



PLUM POINT ENERGY STATION

GROUNDWATER MONITORING AND CORRECTIVE ACTION
2021 ANNUAL REPORT

**PREPARED IN COMPLIANCE WITH THE
EPA FINAL RULE FOR THE DISPOSAL OF
COAL COMBUSTION RESIDUALS
TITLE 40 OF THE CODE OF FEDERAL REGULATIONS, PART 257**

JANUARY 31, 2022

PLUM POINT ENERGY STATION
GROUNDWATER MONITORING AND CORRECTIVE ACTION
2021 ANNUAL REPORT

Prepared for

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EXECUTIVE SUMMARY

Plum Point Services Company, LLC (PPSC), operates a landfill for the disposal of coal combustion residuals (CCRs) at the Plum Point Energy Station located near Osceola, Arkansas. The landfill is regulated by the Environmental Protection Agency (EPA) Coal Combustion Residuals rule, promulgated at Title 40 of the Code of Federal Regulations (40 CFR), Part 257, and published on April 17, 2015. Landfills regulated by this rule are required to implement and maintain a groundwater monitoring program to determine if the CCR landfill is impacting groundwater quality at the facility's compliance boundary. For this purpose, semiannual groundwater detection monitoring is required. This report presents results from semiannual detection monitoring events performed during 2021 in accordance with 40 CFR Part 257.

The landfill's groundwater monitoring program uses a certified monitoring well network comprised of ten monitoring wells (FTN 2017a). Groundwater sample collection is performed in accordance with the landfill's groundwater sampling and analysis plan (FTN 2017b). Data collected from this program are evaluated in accordance with the landfill's certified statistical analysis plan (FTN 2017c).

FTN Associates, Ltd. (FTN), was contracted to sample groundwater and statistically evaluate the data from the 2021 semiannual monitoring events. Major conclusions from the evaluations include the following:

1. Detection monitoring was performed during April and October 2021 for the first and second half of 2021 monitoring periods, respectively.
2. The direction of groundwater flow varied between the first and second half monitoring events. Water levels gauged during April 2021 indicate groundwater flow was generally toward the southwest across the active landfill area. Water levels gauged during October 2021 indicate groundwater flow was generally toward the northeast across the active landfill area.
3. Of the parameters evaluated, only fluoride has an EPA maximum contaminant level (MCL). None of the measured values in groundwater exceeded the MCL for fluoride.

4. Time-series plots and box-and-whiskers diagrams show variability across the well network for calcium, chloride, fluoride, sulfate, and total dissolved solids (TDS). Values for boron and pH are relatively similar across all wells.
5. Statistical evaluation of the first half of 2021 data set identified confirmed statistically significant increases (SSIs) for calcium at MW-116 and TDS at MW-117. PPSC completed a successful alternate source demonstration (ASD) in response to the SSIs in accordance with §257.94(e)(2). The ASD was certified by an Arkansas-registered professional engineer on October 6, 2021, and is included with this report in accordance with §257.94(e)(2). Based on the successful ASD, PPSC continued with detection monitoring in accordance with §257.94.
6. Statistical evaluation of the second half of 2021 data set identified confirmed SSIs for calcium, sulfate, and TDS at MW-116 and for sulfate and TDS at MW-117. In accordance with §257.94(e)(2), PPSC will undertake an ASD during the first half 2022 to address the confirmed SSIs. Pending the results of the ASD, PPSC will continue with detection monitoring in accordance with §257.94.

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1.0 BACKGROUND

Plum Point Services Company, LLC (PPSC), operates a landfill for the disposal of coal combustion residuals (CCRs) at the Plum Point Energy Station in Mississippi County, Arkansas. The plant and landfill are located approximately 2 miles south of the city of Osceola, as shown on Figure 1.1. The landfill is regulated by the Environmental Protection Agency (EPA) Coal Combustion Residuals rule, promulgated at Title 40 of the Code of Federal Regulations (40 CFR), Part 257, and published on April 17, 2015. The regulation, referred to hereafter as the CCR rule, requires regulated landfills to implement and maintain a groundwater monitoring program to determine if the CCR landfill is impacting groundwater quality at the facility's compliance boundary. For this purpose, groundwater detection monitoring is required on a semiannual frequency. A groundwater sampling program that meets the requirements of the CCR rule was implemented by PPSC during 2015, and the first semiannual detection monitoring event was performed at the landfill during the second half of 2017.

FTN Associates, Ltd. (FTN), was contracted to sample groundwater and statistically evaluate the data from the semiannual monitoring events performed during 2021. This report presents the results of groundwater sampling and the associated statistical evaluations, and is intended to satisfy the reporting requirements of §257.90(e)(1) through (5). The following sections provide a brief description of the sampling area, operational history of the plant and landfill, regional and site-specific hydrogeological setting, and general regional and site groundwater quality.

1.1 Sampling Area

The landfill area encompasses approximately 245 acres located approximately 1 mile west of the Mississippi River and 2 miles south of Osceola, Arkansas. The landfill is bordered by Arkansas Highway 239 to the east, Arkansas Highway 198 to the south, and the BNSF rail line to the west. Beyond these features and immediately north of the landfill are agricultural fields, and topography is relatively flat. A vicinity map of Plum Point Energy Station and the landfill is provided as Figure 1.2.

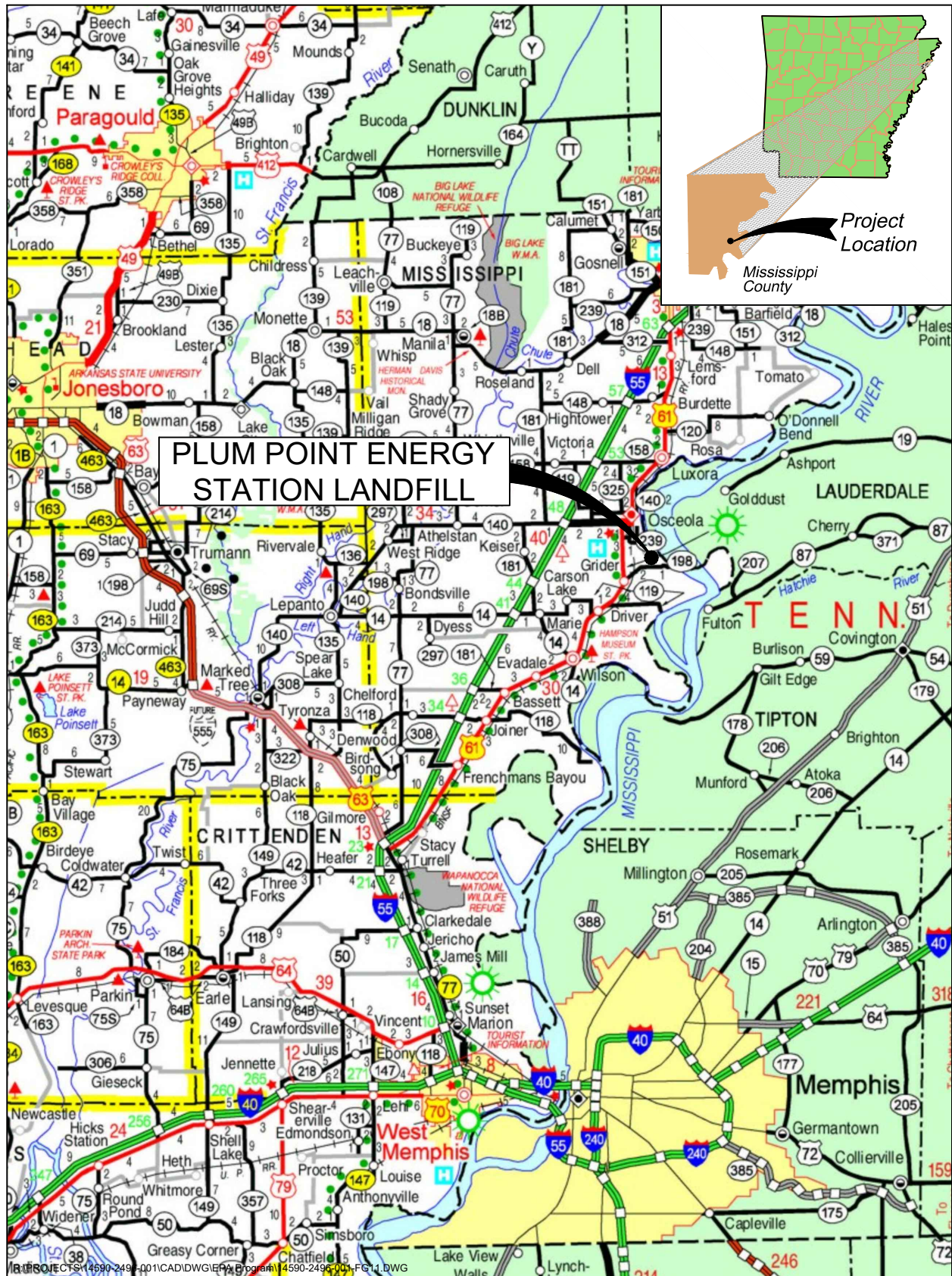


Figure 1.1. Location map.

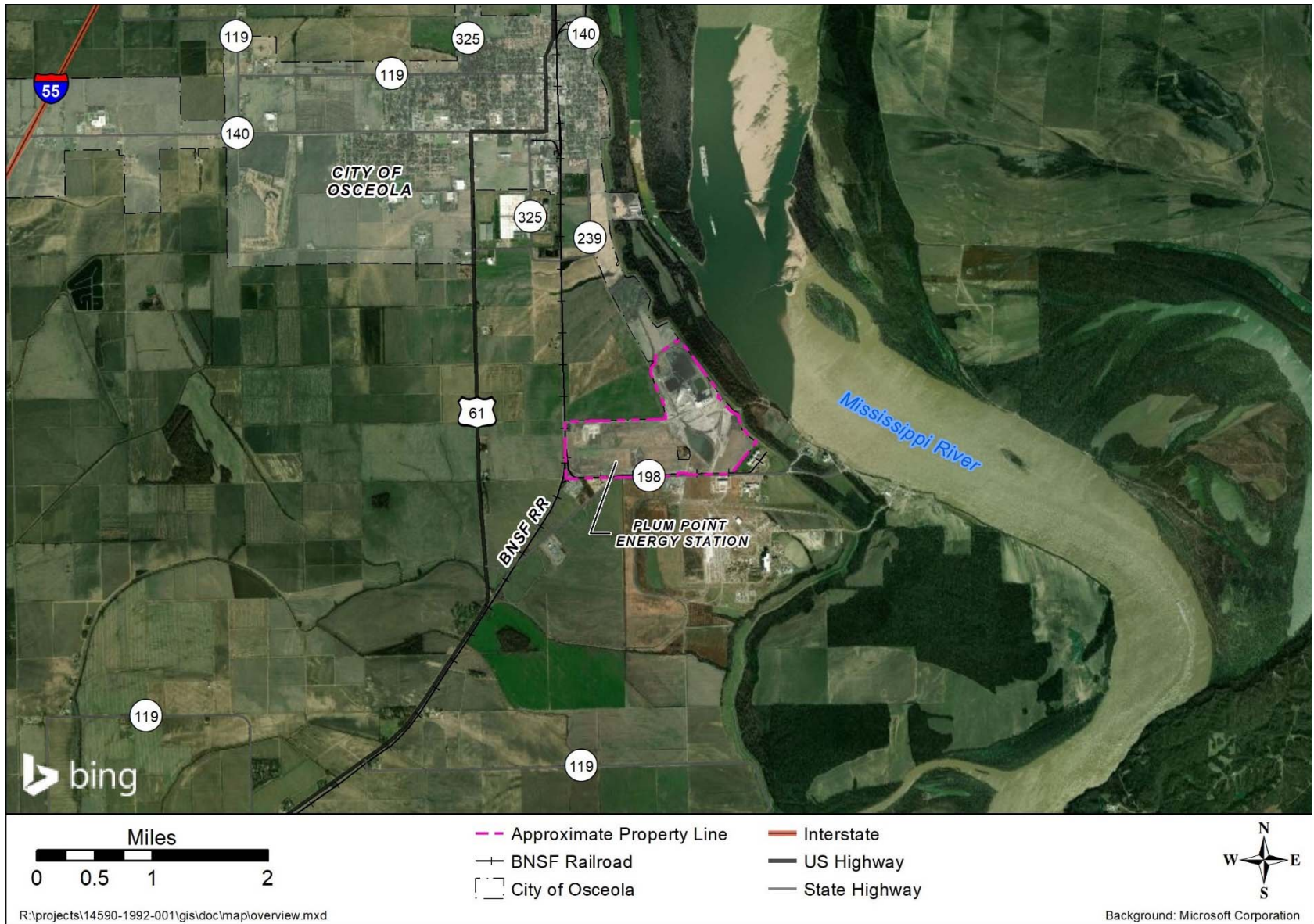


Figure 1.2. Vicinity map, Plum Point Energy Station.

