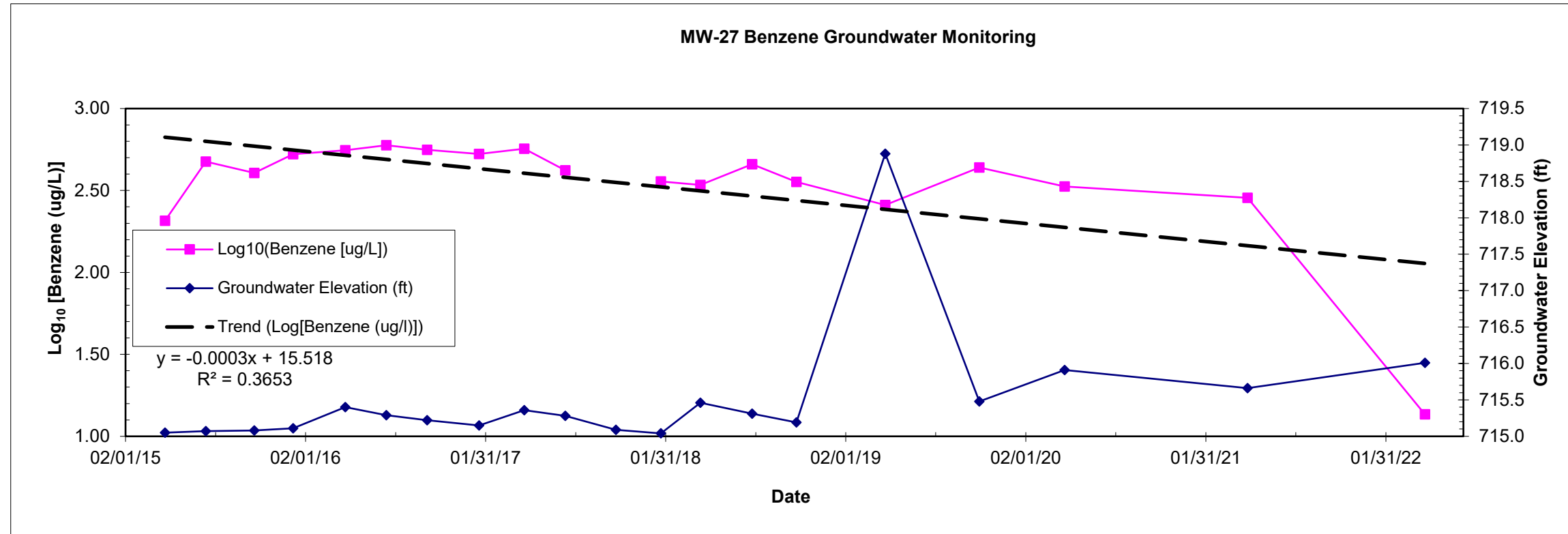






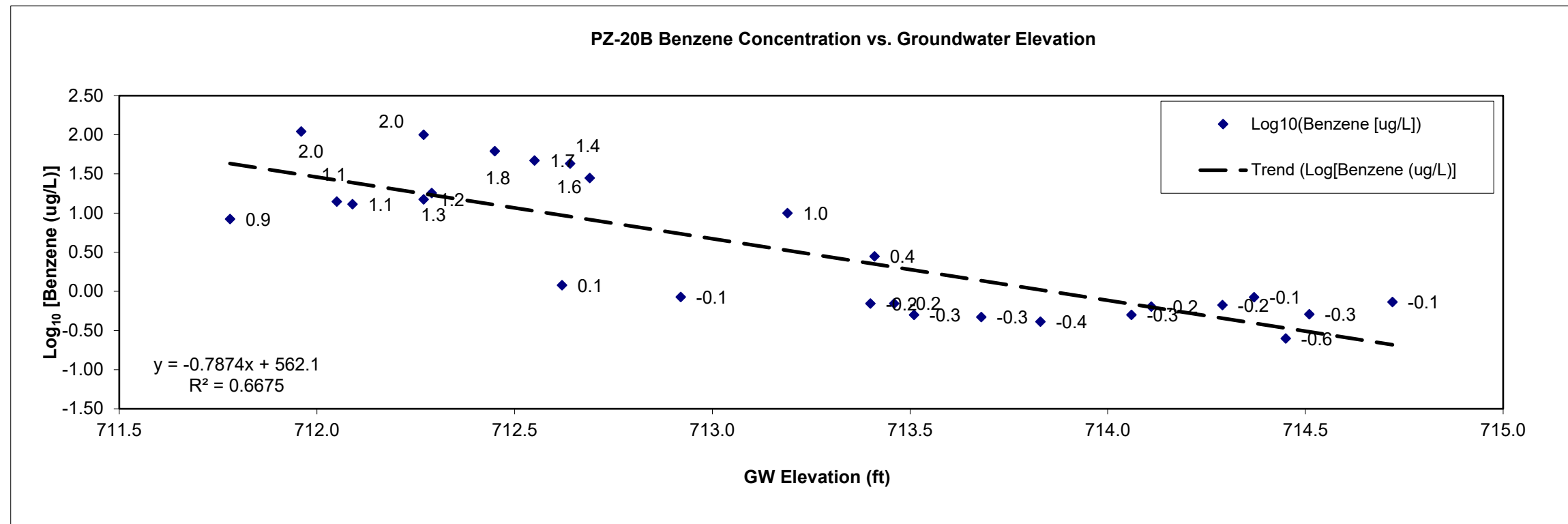
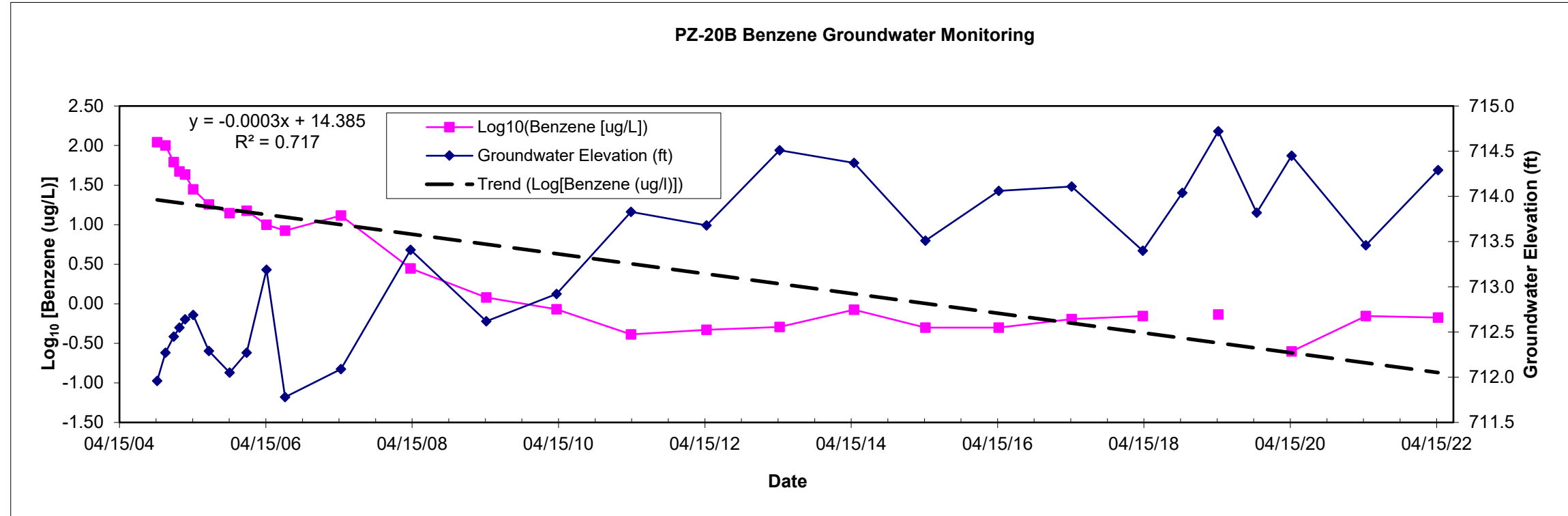


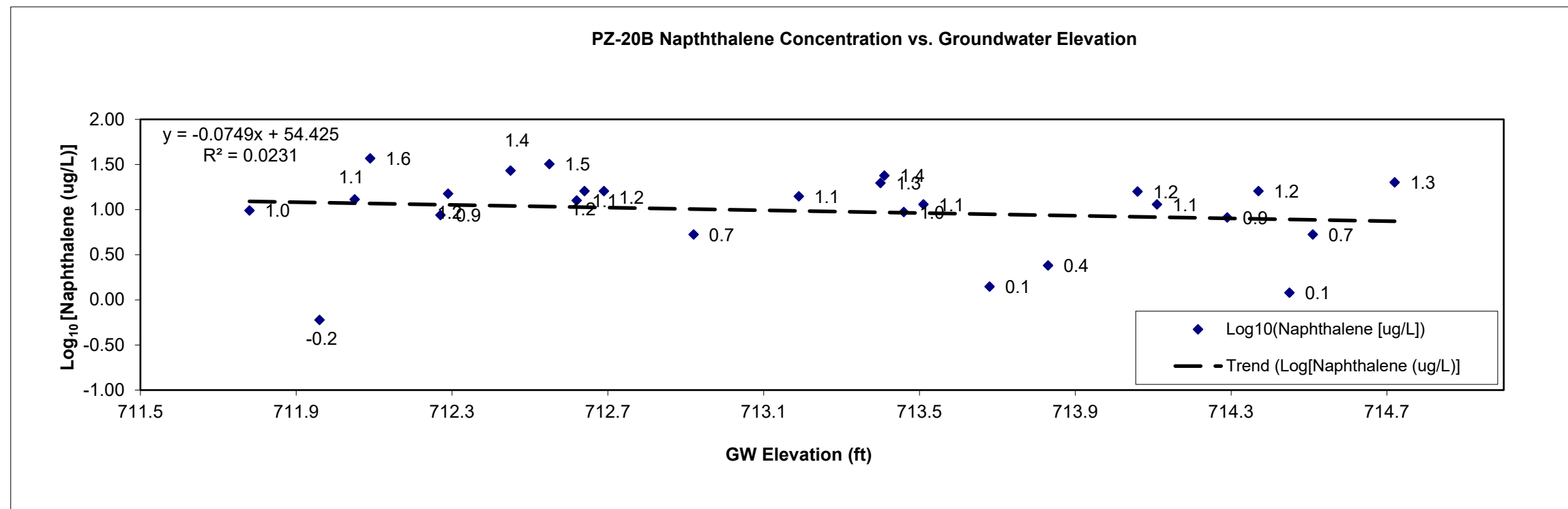
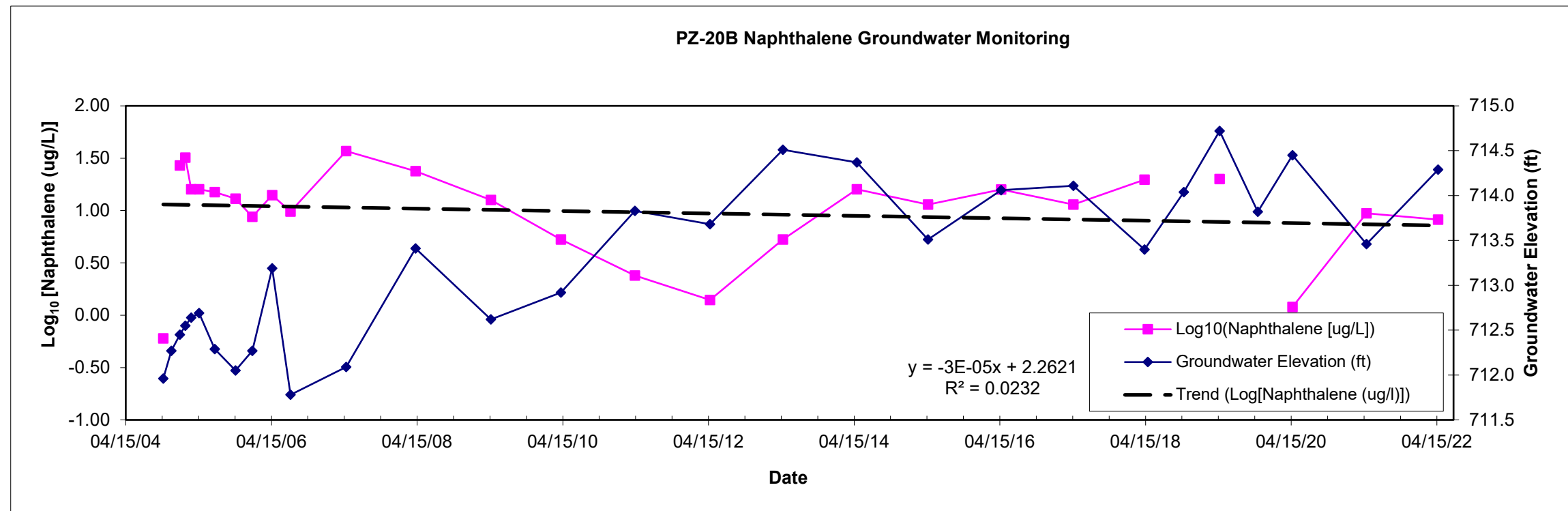