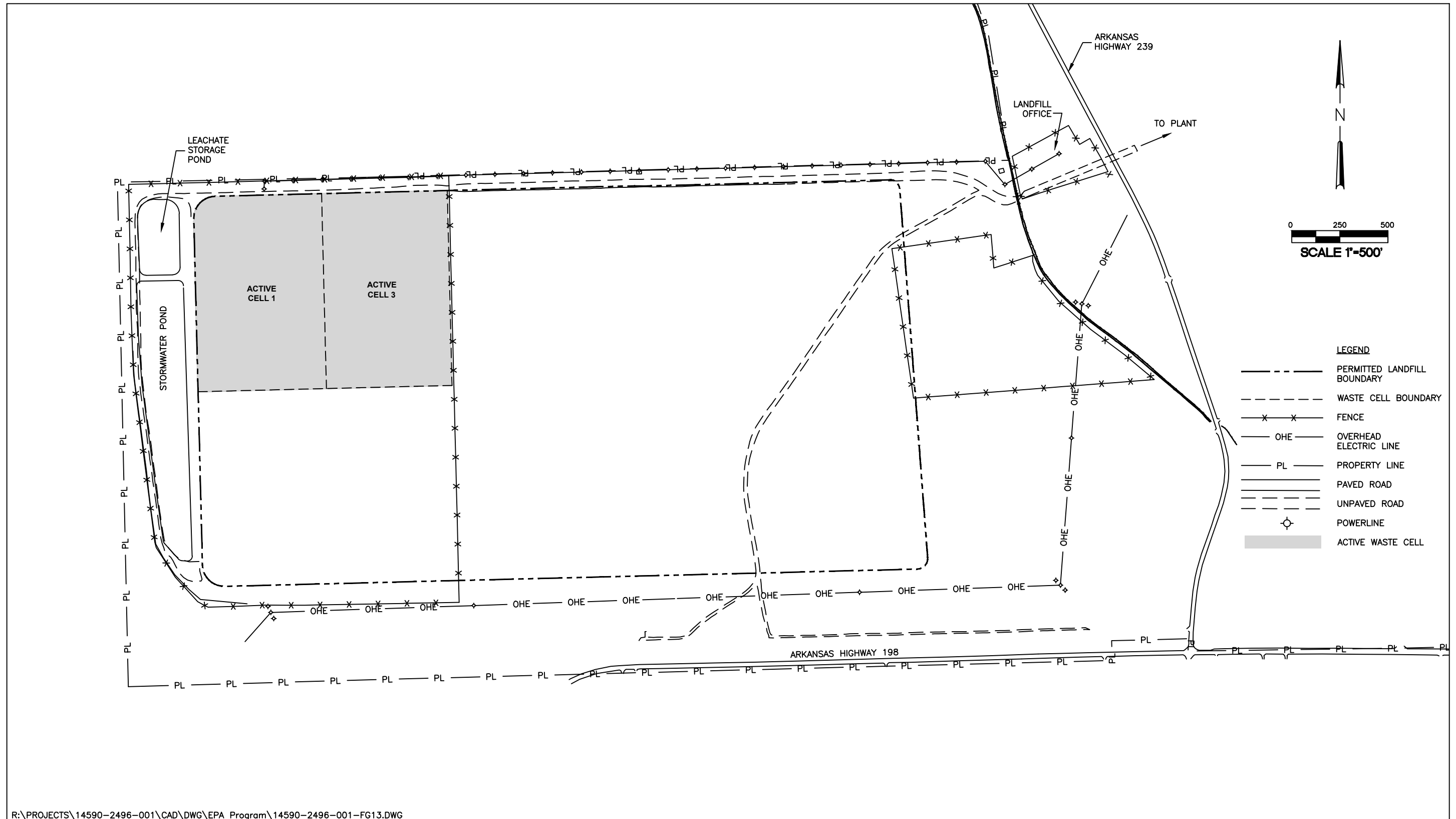
1.2 Operational History

The plant has been in operation since 2010 and generates electricity through the combustion of coal. Approximately 500,000 tons of CCR material is produced and deposited in the landfill each year. The landfill is permitted by the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), under permit no. 0303-S3N-R1 and became active during March 2010. The landfill currently has two active disposal cells, cells 1 and 3, which are shown on Figure 1.3. The combined area of the two active CCR disposal cells is approximately 30 acres.

Groundwater detection monitoring was initiated at the landfill in November 2007, in accordance with Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 22 requirements. The landfill's groundwater monitoring system was expanded and designed to conform to the requirements of the CCR rule. The groundwater monitoring network was certified by FTN in October 2017 (FTN 2017a). Details regarding the certified groundwater monitoring network are provided in Section 2.0 and in the landfill groundwater monitoring network certification report (FTN 2017a).

1.3 Regional Hydrogeology

The landfill is located in the Mississippi Alluvial Plain physiographic region, as shown on Figure 1.4. The region was formed by the deposits of the Mississippi River and its tributaries and is generally flat-lying (Cushing, Boswell, & Hosman 1964). The uppermost aquifer in the region is the Mississippi River Valley alluvial aquifer (hereafter referred to as the alluvial aquifer). The alluvial aquifer is comprised of unconsolidated Quaternary-age alluvial and terrace deposit sands and gravels that generally grade upward to clays and silts, which form a semi-confining to confining layer over much of the aquifer. Regionally, the alluvium reaches depths of 100 ft to 200 ft below ground surface (bgs) (Ryling 1960; Cushing, Boswell, & Hosman 1964). Beneath the alluvial aquifer is the Tertiary-aged Jackson-Claiborne clay, which acts as a lower confining unit. The Jackson group is comprised of primarily dense clay with occasional lenses of fine-grained sand (Peterson, Broom, & Bush 1985). The regional direction of groundwater flow is toward the southwest (Schrader 2015, Rodgers & Whaling 2020).



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Figure 1.3. Landfill layout map.

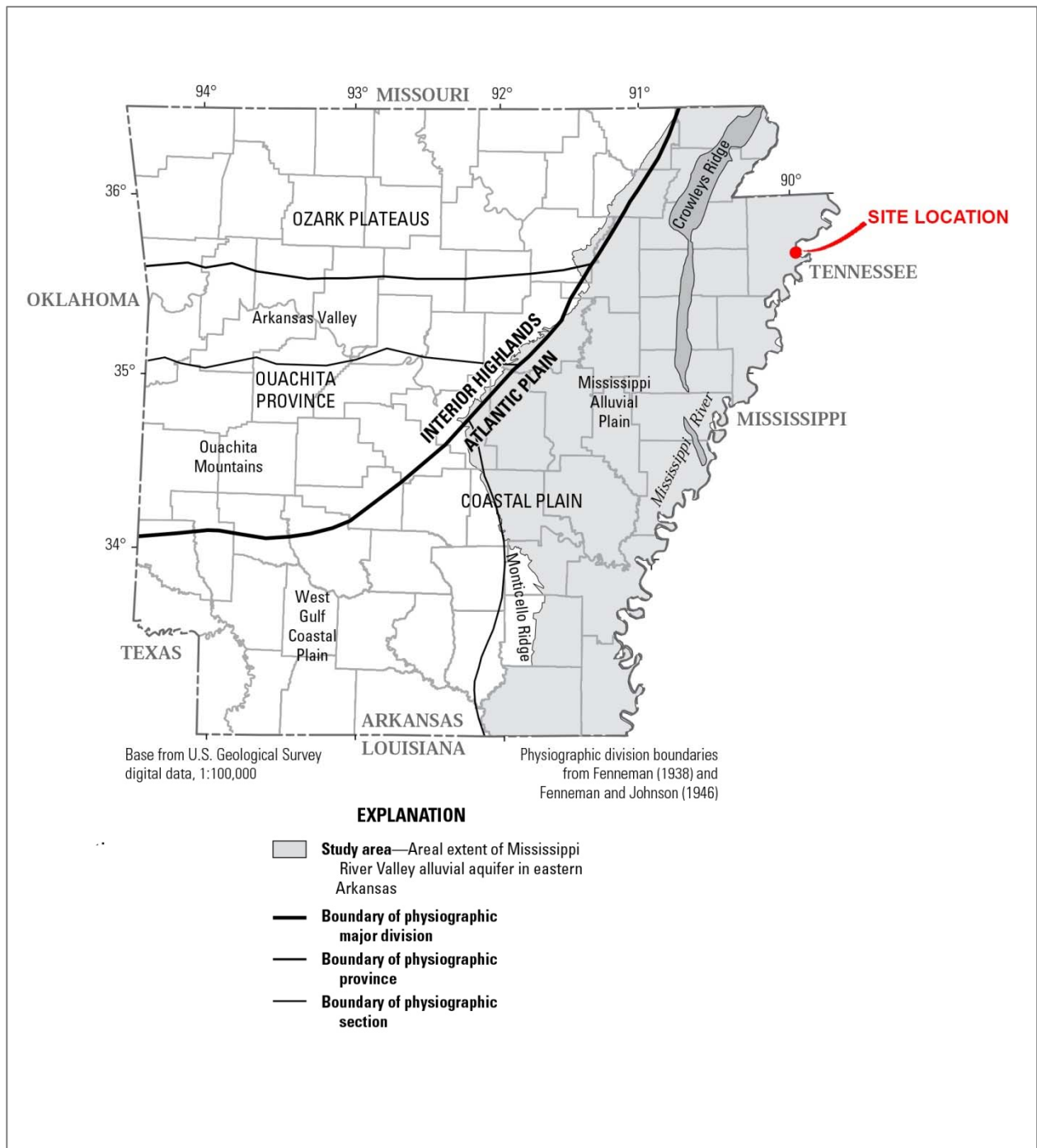


Figure 1.4. Physiographic location, Plum Point Energy Station (adapted from Schrader 2015).

1.4 Site Hydrogeology

A detailed site investigation was performed in 2001 as part of the DEQ permit application for the landfill. The findings from the investigation were submitted to DEQ by Genesis Environmental Consulting, Inc. (GEC), in a geotechnical and hydrogeological investigation (GHI) report (GEC 2001). Findings from the GHI indicated that the confining unit above the alluvial aquifer ranges from 0 ft to over 30 ft thick, with an average thickness of 15 ft at the site. Confining unit soils are comprised of brown to grey clay, silty clay, and sandy clays. Underlying the confining unit are fine- to coarse-grained sands of the alluvial aquifer, with fine- to coarse-grained gravel encountered at depth. Based on one deep boring, completed to a depth of 200 ft below ground surface (bgs), the coarse-grained aquifer materials reach a depth of 190 ft bgs in the vicinity of the landfill.

Laboratory geotechnical testing of confining unit soils indicate a vertical permeability ranging from 6.7×10^{-4} centimeters per second (cm/s) to 3.7×10^{-8} cm/s. Field results from one aquifer pumping test and multiple aquifer slug tests indicate that the uppermost alluvial aquifer has an average hydraulic conductivity of 1.09×10^{-2} cm/s (GEC 2001). The GHI reported an effective porosity for the aquifer of 27% (GEC 2001), which agrees with published values ranging from 10% to 30% for similar aquifer materials (EPA 1998, Yu et al. 2015).

The direction of groundwater flow at the landfill is variable and changes from eastward to westward on a seasonal basis (FTN 2017a). The direction of flow is influenced by the river stage of the adjacent Mississippi River (Kresse et al. 2014).

1.5 General Groundwater Quality

Regionally, groundwater in the alluvial aquifer is a calcium-bicarbonate water type with sodium, magnesium, chloride, sulfate, silica, and iron comprising the majority of the remaining dissolved ions (Kresse et al. 2014). Elevated concentrations of trace metals including iron, manganese, and arsenic are ubiquitous in the alluvial aquifer and thought to be elevated due to the presence of carbonaceous material within the aquifer that drives redox-sensitive parameters to dissolve in groundwater (Kresse & Fazio 2003, Gonthier 2003, Kresse & Clark 2008, Welch et al. 2009, Kresse et al. 2014). Concentrations of most parameters vary widely both laterally and

vertically in the aquifer (Kresse et al. 2014). Groundwater at the top of the aquifer is generally influenced by the quality of natural recharge (e.g., precipitation and surface waterbodies) and anthropogenic activity. Conversely, groundwater quality at the base of the aquifer is influenced heavily by the underlying confining formation (Kresse et al. 2014).