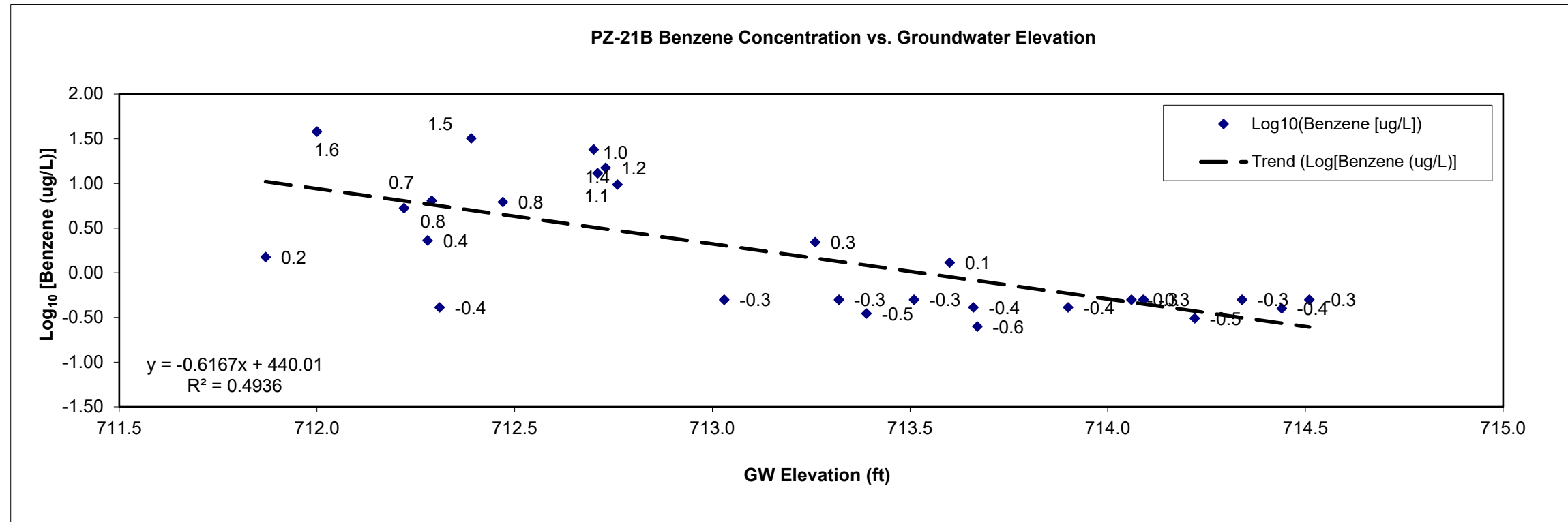
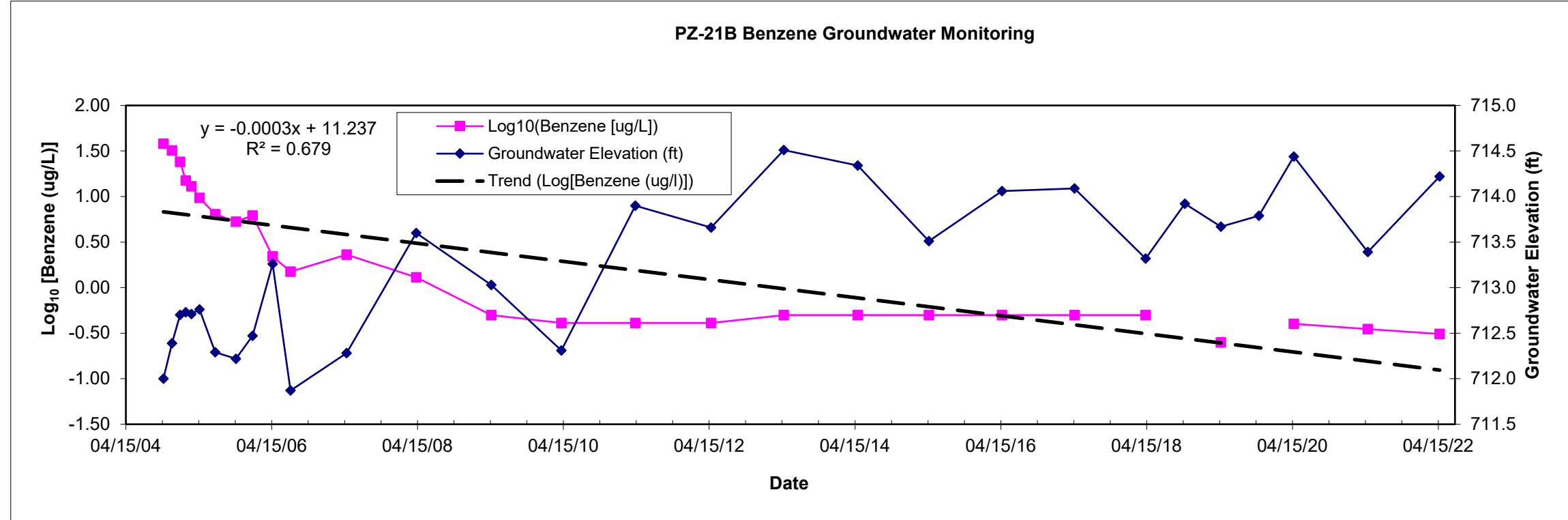


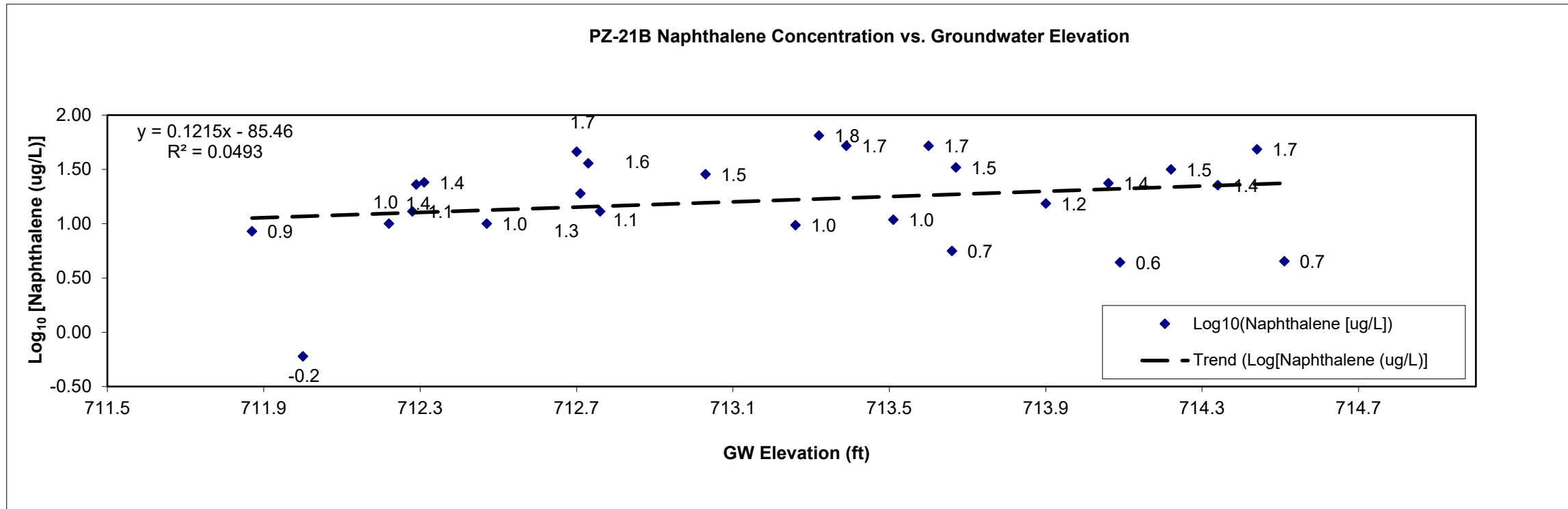
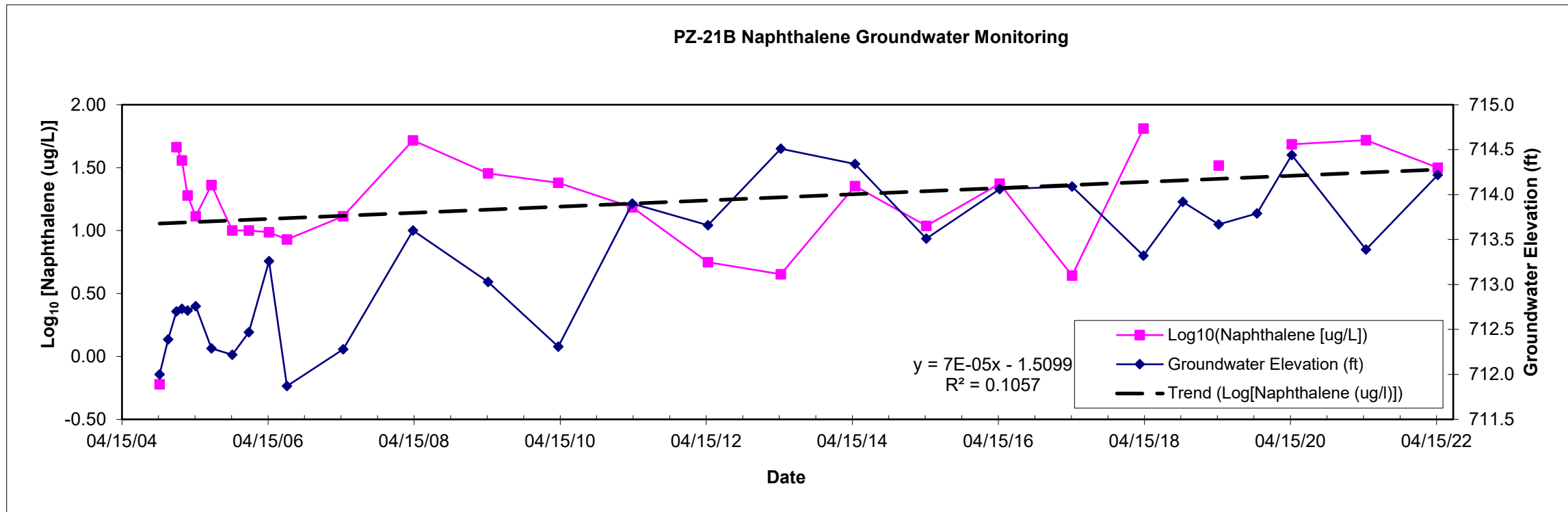




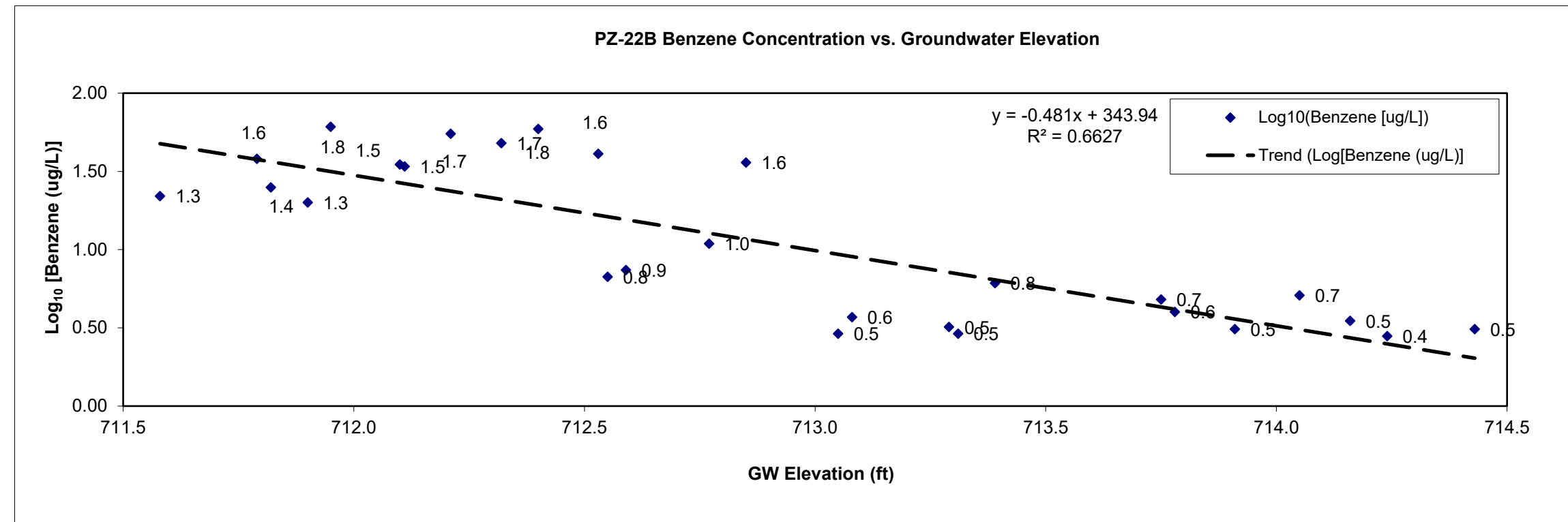
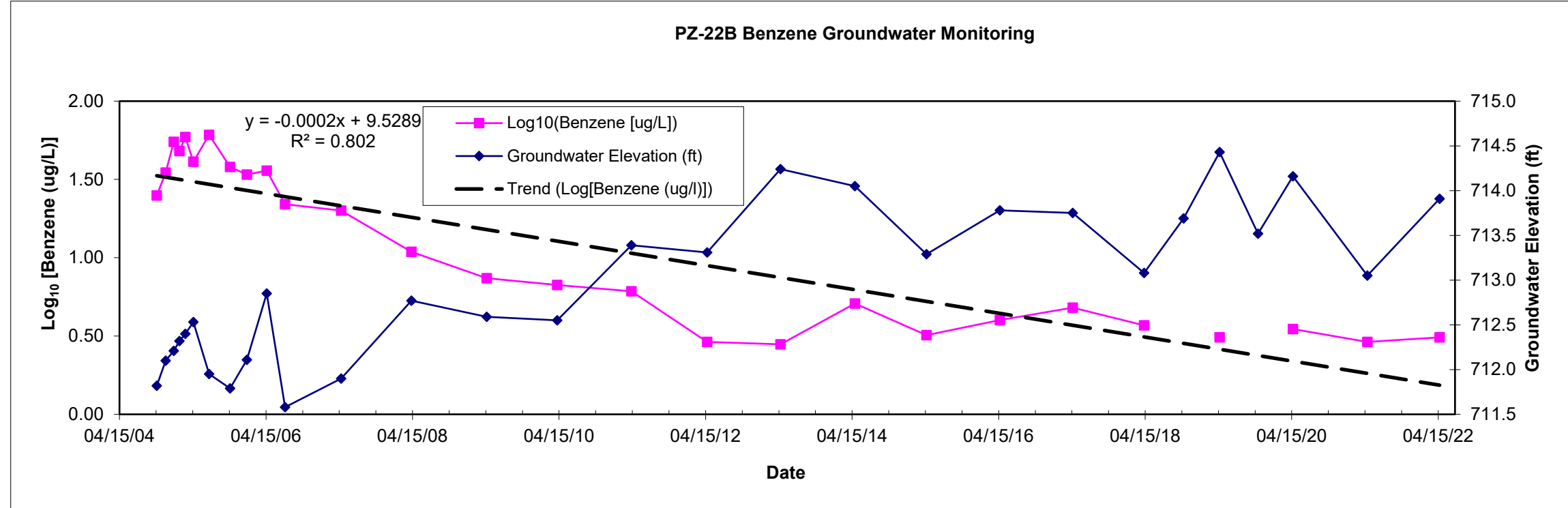


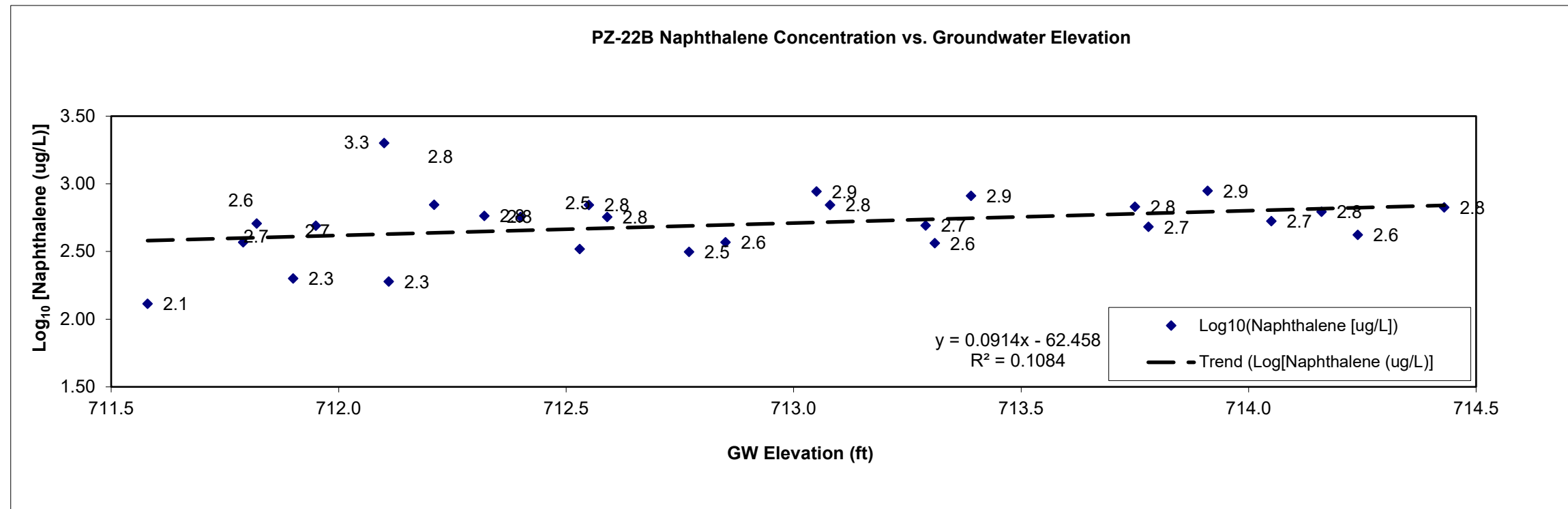
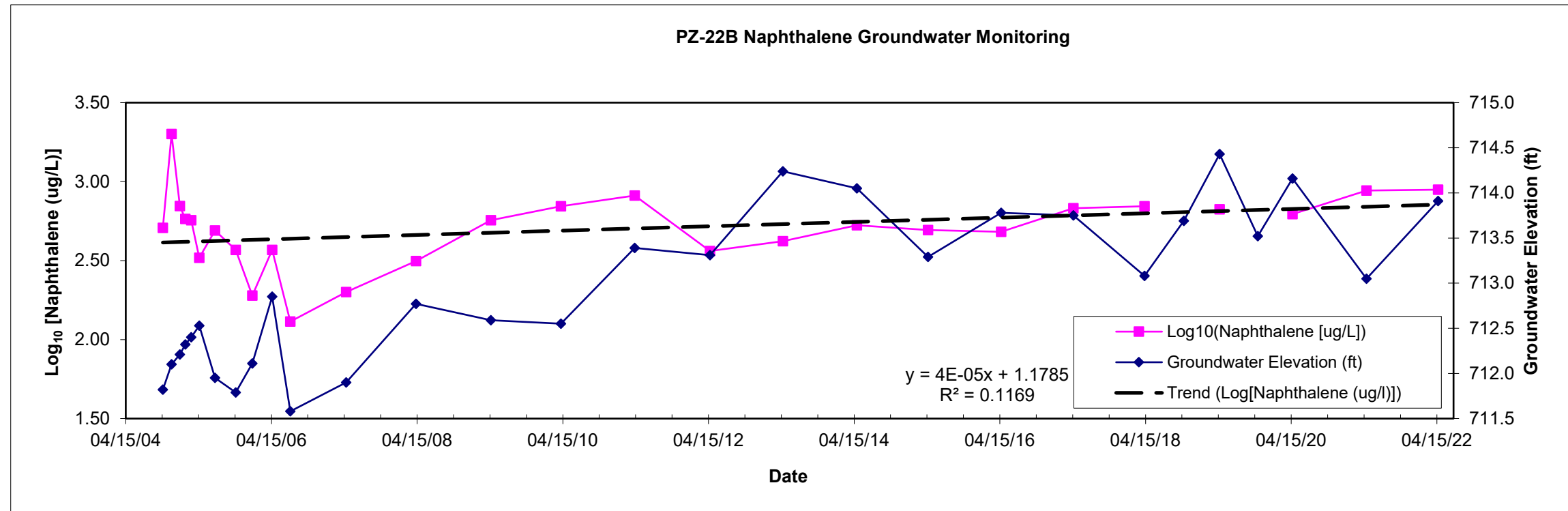


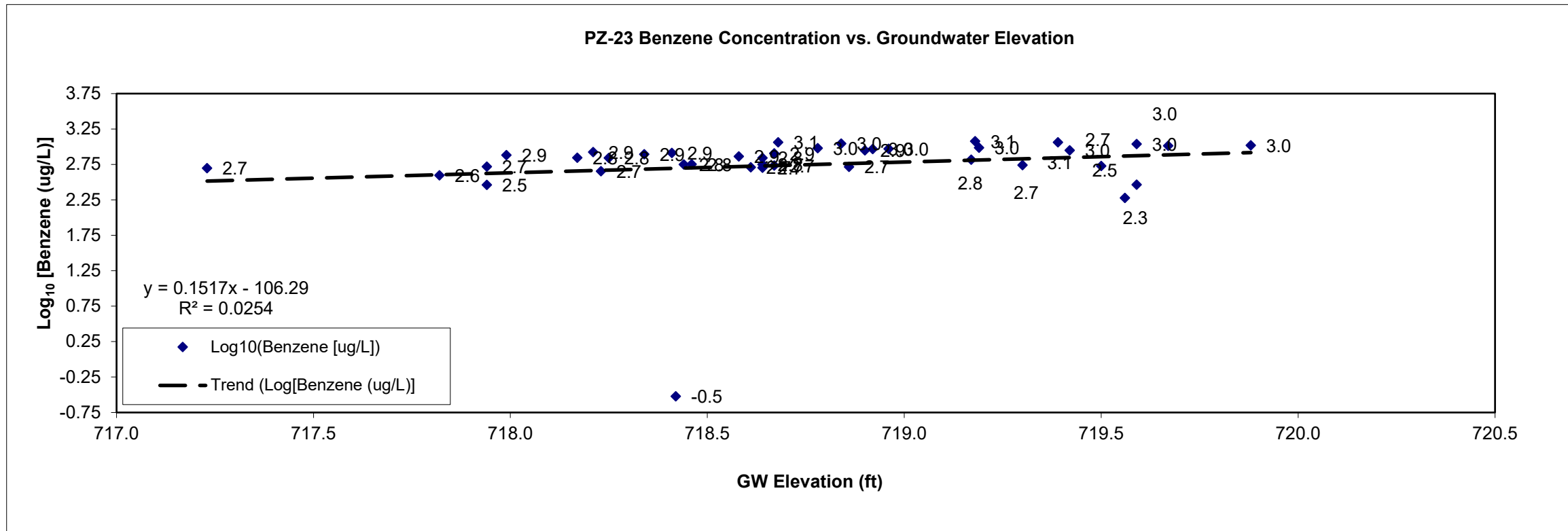
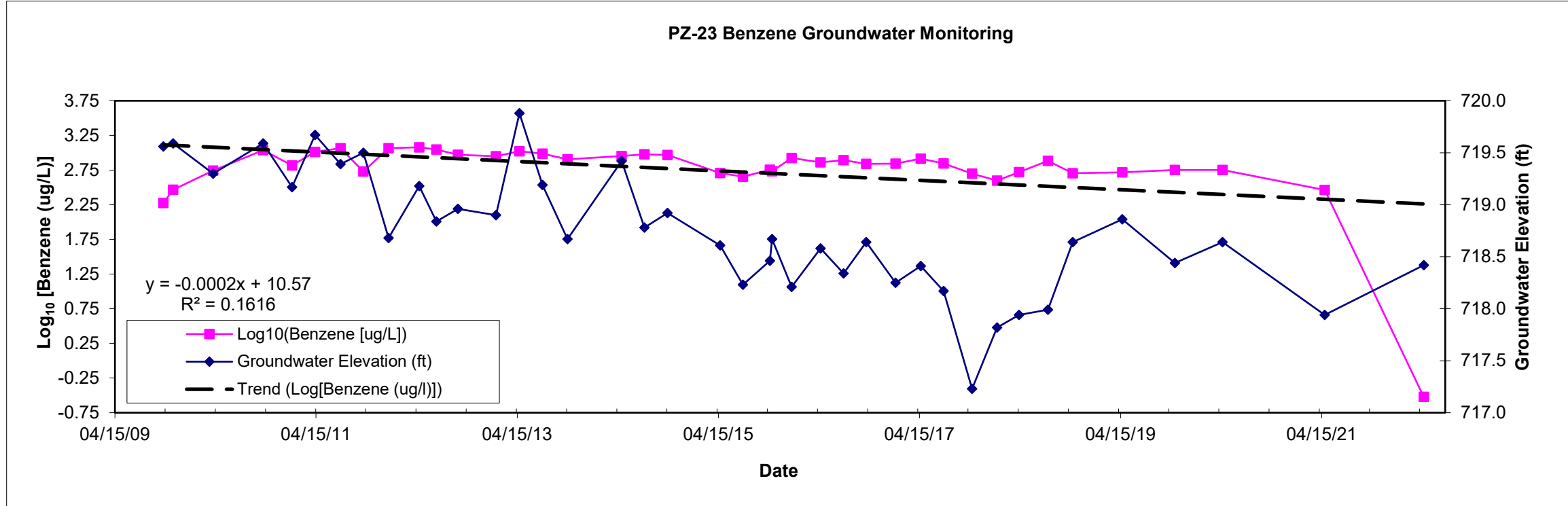