2.0 MONITORING NETWORK AND SCHEDULE

The following sections describe the certified monitoring well network, changes made to the network during 2021, sampling schedule, network maintenance, sampling methodology, and required laboratory analyses.

2.1 Monitoring Well Network

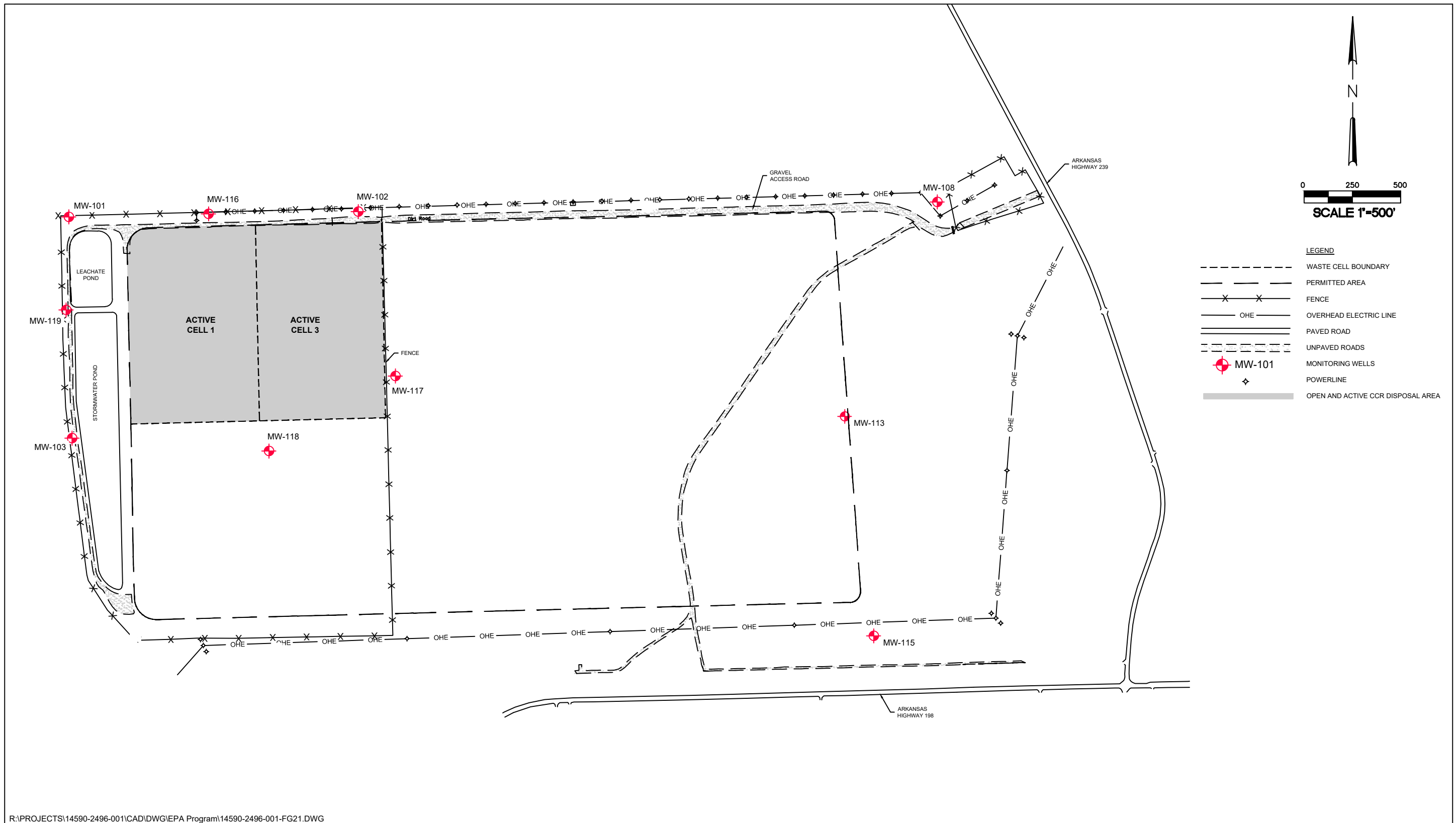
The certified groundwater monitoring network for the CCR rule includes the 10 monitoring wells shown on Figure 2.1. The wells are constructed of 2-inch, schedule 40 polyvinyl chloride (PVC) pipe, with 10-ft slotted well screens. A summary of well construction details is included in Table 2.1.

Table 2.1. Summary of well construction details.

| Well Number | Well Installation Date | Ground Surface Elevation (ft NAVD ^[a]) | Measuring Point Elevation ^(b) (ft NAVD) | Total Depth (ft below measuring point) | Screened Interval (ft NAVD) |
|-------------|------------------------|--|--|--|-----------------------------|
| MW-101 | 4/9/2001 | 239.4 | 242.75 | 33.6 | 219.2-209.2 |
| MW-102 | 4/9/2001 | 240.5 | 243.99 | 30.2 | 223.8-213.8 |
| MW-103 | 9/26/2007 | 240.5 | 243.25 | 32.8 | 220.5-210.5 |
| MW-108 | 4/11/2001 | 241.8 | 245.11 | 32.4 | 222.7-212.7 |
| MW-113 | 4/07/2009 | 241.5 | 244.63 | 35.9 | 223.7-208.7 |
| MW-115 | 9/25/2007 | 240.4 | 243.55 | 33.0 | 220.6-210.7 |
| MW-116 | 6/23/2015 | 239.3 | 243.97 | 31.9 | 222.5-212.5 |
| MW-117 | 6/24/2015 | 239.4 | 242.53 | 34.2 | 218.5-208.5 |
| MW-118 | 6/24/2015 | 238.0 | 241.23 | 31.4 | 220.2-210.2 |
| MW-119 | 10/6/2016 | 243.6 | 246.53 | 35.4 | 221.5-211.5 |

Notes:

- a. North American Vertical Datum of 1988.
- b. Measuring point is the surveyed and marked point on the top of casing (TOC) of each monitoring well.



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Figure 2.1. Monitoring well locations, Plum Point Energy Station.

Each monitoring well is screened in the alluvial aquifer, the uppermost aquifer in the vicinity of the landfill. The direction of groundwater flow beneath the site is seasonally variable. As a result, there is not a hydraulically upgradient location with respect to cells 1 and 3. As allowed by §257.91(a)(1), the groundwater program utilizes wells for background water quality that are not hydraulically upgradient of the CCR management area. Monitoring wells MW-108, MW-113, and MW-115 (Figure 2.1) are used for this purpose because they are positioned outside the potential zone of impact from cells 1 and 3. The rationale for this is based on the age of the landfill, the estimated maximum rate of groundwater flow, and the distance of MW-108, MW-113, and MW-115 from the CCR management area (FTN 2017a).

2.2 Network Improvements During 2021

All of the 10 monitoring wells in the certified network were installed prior to 2021. No new wells were installed and none of the existing wells were altered or abandoned during 2021.

2.3 Sampling Schedule

In accordance with the CCR rule and the landfill's groundwater sampling and analysis plan (GWSAP), detection monitoring is scheduled to occur semiannually. The first half 2021 detection monitoring event was conducted during April 2021. Based on statistical evaluation of the data set, verification sampling was performed during June 2021, as discussed in Section 4.0. The second half 2021 detection monitoring event was conducted during October 2021. Verification sampling was performed during December 2021.

Detection monitoring for the 2022 monitoring year is tentatively scheduled for April and October 2022.

2.4 Monitoring Well Operation and Maintenance

The integrity of each monitoring well was inspected prior to commencement of groundwater sampling activities. Well casing, concrete pads, and bollards were inspected for any indications of damage and dedicated sampling equipment was assessed for visible damage. Noted damages and recommended repairs, if any, were communicated to PPSC.

2.5 Sampling Methodology

To ensure that monitoring results are an accurate representation of groundwater quality, sample collection follows the guidelines for sample collection, preservation, shipment, chain-of-custody (COC) control, and quality control outlined in the landfill's GWSAP (FTN 2017a). Groundwater sample collection during the 2021 monitoring events was performed in accordance with the landfill's GWSAP and EPA guidelines (Puls & Barcelona 1996). Groundwater was sampled with a Geopump Peristaltic Series II Pump and linear low-density polyethylene tubing. Field parameters were measured during purging and sampling using a Hach 2100P portable turbidity meter and a handheld YSI MPS 556 or YSI ProPlus multiparameter instrument fitted with a flow-through cell. Field sampling forms for the 2021 monitoring events are provided in Appendix A.

2.6 Laboratory Analyses

Samples collected for each detection monitoring event are required to be analyzed for the 40 CFR Part 257 appendix III list of parameters provided in Table 2.2. Pace Analytical National (Pace), of Mt. Juliet, Tennessee, provided laboratory services during the detection monitoring period. Samples were analyzed in accordance with EPA's *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846) (EPA 1986b), or equivalent, and guidelines established by EPA. Laboratory reports from Pace are included in Appendix B.

Table 2.2. Appendix III parameters for groundwater detection monitoring.

| Appendix III to Part 257 – Parameters for Detection Monitoring | |
|---|------------------------------|
| Boron | Sulfate |
| Calcium | Total dissolved solids (TDS) |
| Chloride | pH (field-measured) |
| Fluoride | |

3.0 DATA PRESENTATION

This section presents the data collected during the 2021 monitoring events. Water level data are presented in Section 3.1, field-measured groundwater quality data are presented in Section 3.2, laboratory analytical data are presented in Section 3.3, and a review of quality assurance and quality control (QA/QC) measures is presented in Section 3.4.

3.1 Water Level Data

This section presents groundwater level measurements and groundwater flow characteristics determined from these measurements.

3.1.1 Water Level Measurements and Hydrograph

Static water levels were measured in all 10 monitoring wells prior to conducting any sampling activities for the April and October detection monitoring events. Water levels were measured using a Solinst 101 water level meter on April 12, 2021, and October 4, 2021, for the first and second half 2021 monitoring periods, respectively. Depth to water was measured to the nearest 0.01 ft from the measuring point (MP) located on the top of casing (TOC) of each well and recorded on the field water level data sheets included in Appendix A. Field water level measurements are tabulated in Table 3.1.

Table 3.1. Water level data.

| Well ID | MP Elevation (ft NAVD88) | April 12, 2021 | | October 4, 2021 | |
|---------|-----------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|
| | | Depth to Water (ft below MP) | Water Elevation (ft NAVD88) | Depth to Water (ft below MP) | Water Elevation (ft NAVD88) |
| MW-101 | 242.75 | 11.10 | 231.65 | 20.61 | 222.14 |
| MW-102 | 243.99 | 11.93 | 232.06 | 22.67 | 221.32 |
| MW-103 | 243.25 | 9.74* | 233.51* | 21.31 | 221.94 |
| MW-108 | 245.11 | 11.21 | 233.90 | 25.83 | 219.28 |
| MW-113 | 244.63 | 11.51 | 233.12 | 24.38 | 220.25 |
| MW-115 | 243.55 | 10.40 | 233.15 | 23.02 | 220.53 |
| MW-116 | 243.97 | 12.59 | 231.38 | 22.48 | 221.49 |
| MW-117 | 242.53 | 10.72 | 231.81 | 21.16 | 221.37 |
| MW-118 | 241.23 | 9.70 | 231.53 | 19.53 | 221.70 |
| MW-119 | 246.53 | 14.84 | 231.69 | 24.49 | 222.04 |

Note: *Water level was not used to construct the potentiometric surface due to a suspected transcription error.

Hydrographs depicting water level elevations over time are included in Appendix C. As shown on the hydrograph, within-well water levels fluctuated seasonally as much as ± 24 ft over the period of record for the CCR rule program.

3.1.2 Direction of Groundwater Flow

Depth-to-water measurements were converted to feet NAVD88 and used to construct the potentiometric surface maps shown on Figures 3.1 and 3.2 (figures are included at the end of Section 3.0). As shown on Figure 3.1, groundwater flow was generally flat across the active landfill during the April 2021 monitoring event; however, flow across the permitted area was toward the southwest. As shown on Figure 3.2, groundwater flow beneath the active landfill was generally to the northeast during the October 2021 monitoring event.

3.1.3 Rate of Groundwater Flow

The rate of groundwater flow beneath the landfill is estimated based on Darcy's law, modified to account for the open space available for groundwater flow within the aquifer. The resulting equation used to estimate the average linear groundwater velocity, or rate of flow, is shown below (Kuo 1999):

$$V_x = K/n_e(dh/dl)$$

Where: V_x = linear velocity,
 K = hydraulic conductivity,
 n_e = effective porosity, and
 dh/dl = hydraulic gradient.

The hydraulic conductivity (K) and the effective porosity (n_e) of the alluvial aquifer are 1.09×10^{-2} cm/sec and 27%, respectively, based on previous reports (GEC 2001). The hydraulic gradient (dh/dl) is calculated using water level elevations that most closely represent the flow line from upgradient to downgradient across cells 1 and 3. The hydraulic gradient was estimated to be 6.4×10^{-4} ft/ft during April 2021 and 3.3×10^{-4} ft/ft during October 2021 using the potentiometric surface maps shown on Figures 3.1 and 3.2, respectively. Based on these values,

V_x was calculated to be approximately 27 ft/year during April 2021 and 14 ft/year during October 2021. These values are consistent with historically observed flow rates at the site (FTN 2017a).

3.2 Field-Measured Water Quality Data

Groundwater sampling records for the 2021 monitoring events are included in Appendix A. Field-measured water quality parameters from the 2021 monitoring events are summarized in Table 3.2. A review of the field quality control samples is provided in Section 3.4.

3.3 Laboratory Analytical Data

Laboratory reports for sampling performed during the 2021 monitoring periods are included in Appendix B. A review of the laboratory quality control information is provided in Section 3.4. Reported measured values along with field-measured pH are summarized in Tables 3.3 and 3.4 for the first and second half of 2021 monitoring periods, respectively. EPA-promulgated maximum contaminant levels (MCLs) are shown for comparison purposes. Of the appendix III parameters listed in Tables 3.3 and 3.4, fluoride is the only parameter with an established MCL. As shown in Tables 3.3 and 3.4, none of the measured levels for fluoride were above the MCL of 4 mg/L. Data from these monitoring events are compiled in the landfill's historical groundwater database for appendix III parameters, included as Appendix D.

Table 3.2. Field-measured water quality data.

| Well | Date | Conductivity ($\mu\text{mhos/cm}$) | pH (su) | Temperature (C) | Turbidity (NTU) |
|--|------------|---|------------|--------------------|--------------------|
| First Half 2021 Monitoring Event, April 2021 | | | | | |
| MW-101 | 4/15/2021 | 485 | 7.1 | 17.0 | 3.6 |
| MW-102 | 4/15/2021 | 605 | 6.9 | 16.8 | 3.3 |
| MW-103 | 4/15/2021 | 442 | 6.9 | 17.0 | 4.3 |
| MW-108 | 4/13/2021 | 706 | 7.0 | 17.4 | 3.1 |
| MW-113 | 4/13/2021 | 535 | 7.1 | 16.3 | 2.1 |
| MW-115 | 4/13/2021 | 595 | 7.0 | 15.9 | 2.3 |
| MW-116 | 4/15/2021 | 677 | 6.9 | 16.7 | 1.7 |
| MW-117 | 4/13/2021 | 507 | 6.9 | 18.1 | 2.2 |
| MW-118 | 4/15/2021 | 484 | 6.6 | 15.7 | 2.4 |
| MW-119 | 4/15/2021 | 594 | 6.9 | 17.5 | 2.2 |
| First Half 2021 Verification Sampling Event, June 2021 | | | | | |
| MW-101 | 6/29/2021 | 710 | 6.7 | 18.6 | 2.0 |
| MW-113 | 6/29/2021 | 550 | 6.2 | 21.9 | 2.3 |
| MW-116 | 6/29/2021 | 1,052 | 6.5 | 19.5 | 1.8 |
| MW-117 | 6/29/2021 | 566 | 6.4 | 20.0 | 1.4 |
| Second Half 2021 Monitoring Event, October 2021 | | | | | |
| MW-101 | 10/7/2021 | 612 | 6.7 | 18.6 | 1.3 |
| MW-102 | 10/6/2021 | 630 | 6.8 | 21.1 | 4.3 |
| MW-103 | 10/7/2021 | 496 | 6.5 | 18.4 | 2.9 |
| MW-108 | 10/5/2021 | 756 | 6.7 | 20.8 | 2.3 |
| MW-113 | 10/5/2021 | 417 | 6.6 | 20.4 | 1.1 |
| MW-115 | 10/5/2021 | 584 | 6.7 | 20.2 | 1.0 |
| MW-116 | 10/6/2021 | 948 | 6.5 | 19.9 | 1.0 |
| MW-117 | 10/6/2021 | 491 | 6.5 | 19.6 | 2.1 |
| MW-118 | 10/6/2021 | 457 | 6.4 | 18.8 | 1.1 |
| MW-119 | 10/7/2021 | 579 | 6.7 | 19.7 | 1.5 |
| Second Half 2021 Verification Sampling Event, December 2021 | | | | | |
| MW-116 | 12/14/2021 | 901 | 6.7 | 19.5 | 1.1 |
| MW-117 | 12/14/2021 | 435 | 6.5 | 18.8 | 1.1 |

Table 3.3. Summary of appendix III results, first half of 2021.

| Well ID | Date Collected | Boron (mg/L) | Calcium (mg/L) | Chloride (mg/L) | Fluoride (mg/L) | Sulfate (mg/L) | TDS (mg/L) | pH (su) |
|---|----------------|--------------|----------------|-----------------|-----------------|----------------|------------|---------|
| First Half 2021 Detection Monitoring, April 2021 | | | | | | | | |
| MW-101 | 4/15/2021 | 0.0608 J | 96.9 | 0.855 J | 0.385 | 5.73 | 335 | 7.1 |
| MW-102 | 4/15/2021 | 0.0966 J | 118 | 2.31 | 0.210 | 79.4 | 446 | 6.9 |
| MW-103 | 4/15/2021 | 0.0726 J | 85.9 | 0.976 J | 0.258 | 11.4 | 294 | 6.9 |
| MW-108 | 4/13/2021 | 0.125 J | 149 | 2.67 | 0.216 | 36.8 | 541 | 7.0 |
| MW-113 | 4/13/2021 | 0.0673 J | 95.4 | 2.50 | 0.102 J | 9.83 | 372 | 7.1 |
| MW-115 | 4/13/2021 | 0.0379 J | 117 | 0.789 J | 0.239 | 5.67 | 441 | 7.0 |
| MW-116 | 4/15/2021 | 0.0854 J | 144 | 9.09 | 0.226 | 126 | 541 | 6.9 |
| MW-117 | 4/13/2021 | 0.0705 J | 98.8 | 0.976 J | 0.152 | 7.46 | 351 | 6.9 |
| MW-118 | 4/15/2021 | 0.0663 J | 94.1 | 0.911 J | 0.185 | 20.0 | 329 | 6.6 |
| MW-119 | 4/15/2021 | 0.0687 J | 115 | 2.43 | 0.267 | 33.6 | 413 | 6.9 |
| First Half 2021 Verification Sampling, June 2021 | | | | | | | | |
| MW-101 | 6/29/2021 | --- | --- | --- | 0.307 | --- | --- | 6.7 |
| MW-113 | 6/29/2021 | --- | --- | --- | --- | --- | 303 | 6.2 |
| MW-116 | 6/29/2021 | --- | 169 | --- | --- | --- | --- | 6.5 |
| MW-117 | 6/29/2021 | --- | 83.7 | --- | --- | --- | 314 | 6.4 |
| Quality Control Samples | | | | | | | | |
| MW-117 DUP ^(a) | 4/13/2021 | 0.0708 J | 99.0 | 0.972 J | 0.153 | 7.41 | 353 | --- |
| EPA EB ^(a) | 4/15/2021 | <0.200 | <1.00 | <1.00 | <0.150 | <5.00 | <10.0 | --- |
| MW-117 DUP ^(b) | 6/29/2021 | --- | 84.4 | --- | --- | --- | 321 | --- |
| EPA EB-1 ^(b) | 6/29/2021 | --- | <1.00 | --- | <0.0150 | --- | <10.0 | --- |
| EPA MCL | | --- | --- | --- | 4 | --- | --- | --- |

Notes:

“J” flag indicates that the analyte was detected at a level below the laboratory RDL; therefore the value is an estimate.

- Duplicate sample and field equipment rinsate blank collected during the April sampling event.
- Duplicate sample and field equipment rinsate blank collected during the June sampling event.

Table 3.4. Summary of appendix III results, second half of 2021.

| Well ID | Date Collected | Boron (mg/L) | Calcium (mg/L) | Chloride (mg/L) | Fluoride (mg/L) | Sulfate (mg/L) | TDS (mg/L) | pH (su) |
|--|----------------|--------------|----------------|-----------------|-----------------|----------------|------------|---------|
| Second Half 2021 Detection Monitoring, October 2021 | | | | | | | | |
| MW-101 | 10/7/2021 | 0.0555 J | 113 | 0.975 J | 0.312 | 10.2 | 380 | 6.7 |
| MW-102 | 10/6/2021 | 0.0784 J | 116 | 2.48 | 0.215 | 95.3 | 415 | 6.8 |
| MW-103 | 10/7/2021 | 0.0681 J | 89.7 | 1.16 | 0.256 | 12.6 | 324 | 6.5 |
| MW-108 | 10/5/2021 | 0.111 J | 149 | 1.37 | 0.203 | 23.4 | 505 | 6.7 |
| MW-113 | 10/5/2021 | 0.0817 J | 67.5 | 0.877 J | 0.139 J | 3.75 J | 275 | 6.6 |
| MW-115 | 10/5/2021 | 0.0655 J | 109 | 0.964 J | 0.225 | 3.7 J | 379 | 6.7 |
| MW-116 | 10/6/2021 | 0.0973 J | 185 | 11.2 | 0.214 | 166 | 670 | 6.5 |
| MW-117 | 10/6/2021 | 0.0677 J | 88.8 | 0.921 J | 0.162 | 9.09 | 314 | 6.5 |
| MW-118 | 10/6/2021 | 0.0656 J | 82.9 | 1.15 | 0.189 | 11.5 | 280 | 6.4 |
| MW-119 | 10/7/2021 | 0.0594 J | 104 | 2.40 | 0.269 | 39.1 | 388 | 6.7 |
| Second Half 2021 Verification Sampling, December 2021 | | | | | | | | |
| MW-116 | 12/14/2021 | --- | 190 | --- | --- | 200 | 730 | 6.7 |
| MW-117 | 12/14/2021 | --- | 82.0 | --- | --- | 9.31 | 308 | 6.5 |
| Quality Control Samples | | | | | | | | |
| MW-117 DUP ^(a) | 10/6/2021 | 0.0702 J | 88.8 | 0.920 J | 0.156 | 9.18 | 305 | --- |
| EPA EB-1 ^(a) | 10/6/2021 | <0.200 | <1.00 | <1.00 | <0.150 | <5.00 | <10.0 | --- |
| MW-116 DUP ^(b) | 12/14/2021 | --- | 189 | --- | --- | 200 | 724 | --- |
| EPA EB-1 ^(b) | 12/14/2021 | --- | <1.00 | --- | --- | <5.00 | <10.0 | --- |
| EPA MCL | | --- | --- | --- | 4 | --- | --- | --- |

Notes:

“J” flag indicates that the analyte was detected at a level below the laboratory RDL; therefore the value is an estimate.

- Duplicate sample and field equipment rinsate blank collected during the October sampling event.
- Duplicate sample and field equipment rinsate blank collected during the December sampling event.

3.4 Quality Assurance and Quality Control

A review of laboratory and field QA/QC measures is presented below.

3.4.1 Review of Laboratory Quality Control Samples

Based on a review of the data quality documentation provided by Pace in Appendix B, samples were received by the laboratory in good condition, properly preserved, at the correct temperature, and were analyzed within holding times. The overall quality of the data relative to

the contaminants of concern was acceptable and generally met method-specific requirements for precision and accuracy.

3.4.2 Review of Field Quality Control Samples

Field QA/QC samples include field duplicates and field equipment blanks. Field duplicates are two samples taken from the same well and collected as close to each other in time as practical. Data from the duplicate pair are compared to evaluate the level of precision associated with the sampling and analytical methods. Field equipment rinsate blanks are prepared by pouring deionized water over decontaminated sampling equipment. Equipment blank results are used to verify that proper protocols for equipment decontamination were followed in the field. In accordance with the landfill's GWSAP, a minimum of one duplicate sample and one equipment rinsate blank is to be collected per sampling event, or one per 20 groundwater samples collected.