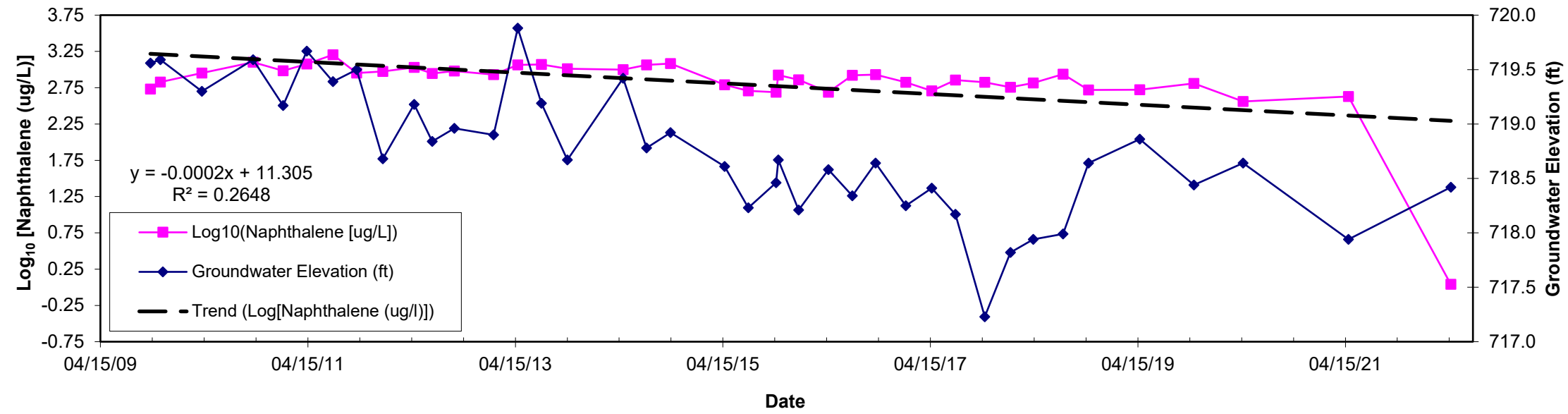




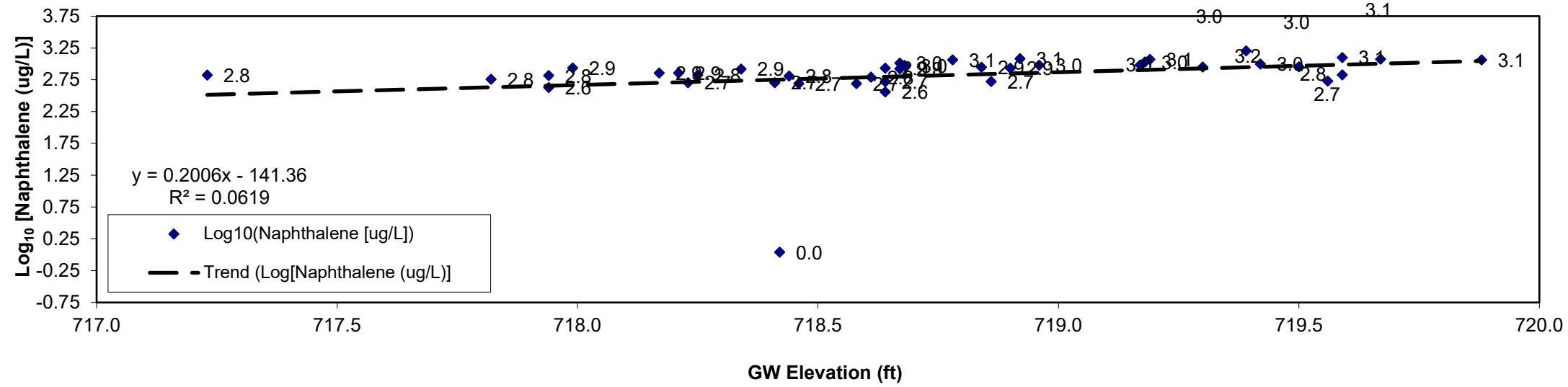


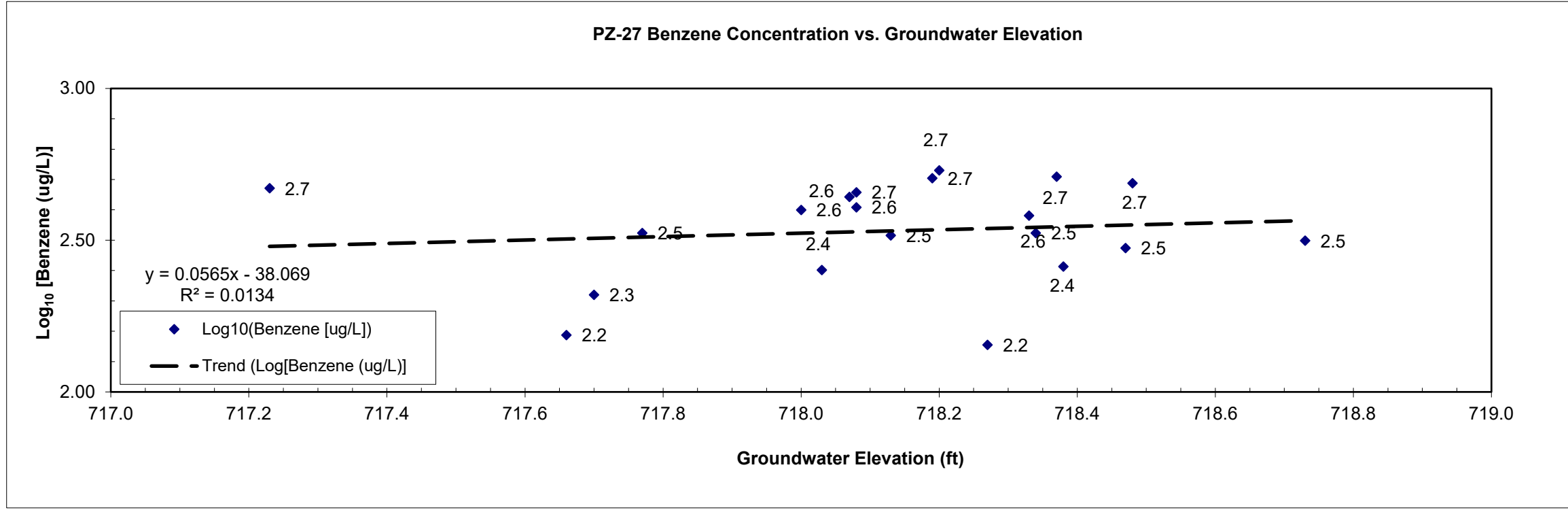
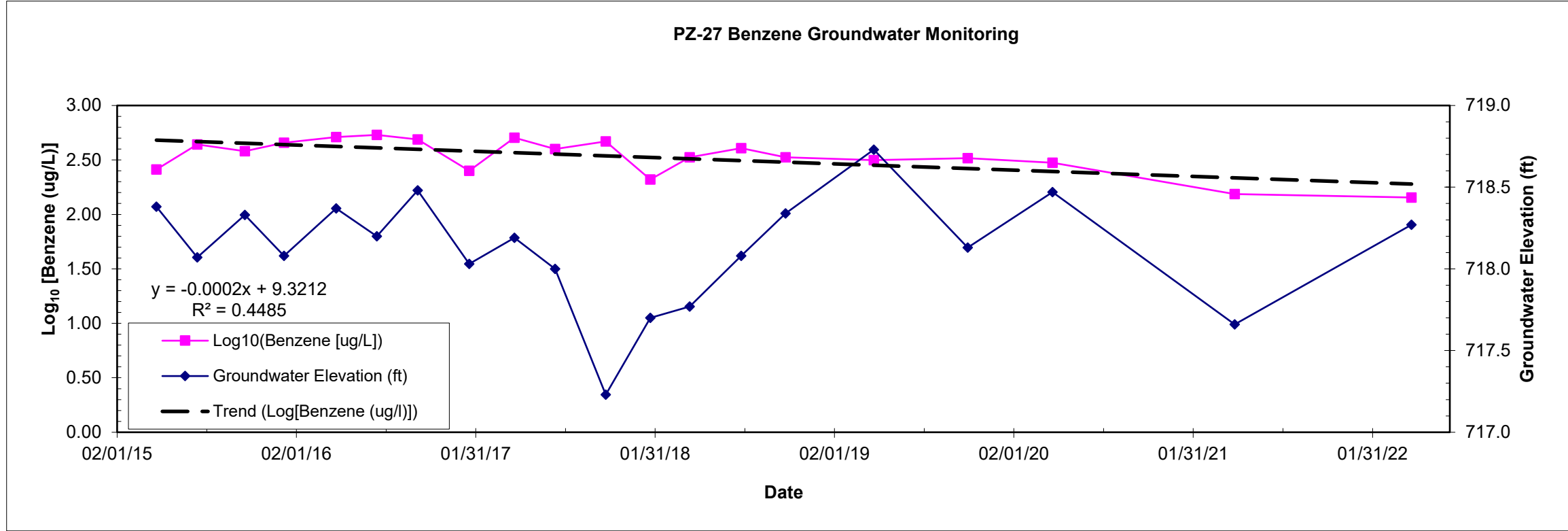


PZ-23 Naphthalene Groundwater Monitoring

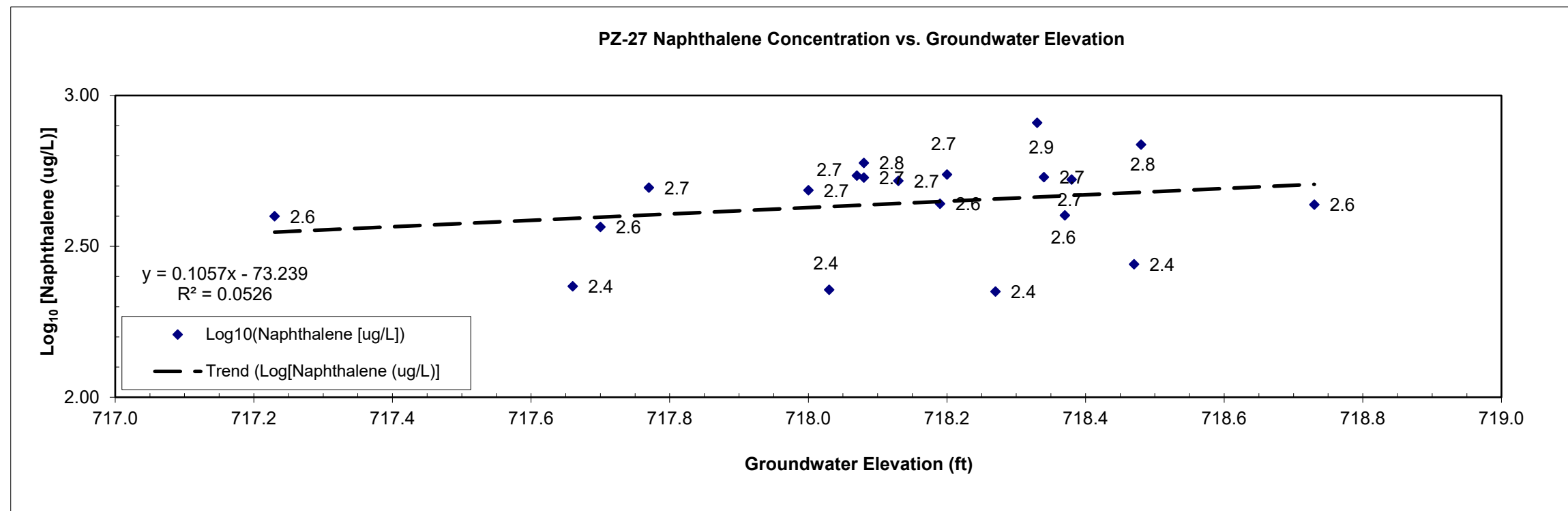
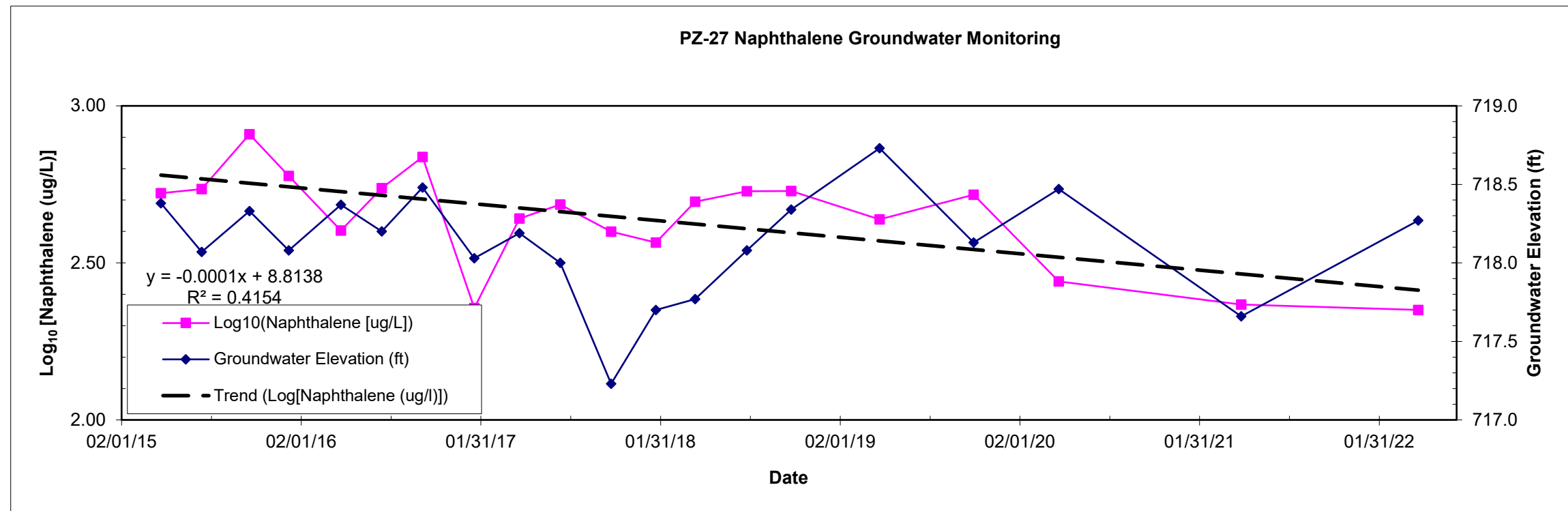


PZ-23 Naphthalene Concentration vs. Groundwater Elevation

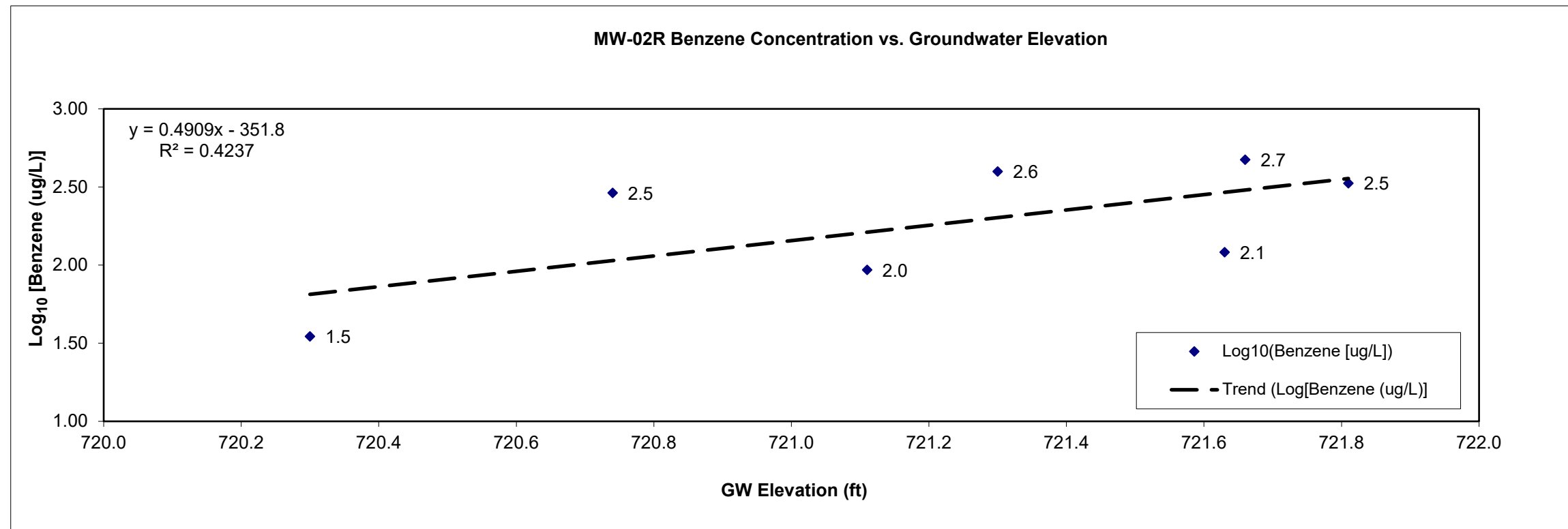
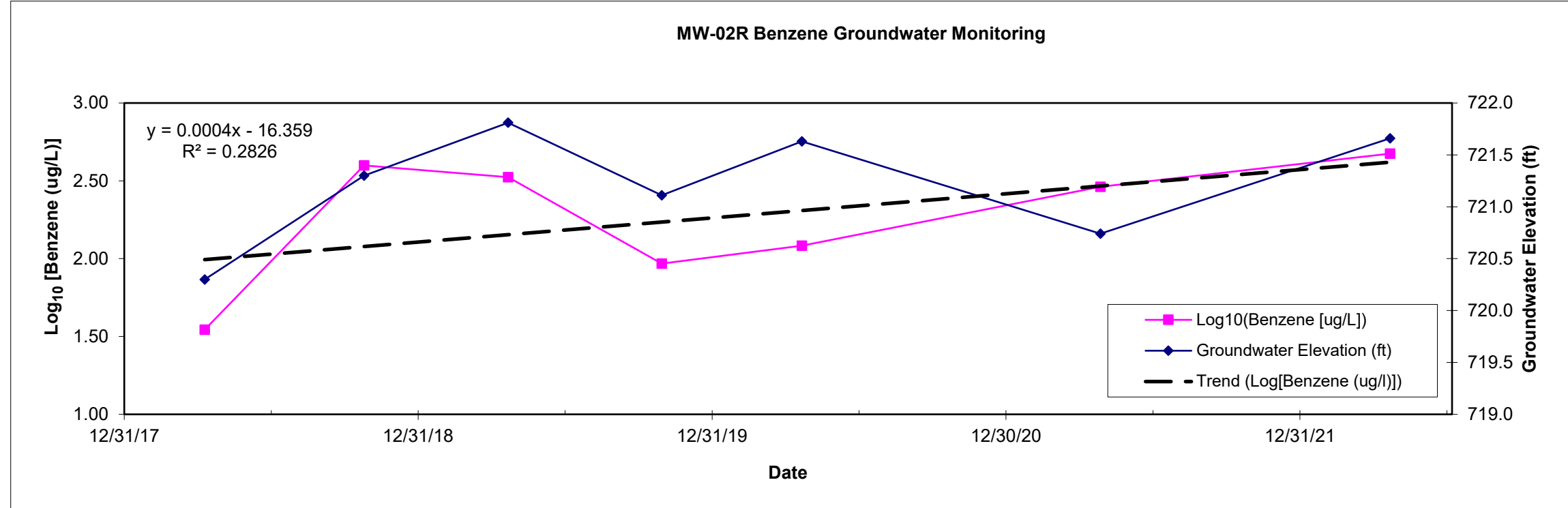