In accordance with the GWSAP, field QA/QC samples were collected in conjunction with groundwater sampling activities for this monitoring period. All QA/QC samples were handled in the same manner as groundwater samples with respect to sample collection, packaging, shipping, preservation, and COC procedures. A review of the field QA/QC samples is performed upon receipt of the data from the laboratory. Field duplicate pairs are evaluated to verify that the duplicate pair showed reasonable precision for analyzed parameters by calculating the relative percent difference (RPD) for parameters where the detected level was at least five times the laboratory RDL and where neither result was qualified or suspected of contamination. Calculated RPDs were below the quality control limit of 20% for all duplicate pairs evaluated, indicating that field methods produced samples with an acceptable level of reproducibility. Results for the equipment rinsate blanks were all below their respective laboratory RDLs, indicating field decontamination methods were effective.

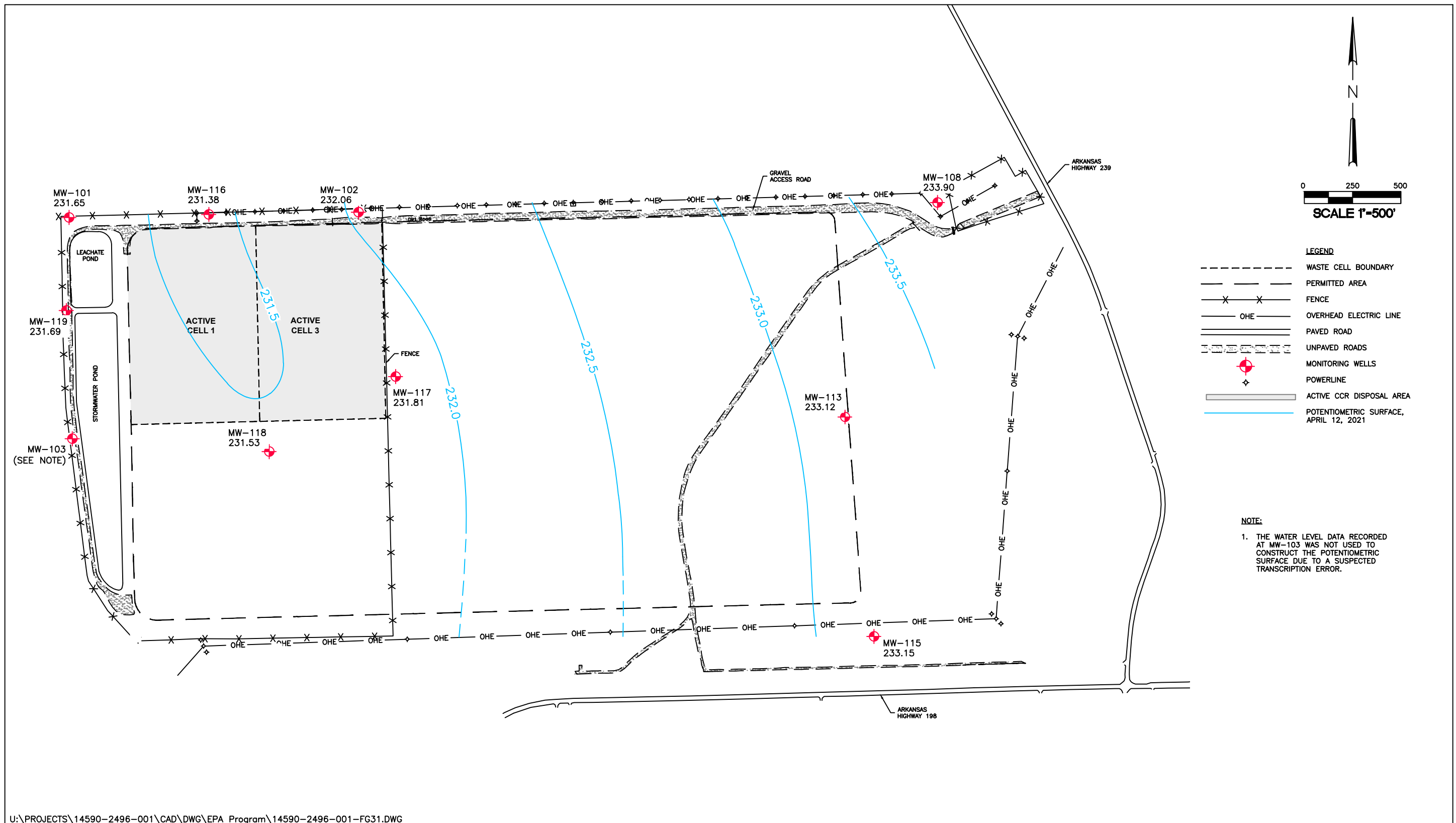
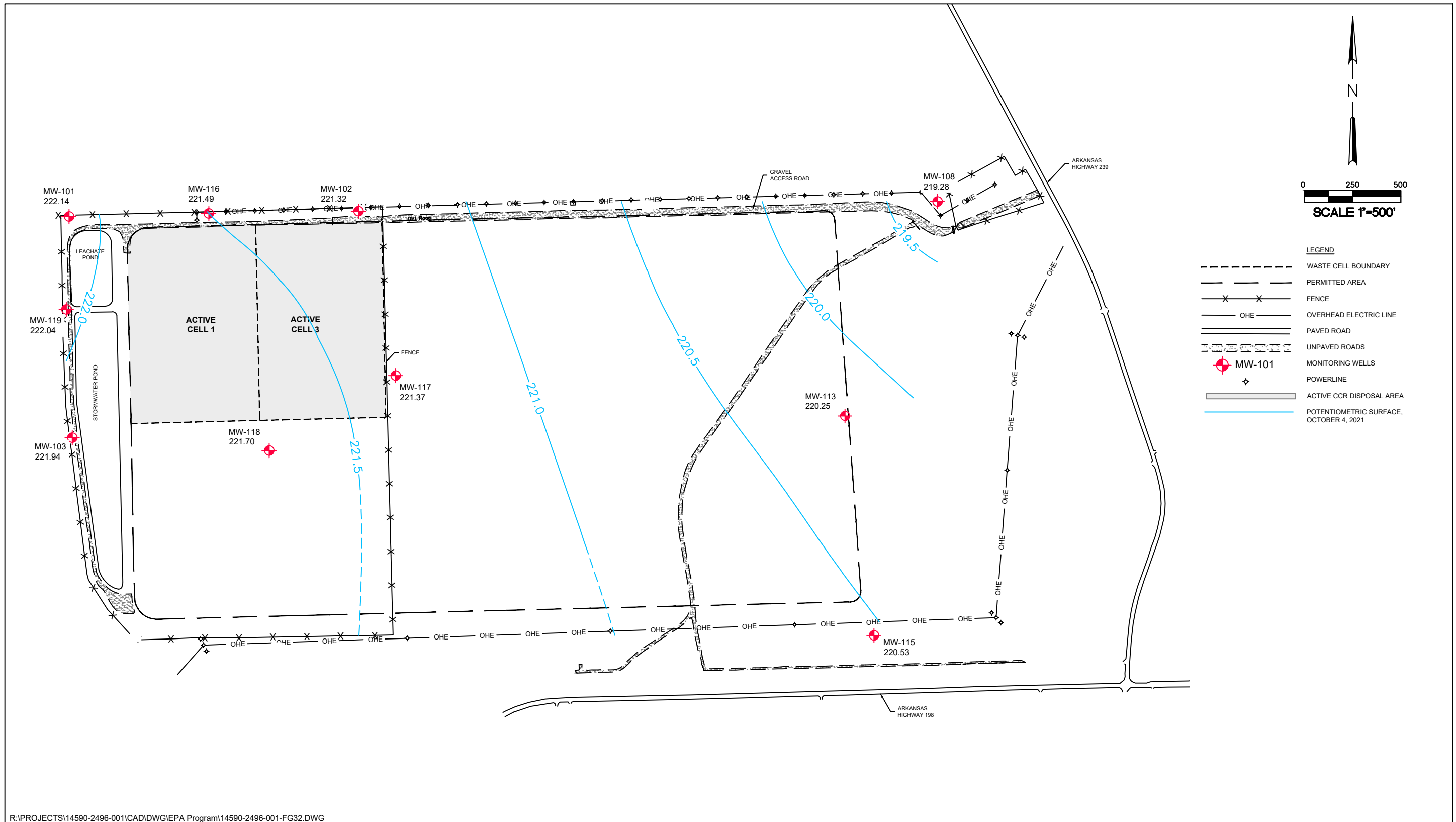


Figure 3.1. Potentiometric surface, April 12, 2021.



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Figure 3.2. Potentiometric surface, October 4, 2021.

4.0 STATISTICAL EVALUATION

This section describes the statistical approach and evaluation of the detection monitoring data collected during 2021. Groundwater quality data were evaluated using the statistical software *Sanitas version 9.6*. Statistical analyses of the data were performed in accordance with the landfill's SAP.

4.1 Statistical Program Design

4.1.1 Statistical Approach

The statistical approach for groundwater monitoring at the landfill is described in the facility's SAP and adheres to recommendations in EPA's *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*, released in March 2009 (Unified Guidance). Groundwater quality data collected for detection monitoring are evaluated with either an intrawell prediction limit combined with a "1 of 2" retesting strategy or with the Mann-Kendall/Sen's Slope test for trends. The technical basis for selecting these tests is discussed in the facility's SAP. Each test and its appropriate application is briefly discussed below.

A prediction limit tests for the likelihood that a new monitoring value (compliance value) comes from the same population as background data. Prediction limit analysis combined with retesting (verification sampling) is effective at reducing a monitoring program's site-wide false positive rate (SWFPR) and improving the statistical power of the monitoring program. The prediction limit test requires a minimum of 8 to 10 background values that are statistically independent and that exhibit stationarity. Retesting, or verification sampling, is performed if an initial sampling result exceeds a prediction limit. The "1 of 2" retesting strategy requires one verification sample be obtained within the same monitoring period as the initial exceedance. If the measured value in the verification sample also exceeds the prediction limit, then a statistically significant increase (SSI) (or statistically significant decrease [SSD] in the case of pH) is declared.

If data characteristics do not meet the requirements for a prediction limit test, the well-parameter pair is tested using the Mann-Kendall/Sen’s Slope test for trends, as recommended by the Unified Guidance. If a statistically significant increasing trend (or statistically significant decreasing trend in the case of pH) is indicated, then this is evidence of possible deteriorating groundwater quality. While there is no explicit retesting strategy for the Mann-Kendall/Sen’s Slope test (as there is for prediction limits), retesting can be applied (Cameron 2015).

Background data sets were updated, where applicable, prior to the first half of 2020 monitoring period. Results of the evaluation are summarized in Appendix E.

4.1.2 Site-Wide False Positive Rate and Statistical Power

The Unified Guidance recommends that detection monitoring programs have adequate statistical power and an SWFPR (alpha) value of 10% over a one-year period of testing. As a result, the semiannual SWFPR is fixed at 5%. The magnitude of the per-test alpha will vary depending on how many statistical tests are required per semiannual evaluation. Input values used to determine the per-test alpha for intrawell prediction limit analyses, combined with a “1 of 2” retesting strategy are listed in Table 4.1.

Table 4.1. Values used to determine test alpha and power curve.