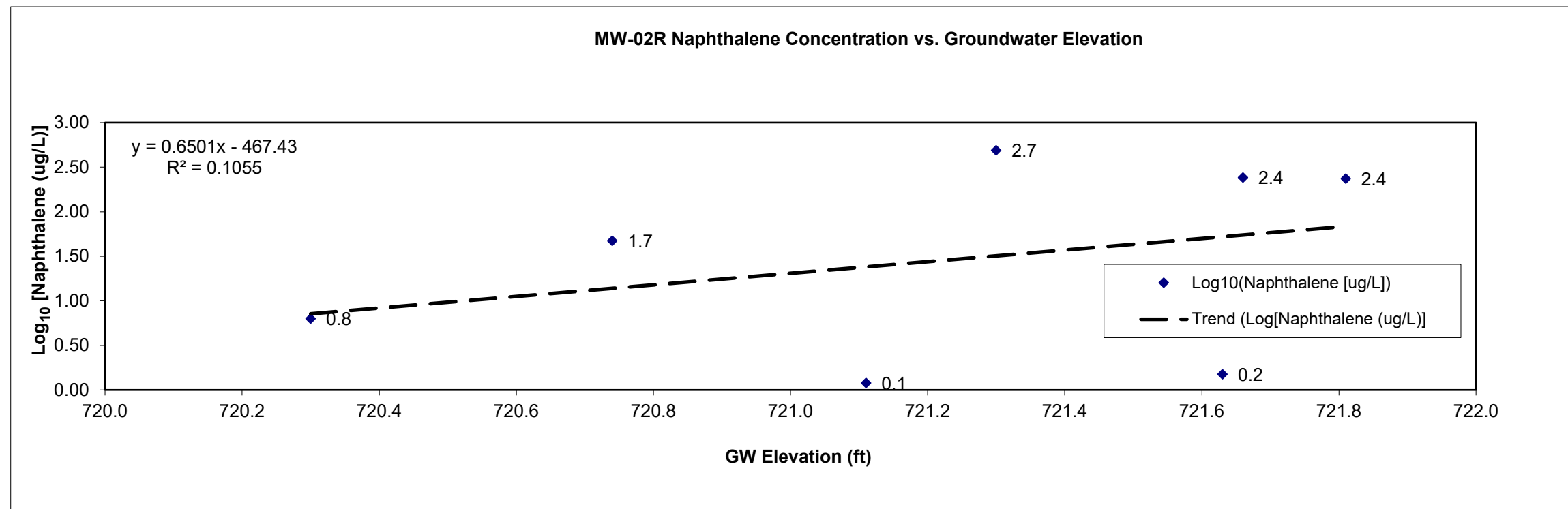
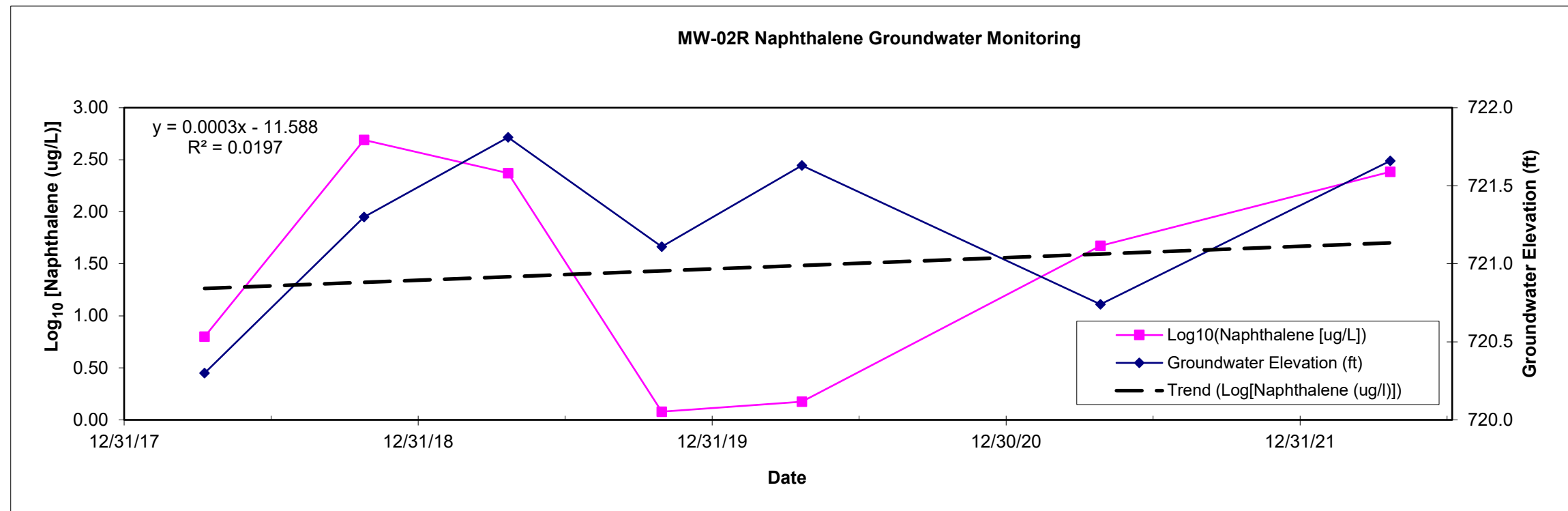


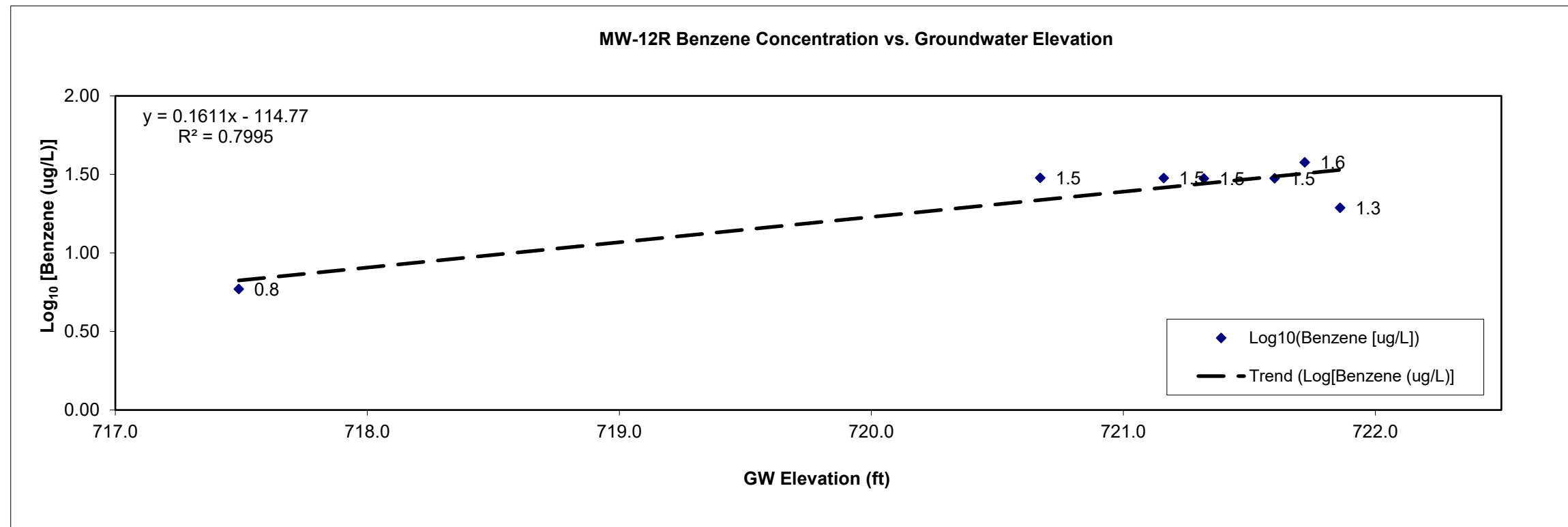
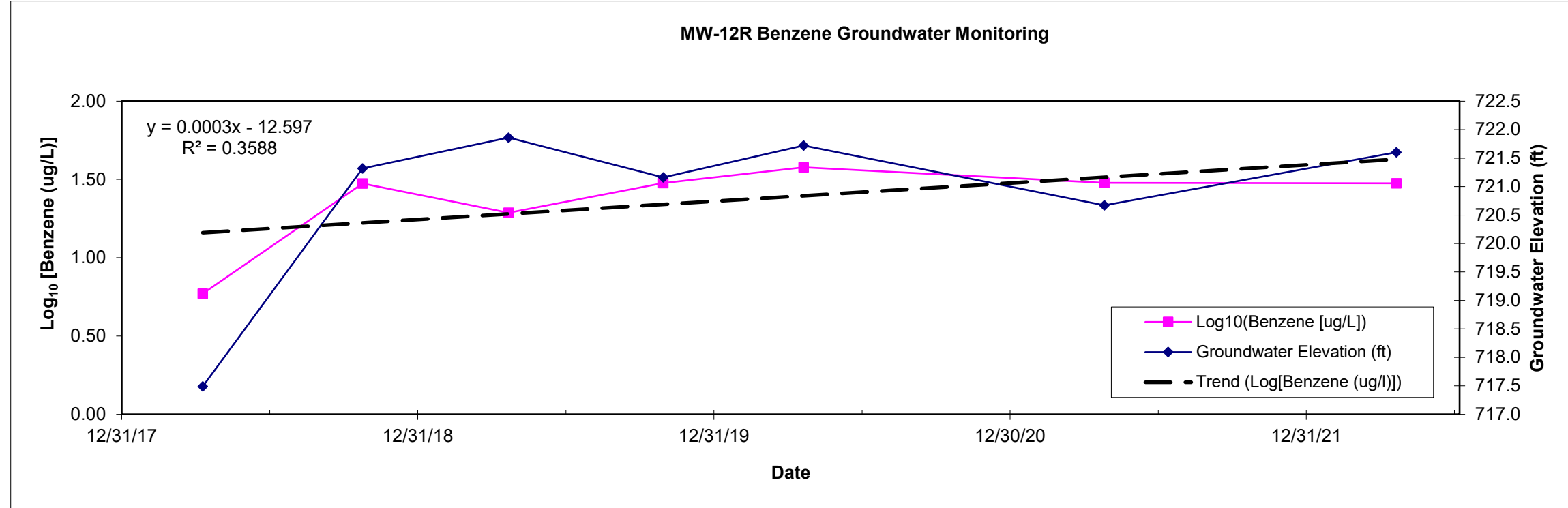




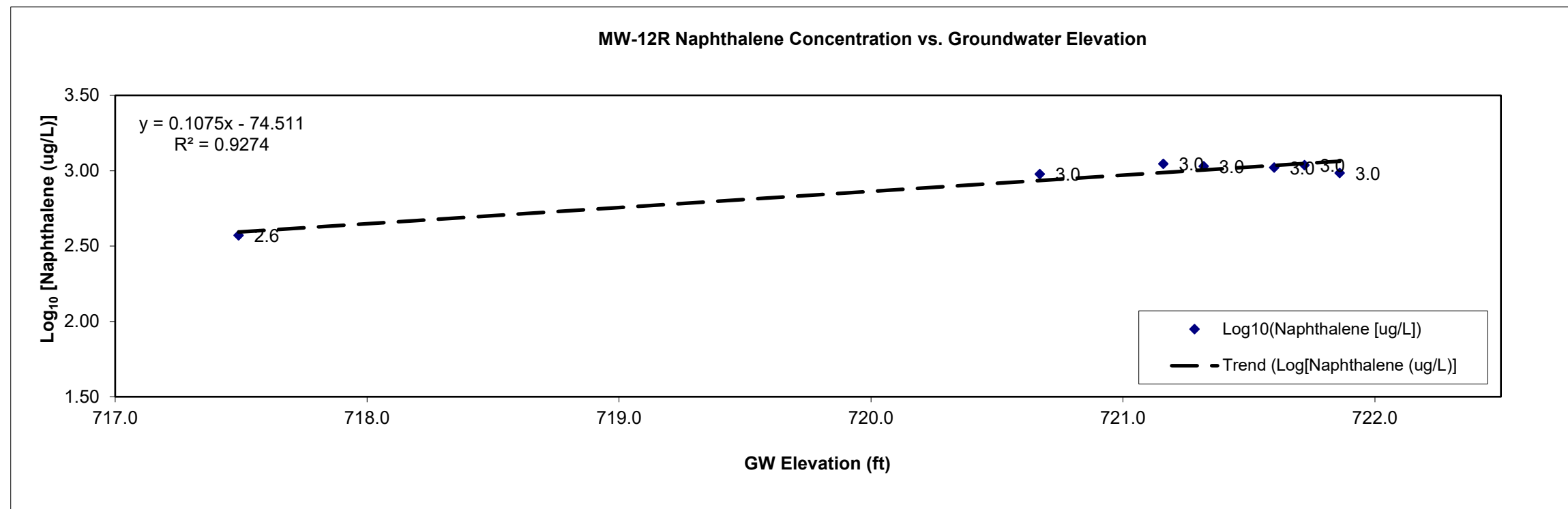
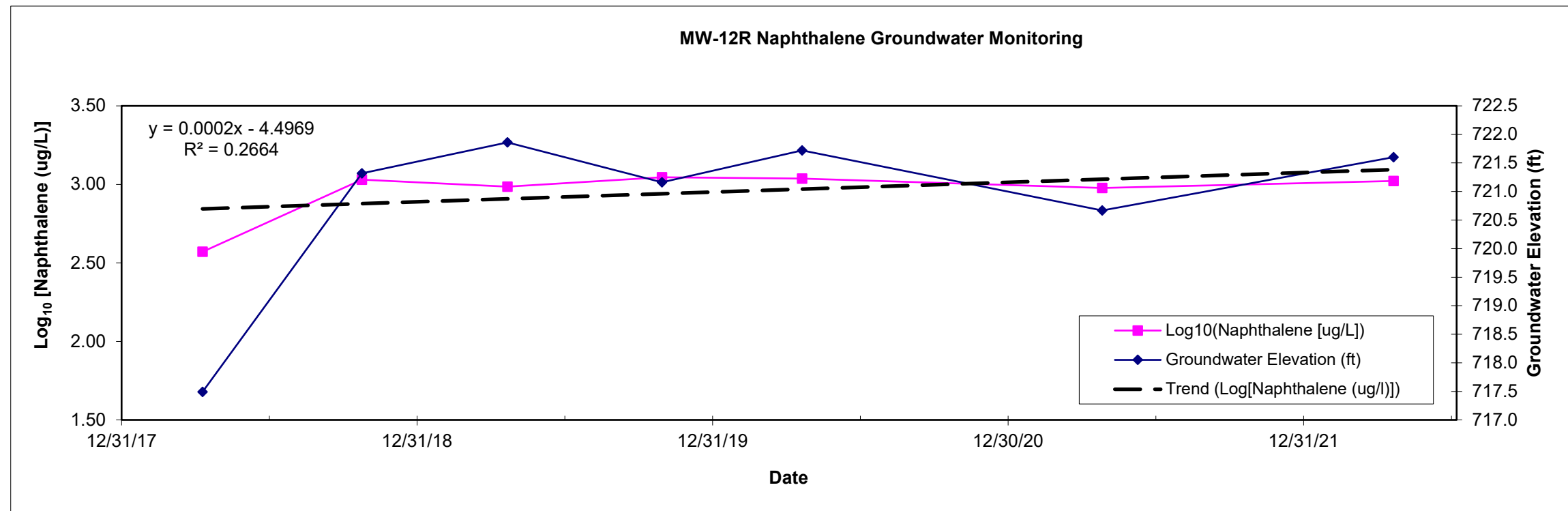
## **APPENDIX E2 SHORT-TERM TREND GRAPHS**

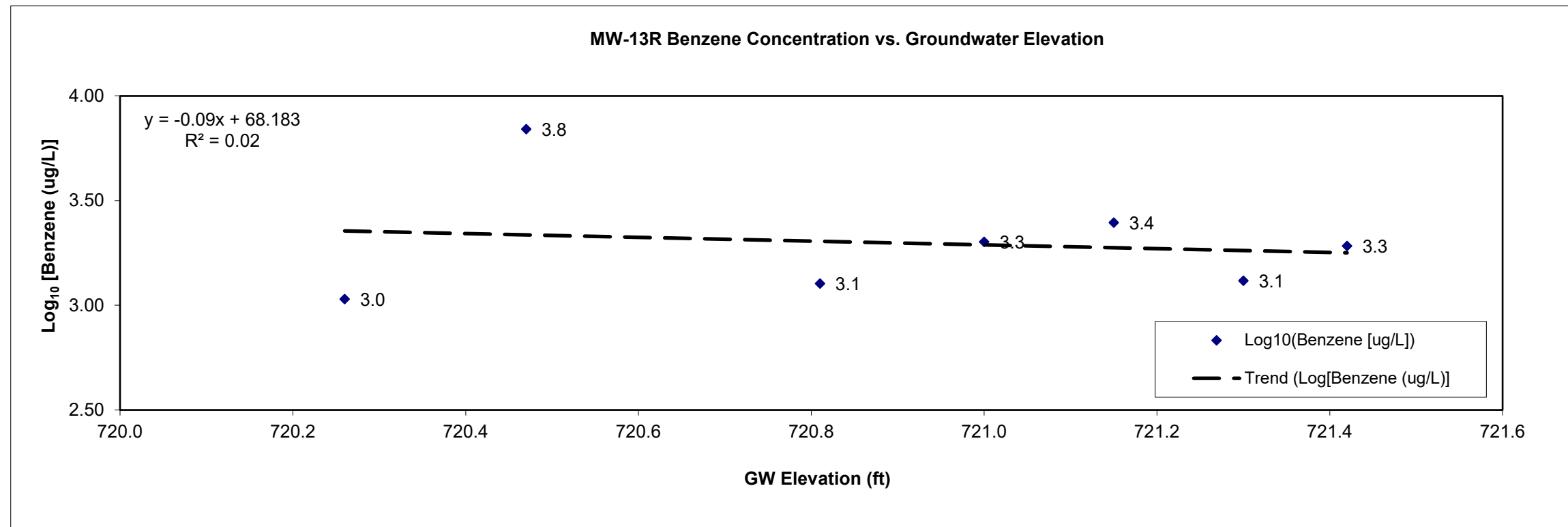
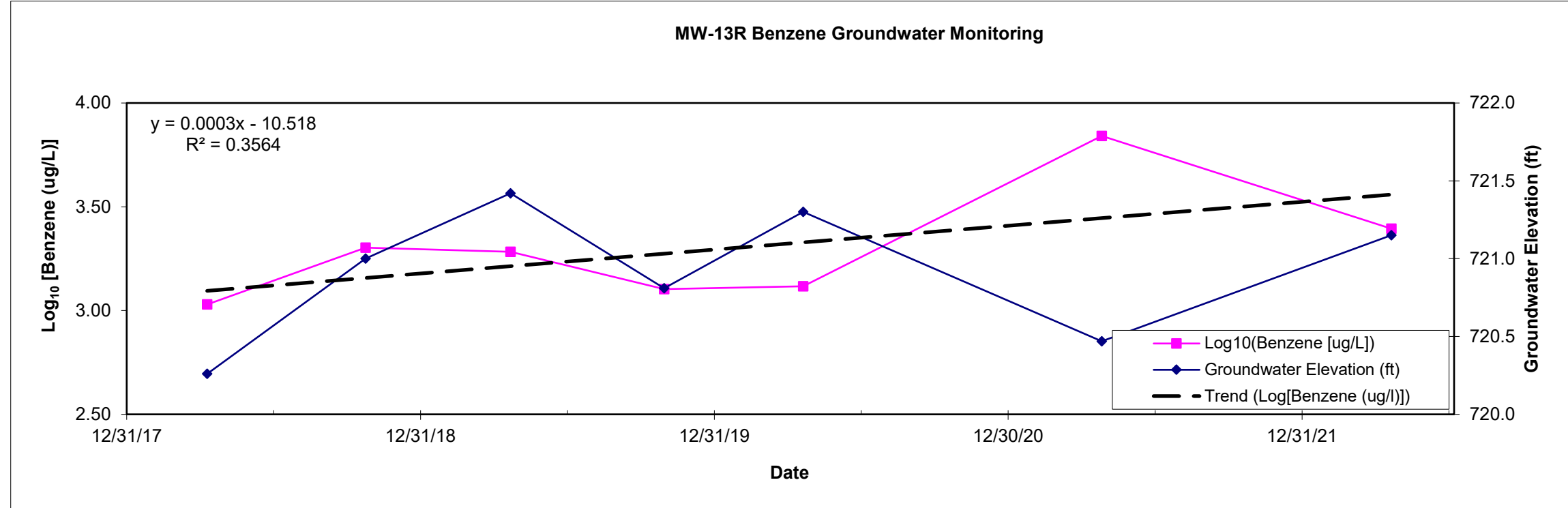


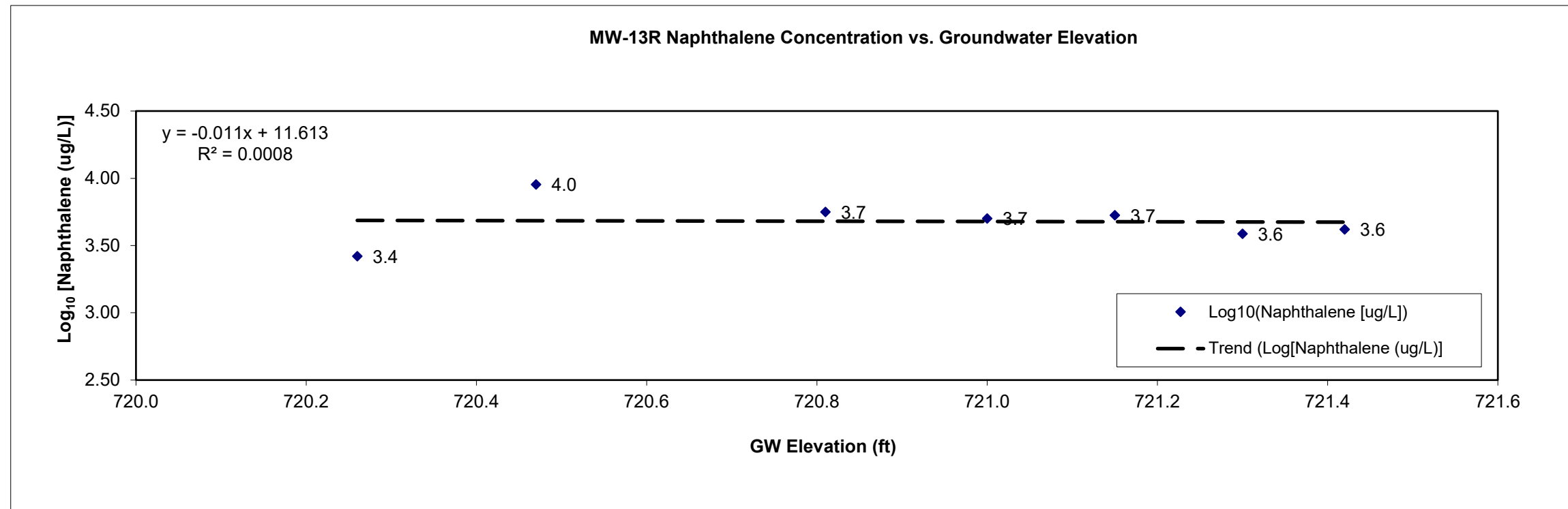
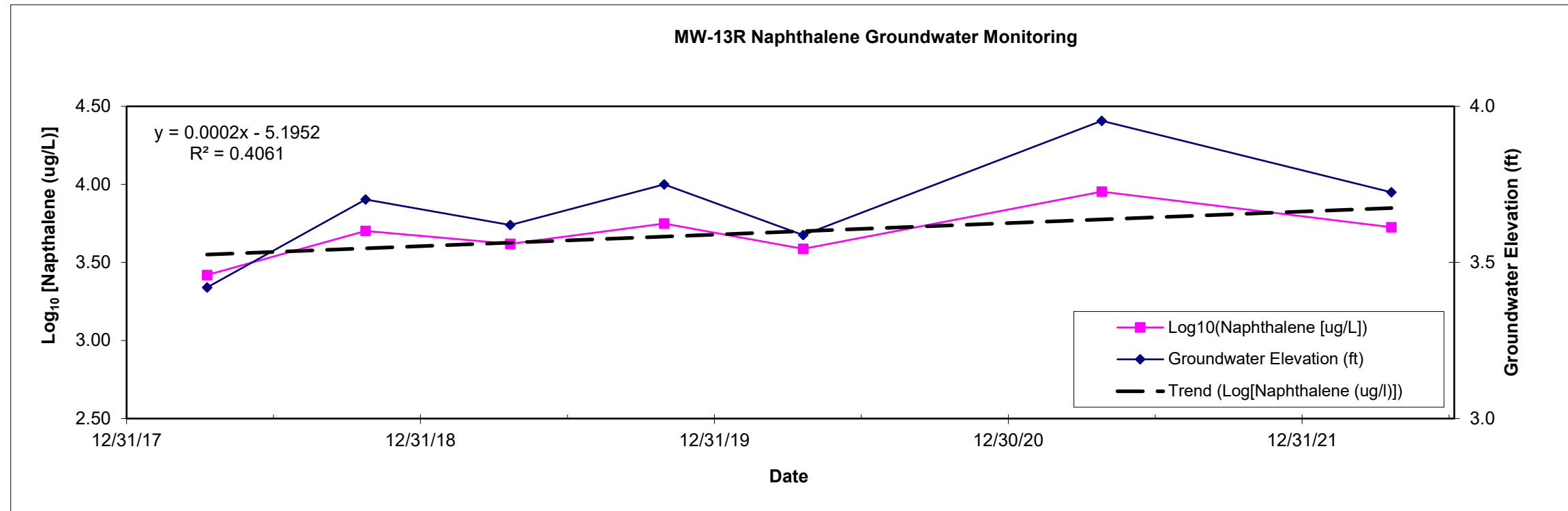