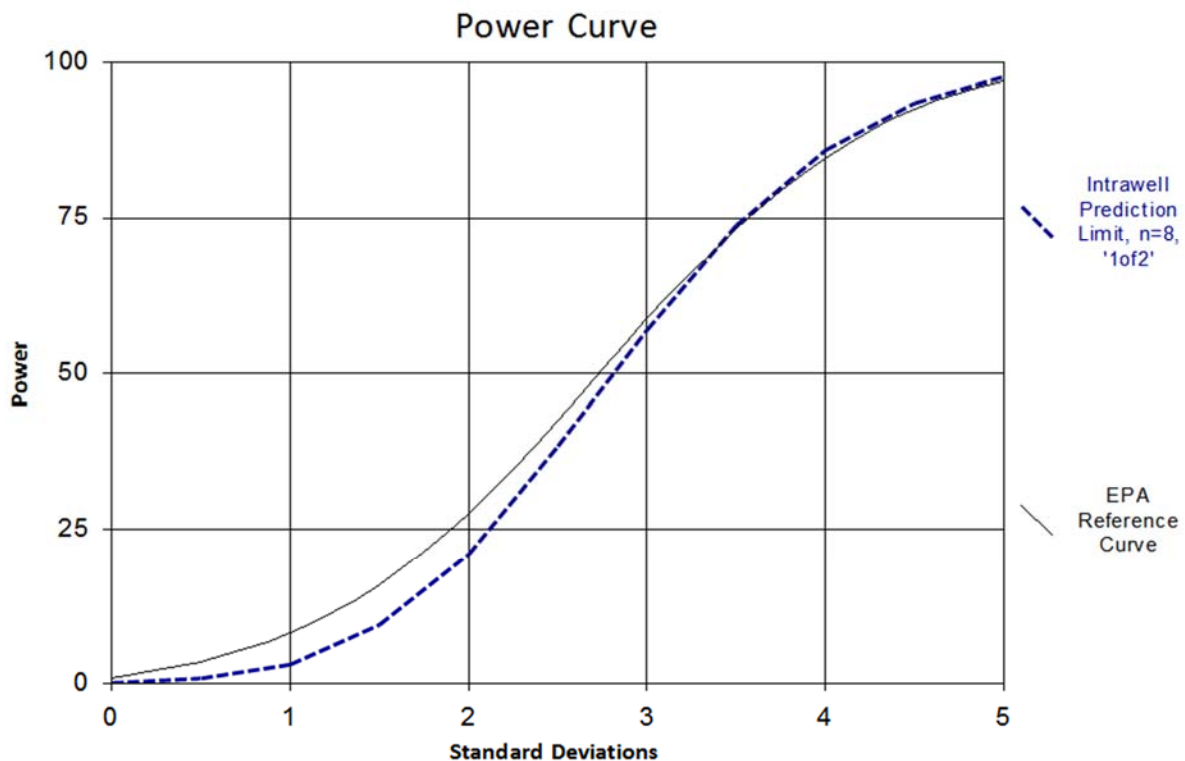
| Certified Well Network | |
|------------------------------------|----------------------------|
| Statistical Test | Intrawell Prediction Limit |
| Number of Compliance Wells (w) | 7 |
| Minimum Background Sample Size (n) | 8 |
| Number of Constituents (c) | 6 |
| Resample Strategy | 1 of 2 |
| Semiannual SWFPR | 0.05 |

Statistical power is inversely related to the SWFPR and is an estimate of the rate at which false negative results will occur. To gauge statistical power, the Unified Guidance recommends the use of the EPA Reference Power Curve (ERPC) to estimate the ability of any individual test to identify an exceedance above background. Any single statistical test should have the ability to

detect an exceedance 55% to 60% of the time at three standard deviations (3σ) above background and 80% to 85% of the time at 4σ above background. Input values for the detection monitoring program's power curve are listed in Table 4.1 and discussed below.

Figure 4.1 depicts the power curve for the well network plotted against the ERPC. This curve shows that any single test is expected to detect exceedances approximately 57% of the time at levels 3σ above background and 87% of the time at levels 4σ above background. Given this comparison, the statistical power of the landfill's detection monitoring program exceeds EPA recommendations.

Sanitas™ v.9.6.23 Sanitas software licensed to FTN Associates. UG



kappa = 2.841, based on 7 compliance wells and 6 constituents, evaluated semi-annually (this report reflects annual total).

Figure 4.1. ERPC versus landfill power curve for detection monitoring.

4.2 Exploratory Data Analysis

Exploratory data analysis (EDA) includes viewing data graphically to identify apparent trends or excursions from normal ranges. To accomplish this, period-of-record data were screened using time-series plots, box-and-whiskers diagrams, and outlier tests. Time-series plots are used to visualize changes in data over time. Box-and-whiskers diagrams provide a graphic depiction of the mean, median, minimum, maximum, and interquartile range of a data set to assist with visualizing the variation in groundwater quality within and across wells. Outlier tests help identify values that are extremely different from other values in a given data set. Section 4.2.1 summarizes observations made from time-series and box-and-whiskers diagrams. Evaluation for the presence of outliers is discussed in Section 4.2.2. The graphical plots from the EDA evaluation are included in Appendix F.

4.2.1 Time-Series Plots and Box-and-Whiskers Diagrams

The following observations are based on a review of the time-series plots and box-and-whiskers diagrams (Appendix F):

- Calcium, chloride, fluoride, sulfate, and TDS values are variable across the network.
- Measured pH and boron are generally similar across the well network.¹

4.2.2 Identification of Outliers

Period-of-record data for statistically evaluated wells were evaluated to identify possible outliers in the April and October 2021 data sets (Appendix F). Dixon's outlier test was applied to data sets with a normal distribution, or to populations that could be mathematically transformed so they have a normal distribution. For data sets that did not have a normal distribution, the non-parametric Tukey's outlier screening was applied. Plots are included in Appendix F. Outlier

¹ As documented in prior annual reports (FTN 2018, 2019, 2020, 2021), multiple pH values measured during the July 2016 background sampling event were anomalous and were suspected to be the result of equipment malfunction. These values were flagged with an "R" in the historical database as part of a background data review completed prior to the first half 2020 monitoring period. Data flagged with an "R" are excluded from statistical evaluations and are not shown on distributional plots.

testing identified one outlier in the April 2021 data set: TDS at MW-101 was statistically low compared to the period-of-record data set. No statistically significant outliers were identified in the October 2021 data set.

4.3 Statistical Evaluation Results

Groundwater quality data from the 2021 monitoring periods were statistically evaluated if they were detected at or above the laboratory RDL. Results detected below the RDL but above a method detection limit (“trace” values) are estimated values and therefore are not statistically evaluated. Trace values are flagged with a “J” in the laboratory reports provided in Appendix B and in the historical database included in Appendix D. Statistical analyses are not performed on nondetect data, which are flagged with a “U” in the laboratory reports (Appendix B) and represented in the historical database as less than (<) the RDL value for the method used (Appendix D).

4.3.1 Intrawell Prediction Limit Analysis, First Half of 2021

In accordance with 257.93(h), intrawell prediction limit analyses were performed on all detected appendix III parameters, except as noted in Section 4.3.2, using the background data sets identified in Appendix E. Results from the first half of 2021 monitoring period are summarized in Table 4.2 and graphical plots of the evaluation are included in Appendix G. Two previously confirmed statistically significant increases (SSIs), calcium and TDS at MW-117, were identified in the April 2021 data set, along with unverified SSIs for calcium at MW-116, fluoride at MW-101, pH at MW-117, and TDS at MW-113, as shown in Table 4.2. Measurements for all other well-parameter pairs were below calculated intrawell prediction limits. In accordance with the facility’s SAP and “1 of 2” retesting strategy, verification sampling was performed during June 2021 for the potential exceedances, and while not required, verification sampling was also performed for the two previously confirmed SSIs. As shown in Table 4.2, verification sampling results confirmed the SSIs for calcium at MW-116 and TDS at MW-117, and disconfirmed the SSIs for calcium at MW-117, fluoride at MW-101, pH at MW-117, and TDS at MW-113.

Table 4.2. Summary of statistically significant results, intrawell prediction limit analysis, first half of 2021.

| Parameter | Well | Prediction Limit | April 2021 Result | June 2021 Verification Result | SSI Confirmed? |
|-----------|--------|-----------------------|--------------------------|-------------------------------|--------------------|
| Calcium | MW-116 | 139.2 mg/L | 144 mg/L | 169 mg/L | Yes |
| Calcium | MW-117 | 87.74 mg/L | 98.8 mg/L ^(a) | 83.7 mg/L | No |
| Fluoride | MW-101 | 0.346 mg/L | 0.385 mg/L | 0.307 mg/L | No |
| pH | MW-117 | 6.6 su ^(b) | 6.9 su | 6.4 su | No |
| TDS | MW-113 | 365 mg/L | 372 mg/L | 303 mg/L | No |
| TDS | MW-117 | 301.8 mg/L | 323 mg/L ^(a) | 314 mg/L | Yes ^(a) |

Notes:

- a. SSI was previously confirmed.
- b. Upper prediction limit.

In response to the confirmed SSIs for calcium at MW-116 and TDS at MW-117 identified during the first half of 2021 detection monitoring period, PPSC completed a successful alternate source demonstration (ASD) in accordance with §257.94(e)(2). The ASD was certified by an Arkansas-registered professional engineer on October 6, 2021, and is included with this report (Appendix H) as required by §257.94(e)(2). Based on the successful ASD, the facility continued with detection monitoring in accordance with §257.94.

4.3.2 Mann-Kendall/Theil-Sen Trend Line Test, First Half of 2021

Well-parameter pairs tested for compliance using the Mann-Kendall/Theil-Sen trend line test due to significant trends in background data sets are identified in Table E.2 of Appendix E. Period-of-record data for each well-parameter pair were analyzed and test plots are included in Appendix G. The evaluation did not identify any statistically significant increasing trends in the period-of-record data sets.

4.3.3 Intrawell Prediction Limit Analysis, Second Half of 2021

In accordance with 257.93(h), intrawell prediction limit analyses were performed on all detected appendix III parameters, except as noted in Section 4.3.4, using the background data sets identified in Appendix E. Graphical plots of the evaluation are included in Appendix G. Three previously confirmed SSIs, calcium at MW-116 and MW-117 and TDS at MW-117, were

identified in the October 2021 data set, along with unverified SSIs for sulfate at MW-116 and MW-117 and TDS at MW-116, as shown in Table 4.2. Measurements for all other well-parameter pairs were below calculated intrawell prediction limits. In accordance with the facility's SAP and "1 of 2" retesting strategy, verification sampling was performed during December 2021 for the potential SSIs, and while not required, verification sampling was also performed for the three previously confirmed SSIs. As shown in Table 4.3, verification sampling results confirmed the SSIs for calcium, sulfate, and TDS at MW-116 and for sulfate and TDS at MW-117.

Table 4.3. Summary of statistically significant results, intrawell prediction limit analysis, second half of 2021.

| Parameter | Well | Prediction Limit (mg/L) | October 2021 Result (mg/L) | December 2021 Verification Result (mg/L) | SSI Confirmed? |
|-----------|--------|-------------------------|----------------------------|--|----------------|
| Calcium | MW-116 | 139.2 | 185 | 190 | Yes* |
| Calcium | MW-117 | 87.74 | 88.8 | 82.0 | No |
| Sulfate | MW-116 | 136.7 | 166 | 200 | Yes |
| Sulfate | MW-117 | 8.048 | 9.09 | 9.31 | Yes |
| TDS | MW-116 | 545.3 | 670 | 730 | Yes |
| TDS | MW-117 | 301.8 | 314 | 308 | Yes* |

Note: *SSI was previously confirmed.

In accordance with §257.94(e)(2), PPSC will undertake an ASD during the first half 2022 to address the confirmed SSIs. Pending the results of the ASD, PPSC will continue with detection monitoring in accordance with §257.94.

4.3.4 Mann-Kendall Test/Theil-Sen Trend Line, Second Half of 2021

Well-parameter pairs tested for compliance using the Mann-Kendall/Theil-Sen trend line test due to significant trends in background data sets are identified in Table E.2 of Appendix E. Period-of-record data for each well-parameter pair were analyzed and test plots are included in Appendix G. The evaluation did not identify any statistically significant increasing trends in the period-of-record data sets.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The following recommendations and conclusions are based on a review of data for the landfill from the 2021 monitoring period:

1. The direction of groundwater flow at the landfill is seasonally variable. Flow across the active landfill was to the southwest during the first half of 2021 monitoring event and to the northeast during the second half of 2021 monitoring event.
2. Of the parameters evaluated, only fluoride has an EPA MCL. None of the reported values in groundwater were measured above the MCL for fluoride.
3. Time-series plots and box-and-whiskers diagrams show variability across the well network for calcium, chloride, fluoride, sulfate, and TDS. Values for boron and pH are relatively similar across all wells.
4. A comparison of the statistical power curve for the detection monitoring program to the EPA Reference Power Curve indicates that the detection rates for statistical exceedances meet EPA recommendations.
5. Statistical evaluation of the first half of 2021 data set identified confirmed SSIs for calcium at MW-116 and TDS at MW-117. A successful ASD was completed for the exceedances on October 6, 2021, and is included with this report in accordance with §257.94(e)(2). The facility continued with detection monitoring in accordance with §257.94.
6. Statistical evaluation of the second half of 2021 data set identified confirmed SSIs for calcium, sulfate, and TDS at MW-116 and for sulfate and TDS at MW-117. In accordance with §257.94(e)(2), PPSC will undertake an ASD during the first half 2022 to address the confirmed SSIs. Pending the results of the ASD, PPSC will continue with detection monitoring in accordance with §257.94.