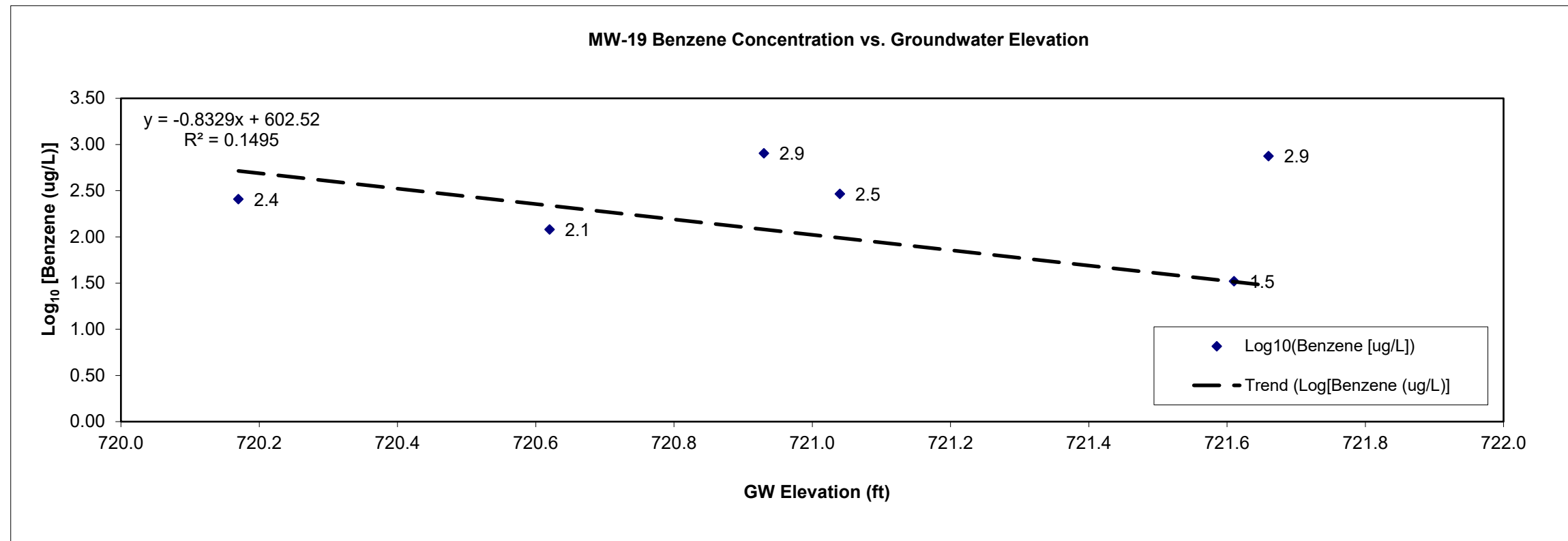
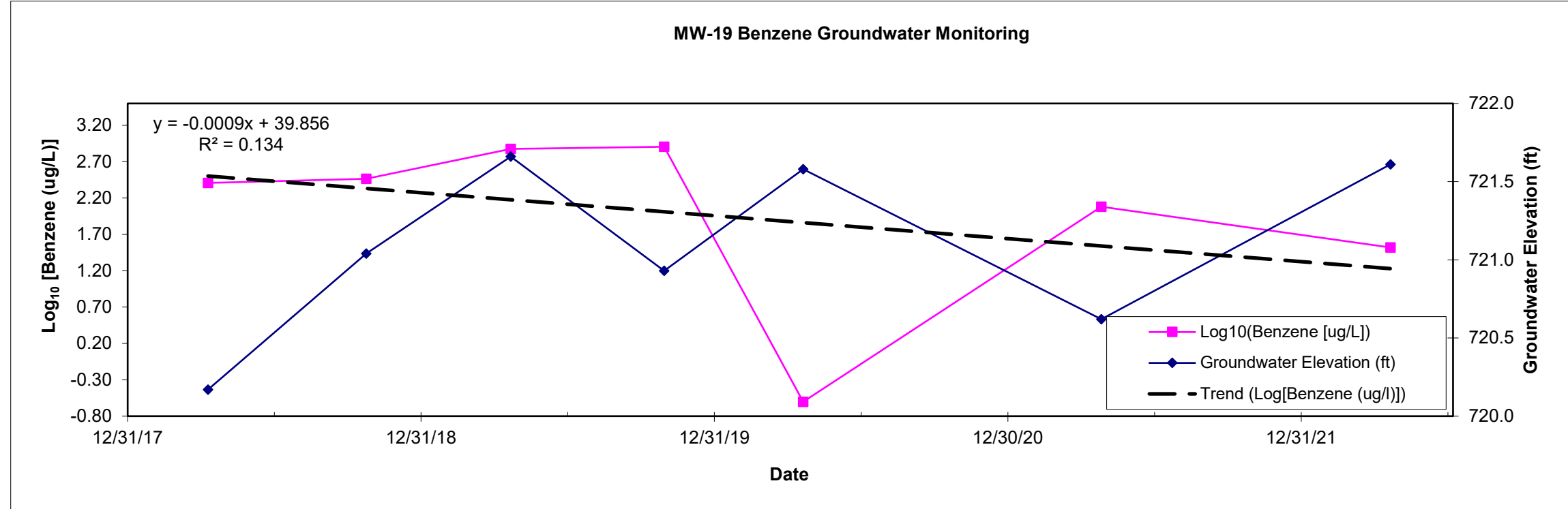


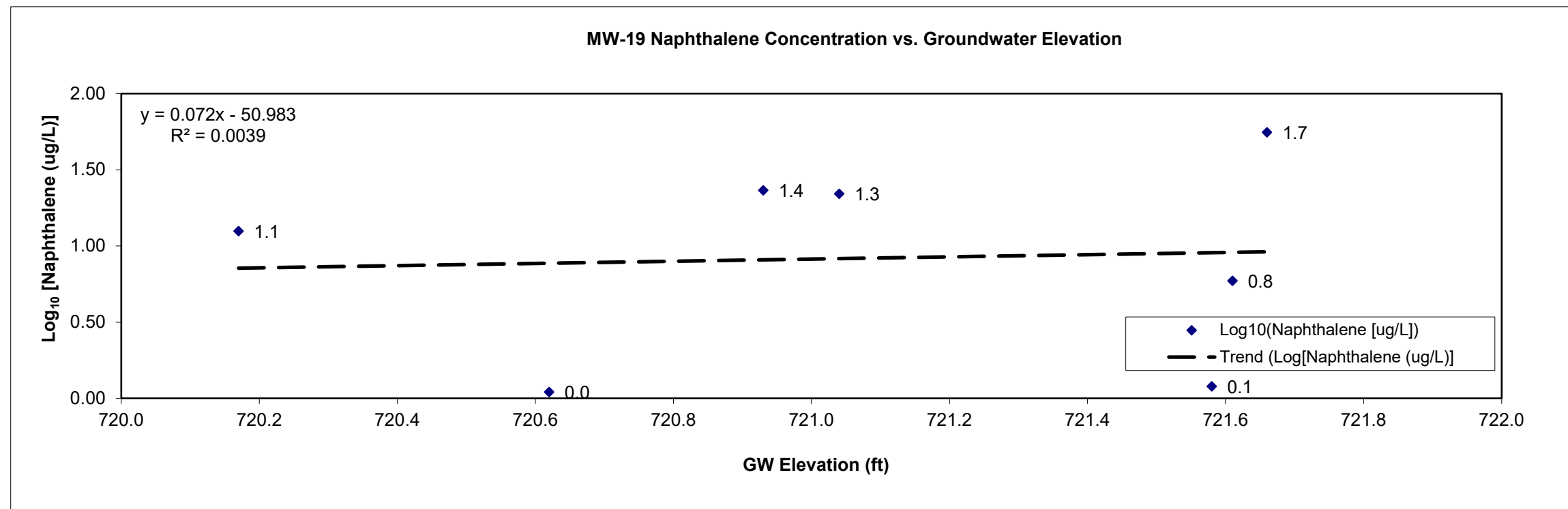
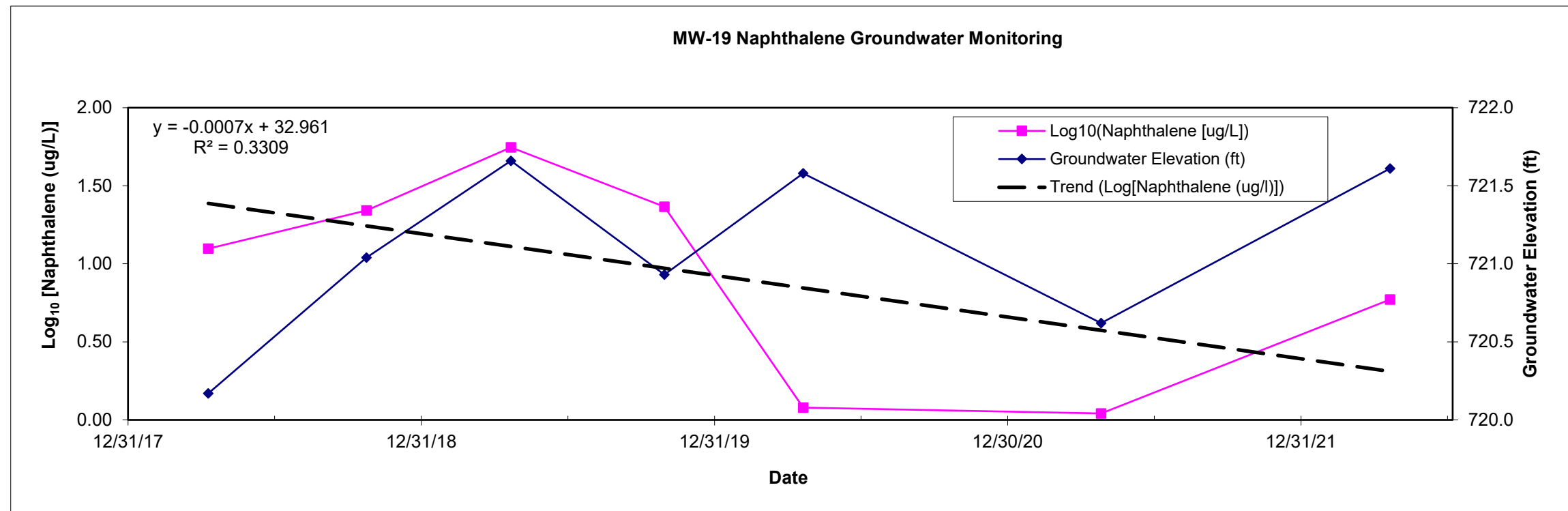


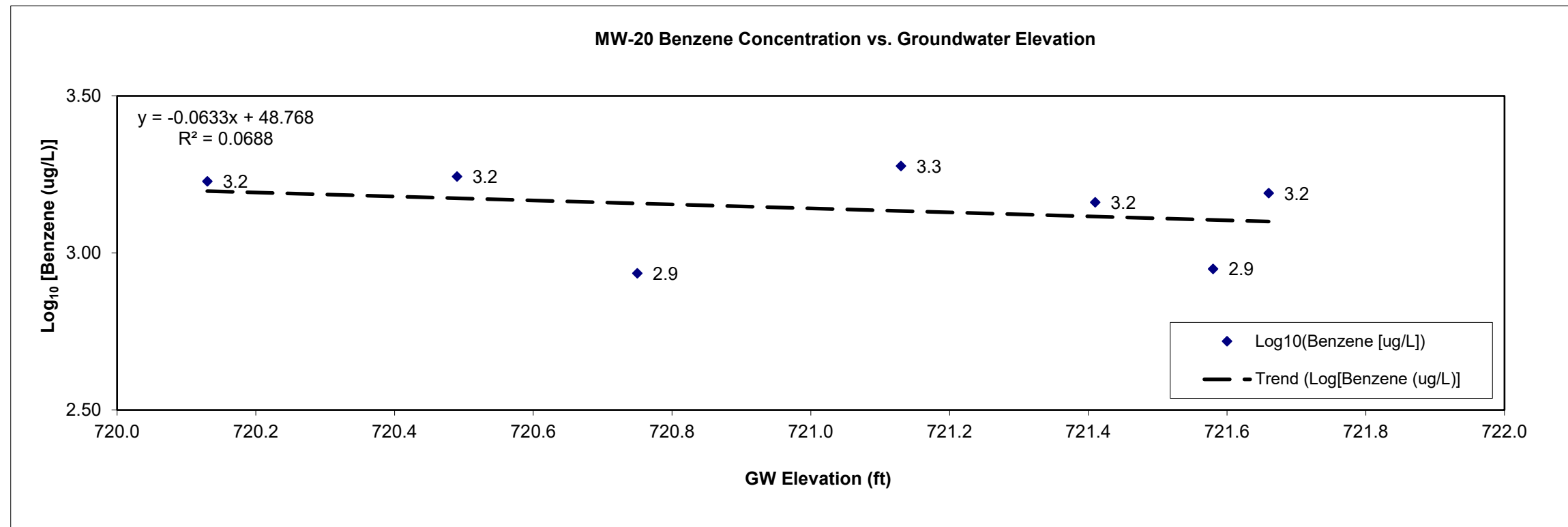
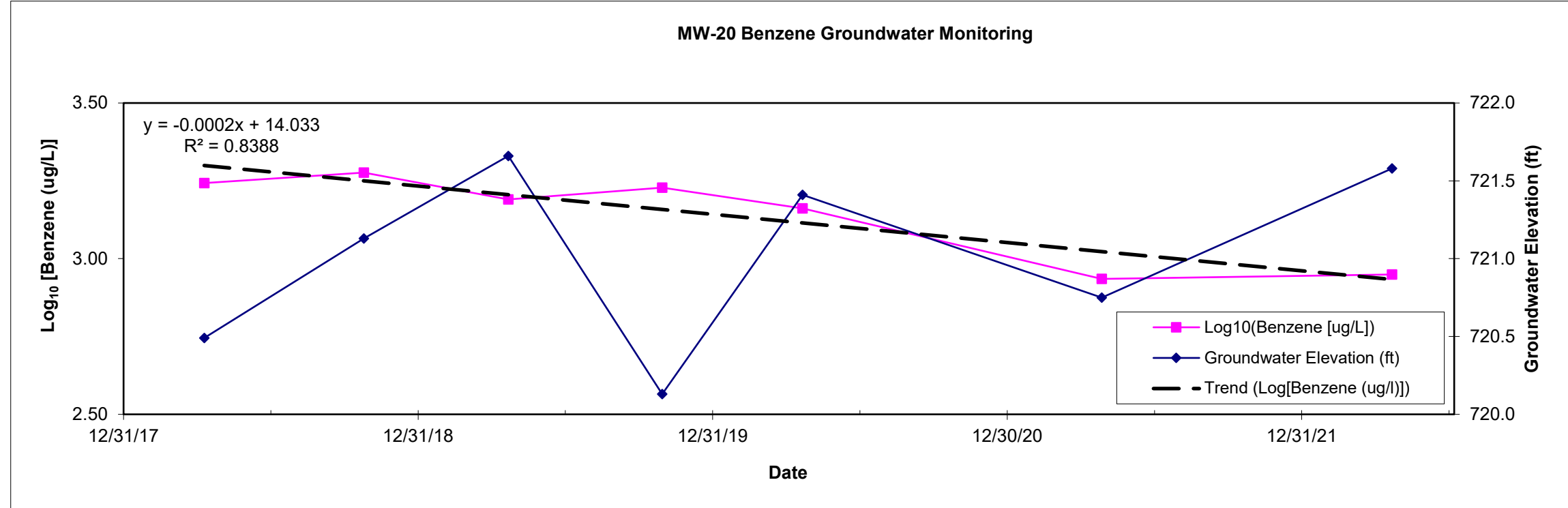