6.0 REFERENCES

- EPA [Environmental Protection Agency]. 1986. *RCRA Ground-Water Monitoring Technical Enforcement Guidance Document*. Dublin, OH: National Water Well Association.
- . 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* [EPA/600/R-98/128]. Washington, DC: US Environmental Protection Agency, Office of Research and Development. 248 pp.
- . 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* [EPA 530-R-09-007]. Washington, DC: Office of Resource Conservation and Recovery, Program Implementation and Information Division, US Environmental Protection Agency. March 2009.
- FTN [FTN Associates, Ltd.]. 2017a. *Groundwater Monitoring Network Evaluation, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2017b. *Groundwater Sampling and Analysis Plan, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2017c. *Statistical Analysis Plan, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2018. *Plum Point Energy Station Landfill, Groundwater Monitoring and Corrective Action 2017 Annual Report*. Little Rock, AR: FTN Associates, Ltd.
- . 2019. *Plum Point Energy Station Landfill, Groundwater Monitoring and Corrective Action 2018 Annual Report*. Little Rock, AR: FTN Associates, Ltd.
- . 2020. *Plum Point Energy Station Landfill, Groundwater Monitoring and Corrective Action 2019 Annual Report*. Little Rock, AR: FTN Associates, Ltd.
- . 2021. *Plum Point Energy Station Landfill, Groundwater Monitoring and Corrective Action 2020 Annual Report*. Little Rock, AR: FTN Associates, Ltd.
- GEC [Genesis Environmental Consulting, Inc.]. 2001. *Geotechnical and Hydrogeological Investigation, Plum Point Energy Station, July 2001* [DEQ DIN 14702]. Little Rock, AR: Genesis Environmental Consulting, Inc.
- Gibbons, Robert D. 1994. *Statistical Methods for Groundwater Monitoring*. New York: John Wiley & Sons, Inc.
- Gonthier, G.J. 2003. *Quality of Groundwater in Pleistocene and Holocene Subunits of the Mississippi River Alluvial Aquifer, 1998* [Water-Resources Investigations Report 2003 4202]. Jackson, MS: National Water-Quality Assessment Program, US Geological Survey.
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- Kresse, T.M., P.D. Hays, K.R. Merriman, J.A. Gillip, D.T. Fugitt, J.L. Spellman, A.M. Nottmeier, D.A. Westerman, J.M. Blackstock, and J.L. Battreal. 2014. *Aquifers of Arkansas—Protection, Management, and Hydrologic and Geochemical Characteristics of Groundwater Resources in Arkansas* [Scientific Investigations Report 2014–5149]. Prepared in cooperation with the Arkansas Natural Resources Commission. Reston, VA: US Geological Survey. 334 pp. doi: <http://dx.doi.org/10.3133/sir20145149>.
- Kuo, J. 2009. *Practical Design Calculations for Groundwater and Soil Remediation*. Boca Raton, FL: Lewis Publishers.
- Peterson, J.C., M.E. Broom, and W.V. Bush. 1985. *Geohydrologic Units of the Gulf Coastal Plain in Arkansas* [USGS Water Resources Investigations Report 85-4116]. Little Rock, AR: US Geological Survey in cooperation with the Arkansas Department of Pollution Control and Ecology and the Arkansas Geological Commission. 20 p.
- Pugh, A.L., P.W. Westerfield, and D.T. Poynter. 1997. *Thickness of the Quaternary Alluvial and Terrace Deposits Comprising the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas* [USGS Water Resources Investigations Report 97-4049]. Little Rock, AR: US Geological Survey in cooperation with the Arkansas Geological Commission. 1 plate.
- Puls, R.W., and M.J. Barcelona. 1996. *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* [EPA 540/S-95/504]. Washington, DC: US Environmental Protection Agency, Office of Solid Waste and Emergency Response.
- Rodgers, K.D., and A.R. Whaling. 2020. *Water Levels and Selected Water-Quality Conditions in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2014* [Scientific Investigations Report 2020-5123]. Prepared in cooperation with the Arkansas Natural Resources Commission and the Arkansas Geological Survey. Reston, VA: US Geological Survey.
- Ryling, R.W. 1960. *Ground-water Potential of Mississippi County, Arkansas* [Water Resources Circular No. 7]. Little Rock, AR: Arkansas Geological and Conservation Commission in cooperation with the US Geological Survey. 87 p.
- Sanitas Technologies. 2018. *Sanitas User Guide, Version 9.6*. Loveland, CO: Sanitas Technologies.
- Schrader, T.P. 2015. *Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012* [Scientific Investigations Report 2015-5059]. Prepared in cooperation with the Arkansas Natural Resources Commission and the Arkansas Geological Survey. Reston, VA: US Geological Survey.

- Welch, H.L., J.A. Kingsbury, W.T. Roland, and R.C. Seanor. 2009. *Quality of Shallow Groundwater and Drinking Water in the Mississippi Embayment-Texas Coastal Uplands Aquifer System and the Mississippi River Valley Alluvial Aquifer, South-Central United States, 1994-2004* [Scientific Investigations Report 2009-5091]. Reston, VA: National Water-Quality Assessment Program, US Geological Survey.
- Yu, C., S. Kamboj, C. Wang, and J. Cheng. 2015. *Data Collection Handbook to Support Modeling Impacts of Radioactive Material in Soil and Building Structures* [ANL/EVS/TM-14/4]. Argonne, IL: US Department of Energy, Argonne National Laboratory, Environmental Science Division.

APPENDIX A

Field Sampling Forms

First Half 2021 Sampling Event



Groundwater Level Data Sheet

| | | | |
|--|--|---|--------------------|
| Project Name: Plum Point Energy Station 2021 Groundwater Services | Project Number: R14590-2496-001 EPA Program | Investigator: Michael Clayton | Page 1 of 1 |
| Weather Conditions: | Measuring Device: Solinst 101 | | |

| Well ID | Date | Time | Depth to Water (feet below TOC) | Damages/Repairs | | |
|---------|-----------|------|---------------------------------|--|--|---|
| MW-101 | 4/12/2021 | 1344 | 11.10 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-102 | 4/12/2021 | 1247 | 11.93 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-103 | 4/12/2021 | 1329 | 9.74 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-108 | 4/12/2021 | 1136 | 11.21 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-113 | 4/12/2021 | 1126 | 11.51 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-115 | 4/12/2021 | 1120 | 10.40 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-116 | 4/12/2021 | 1254 | 12.59 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-117 | 4/12/2021 | 1235 | 10.72 | <input type="checkbox"/> Damaged well pad/casing <input checked="" type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-118 | 4/12/2021 | 1309 | 9.70 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-119 | 4/12/2021 | 1337 | 14.84 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Un-kept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-101 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/15/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | |
|---|--|---|
| Weather: clear | Air Temp. (°F): 59 | Wind: north-northeast at 14 mph |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter: inches 2 Well locked? Total depth from TOC: feet <input checked="" type="checkbox"/> Yes TOC below/above ground: feet <input type="checkbox"/> No |
| Damages/repairs needed: ants in well | | |

Water Level Data

| | | | | | | | |
|---|-------------------|---|----------------|-----------|----------------|-----------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | Remarks |
| | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | | |
| Date | mm/dd/yy | 4/12/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | |
| Time | 24-hour | 1344 | 1230 | 1242 | 1302 | 1314 | |
| Depth to Water | feet | 11.10 | 11.50 | 11.50 | 11.50 | 11.50 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1235 | 1240 | 1245 | 1250 | 1255 | 1300 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 200 | 200 | 200 | 200 | 200 | 200 | | | | | | | |
| pH | su | 7.2 | 7.1 | 7.1 | 7.0 | 7.0 | 7.1 | | | | | | | |
| Temp. | °C | 16.5 | 16.4 | 16.6 | 16.8 | 16.8 | 17.0 | | | | | | | |
| Conductivity | µS/cm | 474 | 446 | 464 | 482 | 482 | 485 | | | | | | | |
| DO | mg/L | 2.0 | 0.8 | 0.6 | 0.5 | 0.45 | 0.4 | | | | | | | |
| ORP | mV | 3.3 | -8.4 | -26.6 | -40.5 | -43.9 | -46.9 | | | | | | | |
| Turbidity | NTU | 4.6 | 3.8 | 4.4 | 4.0 | 3.8 | 3.6 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-101 | 4/15/2021 | 1305 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-102 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/15/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 64 | Wind: north-northeast at 14 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 4/12/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | |
| Time | 24-hour | 1247 | 1440 | 1503 | 1522 | 1531 | |
| Depth to Water | feet | 11.93 | 12.00 | 12.00 | 12.00 | 12.00 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | |
|--|---------|---|-------|-------|--|-------|-------|-------|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | |
| Time | 24-hour | 1450 | 1455 | 1500 | 1505 | 1510 | 1515 | 1520 | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | |
| Purge rate | mL/min | 160 | 160 | 160 | 160 | 160 | 160 | 160 | | | | | |
| pH | su | 6.9 | 6.8 | 6.8 | 6.9 | 6.9 | 6.9 | 6.9 | | | | | |
| Temp. | °C | 16.9 | 16.7 | 16.8 | 16.7 | 16.7 | 16.8 | 16.8 | | | | | |
| Conductivity | µS/cm | 612 | 611 | 611 | 608 | 607 | 606 | 605 | | | | | |
| DO | mg/L | 6.4 | 0.8 | 0.6 | 0.4 | 0.4 | 0.4 | 0.4 | | | | | |
| ORP | mV | 3.5 | -12.6 | -25.3 | -40.9 | -45.4 | -48.1 | -49.9 | | | | | |
| Turbidity | NTU | 4.5 | 4.0 | 4.3 | 4.2 | 3.3 | 2.9 | 3.3 | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | | | | | |
| Odor | -- | none | none | none | none | none | none | none | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-102 | 4/15/2021 | 1525 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-103 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/15/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: clear | Air Temp. (°F): 57 | Wind: north-northeast at 14 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 4/12/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | |
| Time | 24-hour | 1329 | 1035 | 1057 | 1108 | 1121 | |
| Depth to Water | feet | 9.74 | 12.10 | 12.21 | 12.21 | 12.21 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1040 | 1045 | 1050 | 1055 | 1100 | 1105 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 190 | 190 | 190 | 190 | 190 | 190 | | | | | | | |
| pH | su | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | | | | | | | |
| Temp. | °C | 16.8 | 16.7 | 16.6 | 16.8 | 16.9 | 17.0 | | | | | | | |
| Conductivity | µS/cm | 444 | 444 | 443 | 431 | 442 | 442 | | | | | | | |
| DO | mg/L | 2.8 | 0.9 | 0.5 | 0.5 | 0.4 | 0.4 | | | | | | | |
| ORP | mV | -21.7 | -22.8 | -33.7 | -40.4 | -49.6 | -50.7 | | | | | | | |
| Turbidity | NTU | 6.3 | 7.1 | 5.4 | 4.6 | 3.9 | 4.3 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-103 | 4/15/2021 | 1110 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-108 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/13/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | |
|---|--|---------------------------|--------|------|--|--|
| Weather: cloudy | Air Temp. (°F): 61 | Wind: northeast at 10 mph | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | Total depth from TOC | | feet | | |
| | | TOC below/above ground | | feet | | |
| Damages/repairs needed: | | | | | | |