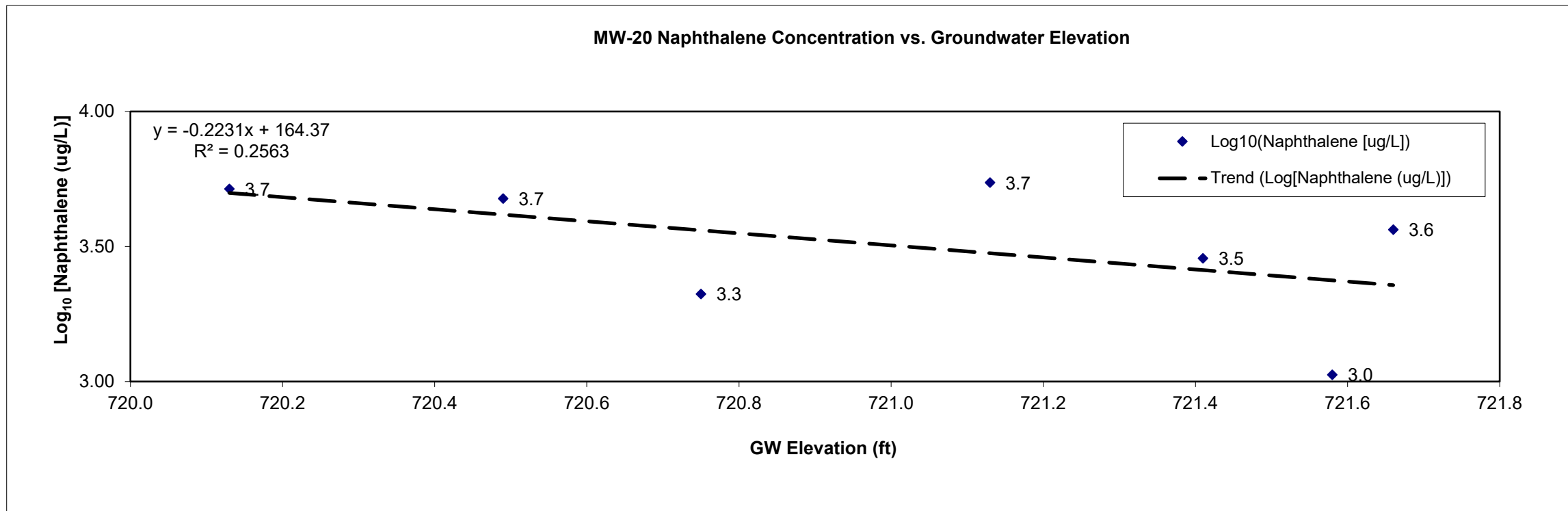
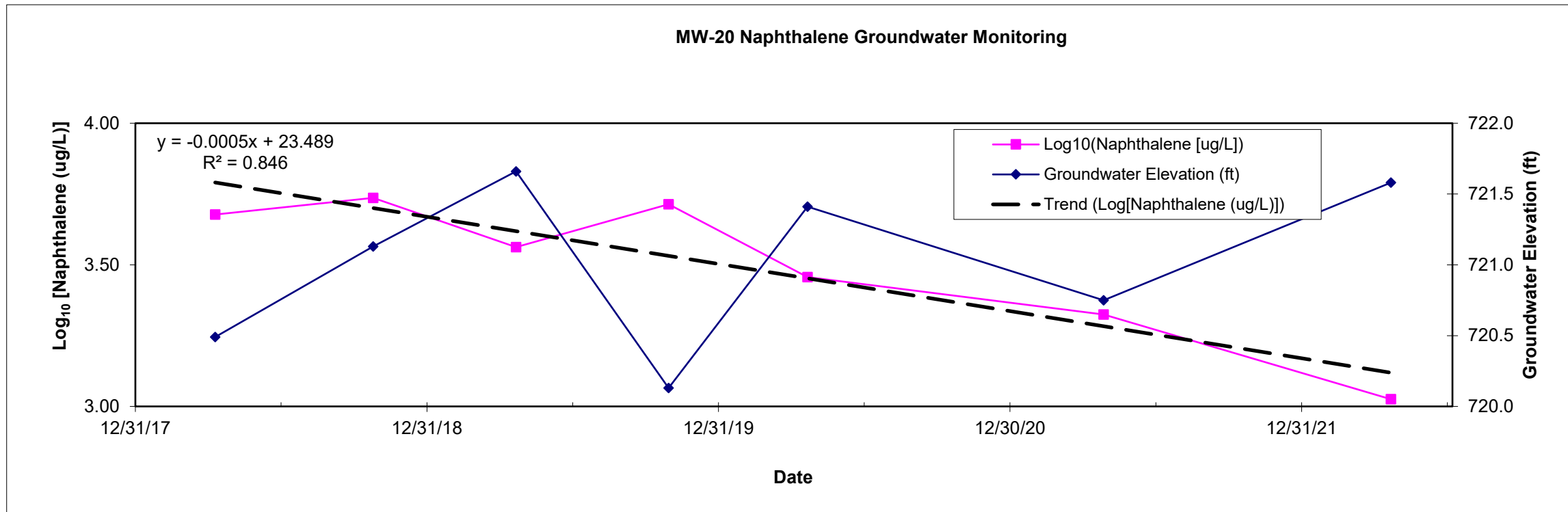


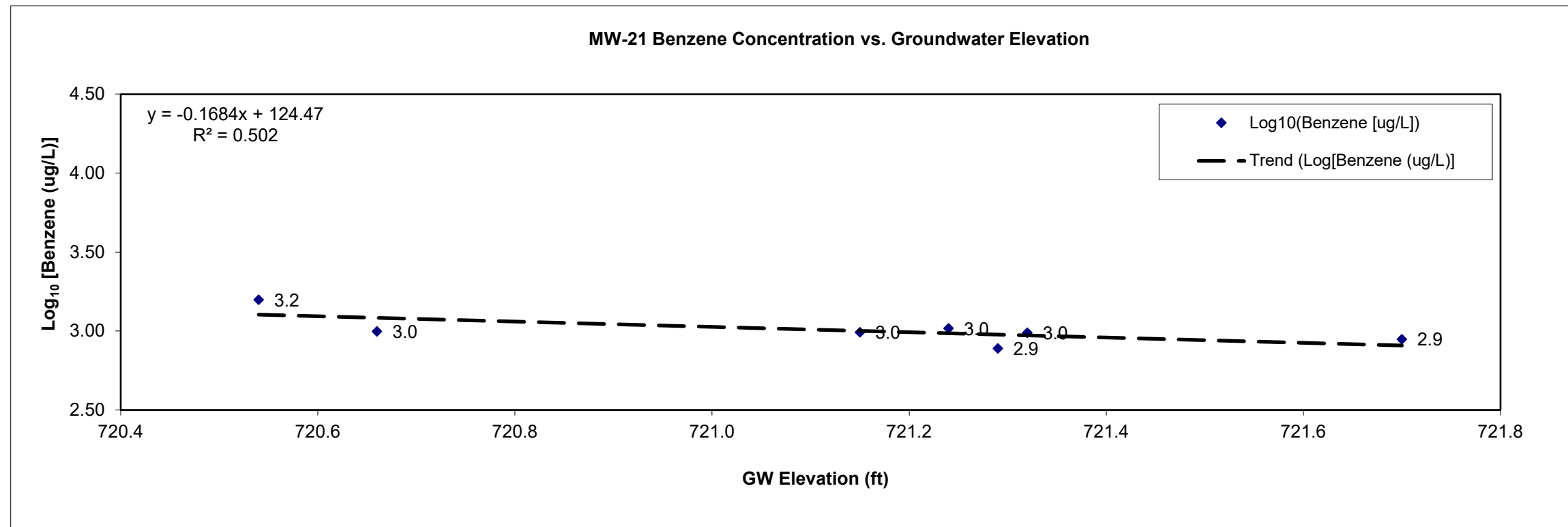
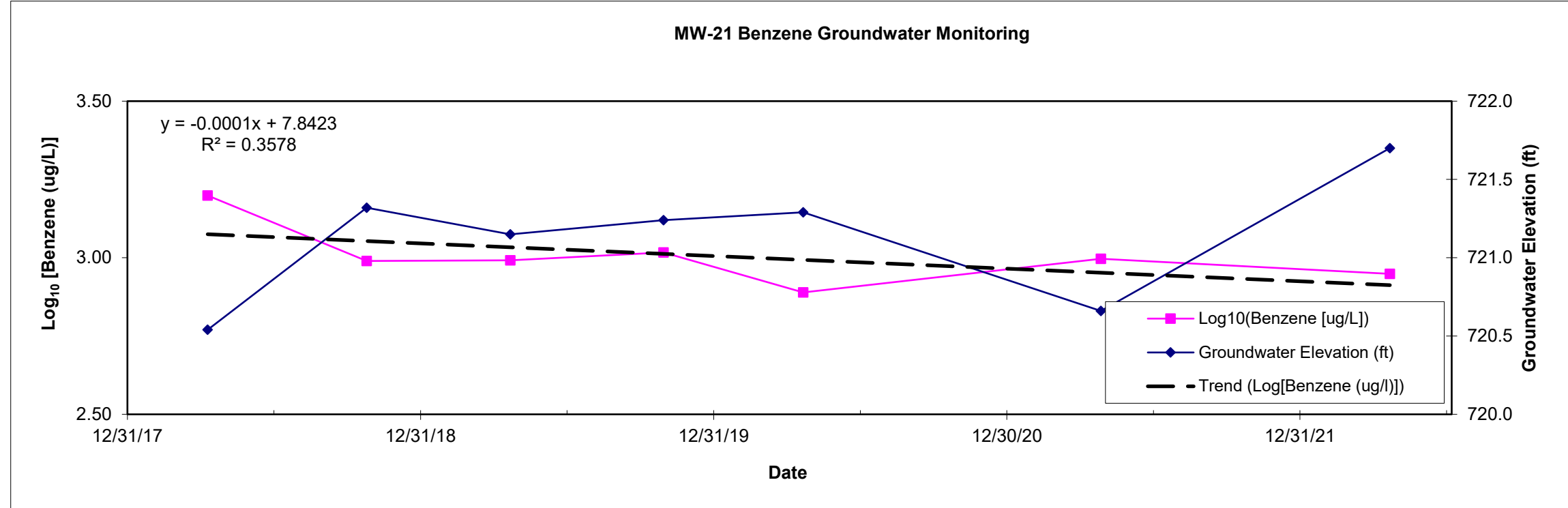




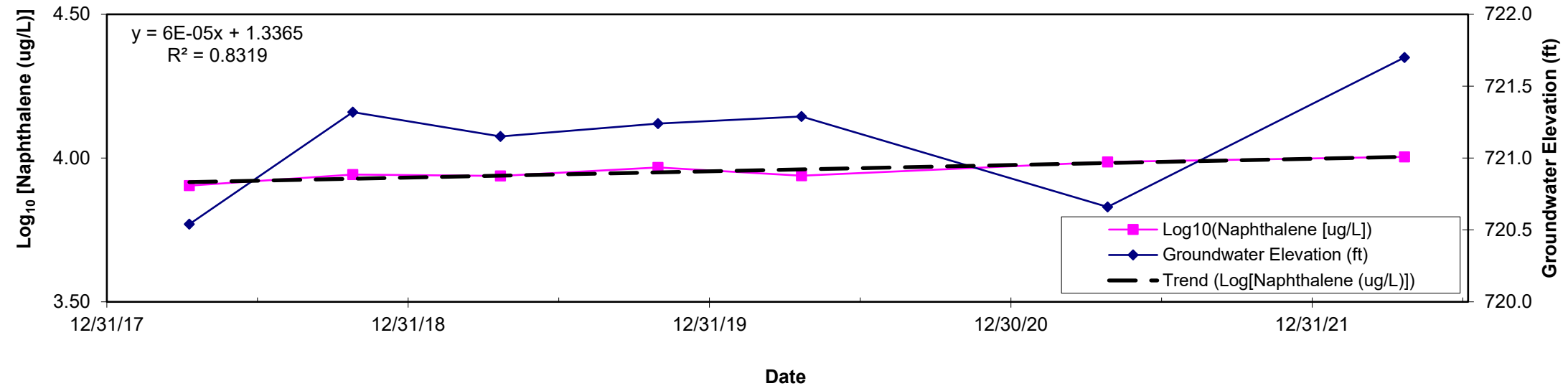








MW-21 Naphthalene Groundwater Monitoring



MW-21 Naphthalene Concentration vs. Groundwater Elevation