Water Level Data

| | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling |
| Date | mm/dd/yy | 4/12/2021 | 4/13/2021 | 4/13/2021 | 4/13/2021 | 4/13/2021 |
| Time | 24-hour | 1136 | 1045 | 1053 | 1117 | 1129 |
| Depth to Water | feet | 11.21 | 11.43 | 11.52 | 11.52 | 11.52 |
| Product/Thickness | LNAPL/DNAPL feet | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1050 | 1055 | 1100 | 1105 | 1110 | 1115 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 150 | 150 | 150 | 150 | 150 | 150 | | | | | | | |
| pH | su | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | | | | | | | |
| Temp. | °C | 17.1 | 17.2 | 17.3 | 17.3 | 17.5 | 17.4 | | | | | | | |
| Conductivity | µS/cm | 712 | 711 | 709 | 708 | 708 | 706 | | | | | | | |
| DO | mg/L | 3.1 | 2.3 | 1.9 | 1.5 | 1.2 | 1.1 | | | | | | | |
| ORP | mV | 27.5 | 19.8 | 8.8 | -1.1 | -7.6 | -12.6 | | | | | | | |
| Turbidity | NTU | 4.1 | 5.3 | 4.1 | 3.5 | 3.3 | 3.1 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-108 | 4/13/2021 | 1120 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-113 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/13/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | |
|---|--|---------------------------|--------|---|--|
| Weather: cloudy | Air Temp. (°F): 60 | Wind: northeast at 12 mph | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| | | Total depth from TOC | feet | | |
| | | TOC below/above ground | feet | | |
| Damages/repairs needed: ants in well | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | Remarks |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | |
| Date | mm/dd/yy | 4/12/2021 | 4/13/2021 | 4/13/2021 | 4/13/2021 | 4/13/2021 | |
| Time | 24-hour | 1126 | 0940 | 0953 | 1018 | 1039 | |
| Depth to Water | feet | 11.51 | 11.50 | 11.50 | 11.54 | 11.54 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|-------|--|--|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | | |
| Time | 24-hour | 0945 | 0950 | 0955 | 1000 | 1005 | 1010 | 1015 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | | |
| Purge rate | mL/min | 160 | 160 | 160 | 160 | 160 | 160 | 160 | | | | | | | |
| pH | su | 7.1 | 6.9 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | | | | | | | |
| Temp. | °C | 16.3 | 16.3 | 16.3 | 16.1 | 16.2 | 16.2 | 16.3 | | | | | | | |
| Conductivity | µS/cm | 539.6 | 537.6 | 537.1 | 575.1 | 535.1 | 534.9 | 535.3 | | | | | | | |
| DO | mg/L | 6.2 | 2.0 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | | | | | | | |
| ORP | mV | 44.5 | 38.3 | 23.5 | 12.4 | 7.1 | -2.0 | -3.7 | | | | | | | |
| Turbidity | NTU | 2.5 | 2.7 | 2.5 | 2.6 | 2.6 | 2.3 | 2.1 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-113 | 4/13/2021 | 1020 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-115 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/13/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: rainy | Air Temp. (°F): 59 | Wind: northeast at 14 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 4/12/2021 | 4/13/2021 | 4/13/2021 | 4/13/2021 | 4/13/2021 | |
| Time | 24-hour | 1120 | 0830 | 0857 | 0913 | 0925 | |
| Depth to Water | feet | 10.40 | 10.53 | 10.53 | 10.53 | 10.53 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|-------|--|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 0840 | 0845 | 0850 | 0855 | 0900 | 0905 | 0910 | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 160 | 160 | 160 | 160 | 160 | 160 | 160 | | | | | | |
| pH | su | 6.8 | 6.9 | 6.9 | 7.0 | 7.0 | 7.0 | 7.0 | | | | | | |
| Temp. | °C | 15.6 | 15.7 | 15.9 | 16.0 | 15.9 | 15.9 | 15.9 | | | | | | |
| Conductivity | µS/cm | 600.7 | 597.4 | 598.4 | 597.8 | 595.7 | 595.9 | 595.0 | | | | | | |
| DO | mg/L | 2.1 | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 | 0.6 | | | | | | |
| ORP | mV | 95.9 | 72.1 | 60.6 | 51.2 | 36.5 | 29.7 | 26.0 | | | | | | |
| Turbidity | NTU | 4.9 | 2.7 | 2.7 | 2.9 | 2.6 | 2.2 | 2.3 | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | | | | | | |
| Odor | -- | none | none | none | none | none | none | none | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-115 | 4/13/2021 | 0915 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-116 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/15/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | |
|---|--|---|
| Weather: clear | Air Temp. (°F): 61 | Wind: north-northeast at 12 mph |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter: inches 2 Well locked? Total depth from TOC: feet <input checked="" type="checkbox"/> Yes TOC below/above ground: feet <input type="checkbox"/> No |
| Damages/repairs needed: | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 4/12/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | |
| Time | 24-hour | 1254 | 1325 | 1338 | 1402 | 1423 | |
| Depth to Water | feet | 12.59 | 12.64 | 12.64 | 12.64 | 12.64 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|-------|--|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1330 | 1335 | 1340 | 1345 | 1350 | 1355 | 1400 | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 190 | 190 | 190 | 190 | 190 | 190 | 190 | | | | | | |
| pH | su | 7.0 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | | | | | | |
| Temp. | °C | 16.5 | 16.5 | 16.6 | 16.6 | 16.7 | 16.6 | 16.7 | | | | | | |
| Conductivity | µS/cm | 574 | 589 | 608 | 633 | 655 | 658 | 677 | | | | | | |
| DO | mg/L | 2.8 | 1.8 | 1.9 | 1.9 | 1.7 | 1.6 | 1.5 | | | | | | |
| ORP | mV | 11.3 | -20.0 | -26.0 | -33.0 | -35.5 | -36.1 | -35.6 | | | | | | |
| Turbidity | NTU | 3.4 | 2.9 | 2.6 | 3.4 | 2.2 | 2.2 | 1.7 | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | | | | | | |
| Odor | -- | none | none | none | none | none | none | none | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-116 | 4/15/2021 | 1405 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-117 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/13/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | |
|---|--|---------------------------------|--------|------|--|--|
| Weather: clear | Air Temp. (°F): 61 | Wind: north-northeast at 12 mph | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | Total depth from TOC | | feet | | |
| | | TOC below/above ground | | feet | | |
| Damages/repairs needed: | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 4/12/2021 | 4/13/2021 | 4/13/2021 | 4/13/2021 | 4/13/2021 | |
| Time | 24-hour | 1235 | 1350 | 1408 | 1417 | 1441 | |
| Depth to Water | feet | 10.72 | 10.71 | 10.71 | 10.71 | 10.71 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | |
|--|---------|---|-------|-------|--|-------|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | |
| Time | 24-hour | 1355 | 1400 | 1405 | 1410 | 1415 | Remarks |
| Purge vol. | gallons | | | | | | |
| Purge rate | mL/min | 190 | 170 | 170 | 170 | 170 | |
| pH | su | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | |
| Temp. | °C | 17.8 | 17.8 | 18.1 | 18.0 | 18.1 | |
| Conductivity | µS/cm | 511.5 | 510.1 | 508.1 | 507.7 | 507.1 | |
| DO | mg/L | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 | |
| ORP | mV | -31.7 | -40.3 | -46.7 | -50.4 | -51.9 | |
| Turbidity | NTU | 5.5 | 2.7 | 2.6 | 2.9 | 2.2 | |
| Color/tint | -- | clear | clear | clear | clear | clear | |
| Odor | -- | none | none | none | none | none | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|------------|-----------|------|--------------|------------|---------|
| MW-117 | 4/13/2021 | 1420 | 3 | 0 | |
| MW-117 DUP | 4/13/2021 | 1420 | 3 | 0 | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-118 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/15/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | |
|---|--|---------------------------|--------|------|--|--|
| Weather: clear | Air Temp. (°F): 51 | Wind: northeast at 14 mph | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | Total depth from TOC | | feet | | |
| | | TOC below/above ground | | feet | | |
| Damages/repairs needed: | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | Remarks |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | |
| Date | mm/dd/yy | 4/12/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | |
| Time | 24-hour | 1309 | 0820 | 0837 | 0906 | 0922 | |
| Depth to Water | feet | 9.70 | 9.76 | 9.76 | 9.76 | 9.78 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|-------|---|-------|-------|-------|--|-------|-------|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | |
| Purge depth | feet | | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | |
| Casing vol. | gallons | | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | |
| Time | 24-hour | 0830 | 0835 | 0840 | 0845 | 0850 | 0855 | 0900 | 0905 | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | | | | | |
| pH | su | 6.3 | 6.3 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.6 | | | | | |
| Temp. | °C | 15.5 | 15.5 | 15.5 | 15.5 | 15.7 | 15.7 | 15.7 | 15.7 | | | | | |
| Conductivity | µS/cm | 488 | 485 | 484 | 485 | 484 | 483 | 483 | 484 | | | | | |
| DO | mg/L | 3.1 | 1.4 | 0.9 | 0.9 | 0.8 | 0.6 | 0.8 | 0.8 | | | | | |
| ORP | mV | 107.3 | 78.4 | 63.9 | 49.7 | 23.7 | 9.6 | 1.6 | -2.4 | | | | | |
| Turbidity | NTU | 2.7 | 2.1 | 2.3 | 2.3 | 2.7 | 2.6 | 2.6 | 2.4 | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | clear | | | | | |
| Odor | -- | none | none | none | none | none | none | none | none | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-118 | 4/15/2021 | 0910 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-119 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 4/15/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | |
|---|--|---------------------------------|--------|------|--|--|
| Weather: clear | Air Temp. (°F): 57 | Wind: north-northeast at 14 mph | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | Total depth from TOC | | feet | | |
| | | TOC below/above ground | | feet | | |
| Damages/repairs needed: | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | Remarks |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | |
| Date | mm/dd/yy | 4/12/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | 4/15/2021 | |
| Time | 24-hour | 1337 | 1130 | 1147 | 1206 | 1223 | |
| Depth to Water | feet | 14.84 | 15.23 | 15.23 | 15.23 | 15.23 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input checked="" type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1140 | 1145 | 1150 | 1155 | 1200 | 1205 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 210 | 210 | 210 | 210 | 210 | 210 | | | | | | | |
| pH | su | 6.9 | 6.8 | 6.8 | 6.8 | 6.8 | 6.9 | | | | | | | |
| Temp. | °C | 18.0 | 17.3 | 17.3 | 17.4 | 17.5 | 17.5 | | | | | | | |
| Conductivity | µS/cm | 596 | 600 | 591 | 595 | 595 | 594 | | | | | | | |
| DO | mg/L | 2.2 | 0.8 | 0.6 | 0.5 | 0.5 | 0.5 | | | | | | | |
| ORP | mV | 5.9 | -6.4 | -28.0 | -32.1 | -34.6 | -37.8 | | | | | | | |
| Turbidity | NTU | 3.1 | 2.7 | 2.3 | 2.4 | 2.6 | 2.2 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-119 | 4/15/2021 | 1210 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

First Half 2021 Verification Sampling Event



Groundwater Level Data Sheet

| | | | |
|--|--|---|--------------------|
| Project Name: Plum Point Energy Station 2021 Groundwater Services | Project Number: R14590-2496-001 EPA Program | Investigator: Michael Clayton | Page 1 of 1 |
| Weather Conditions: Partly cloudy | Measuring Device: Solinst 101 | | |

| Well ID | Date | Time | Depth to Water (feet below TOC) | Damages/Repairs | | |
|---------|-----------|------|---------------------------------|---|--|--|
| MW-101 | 6/29/2021 | 1004 | 14.85 | <input type="checkbox"/> Damaged well pad/casing <input checked="" type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-102 | 6/29/2021 | 1015 | 16.50 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-103 | 6/29/2021 | 0948 | 15.37 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input checked="" type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-108 | 6/29/2021 | 0845 | 19.47 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-113 | 6/29/2021 | 0837 | 17.63 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-115 | 6/29/2021 | 0830 | 16.56 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-116 | 6/29/2021 | 1022 | 16.55 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-117 | 6/29/2021 | 1031 | 14.73 | <input checked="" type="checkbox"/> Damaged well pad/casing <input checked="" type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-118 | 6/29/2021 | 0932 | 13.26 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-119 | 6/29/2021 | 0956 | 18.68 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-101 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 6/29/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 93 | Wind: southeast at 4 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 6/29/2021 | 6/29/2021 | 6/29/2021 | 6/29/2021 | 6/29/2021 | |
| Time | 24-hour | 1004 | 1425 | 1442 | 1458 | 1505 | |
| Depth to Water | feet | 14.85 | 14.82 | 14.82 | 14.82 | 14.82 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1430 | 1435 | 1440 | 1445 | 1450 | 1455 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 230 | 230 | 230 | 230 | 230 | 230 | | | | | | | |
| pH | su | 6.8 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | | | | | | | |
| Temp. | °C | 19.3 | 19.0 | 19.0 | 19.1 | 18.7 | 18.6 | | | | | | | |
| Conductivity | µS/cm | 714 | 714 | 713 | 712 | 712 | 710 | | | | | | | |
| DO | mg/L | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | | | | | | | |
| ORP | mV | 51.9 | 60.6 | 62.3 | 60.2 | 58.3 | 58.8 | | | | | | | |
| Turbidity | NTU | 2.8 | 2.6 | 2.8 | 3.0 | 2.4 | 2.0 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-101 | 6/29/2021 | 1500 | 1 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-113 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 6/29/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 91 | Wind: southeast at 5 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 6/29/2021 | 6/29/2021 | 6/29/2021 | 6/29/2021 | 6/29/2021 | |
| Time | 24-hour | 0837 | 1140 | 1203 | 1218 | 1230 | |
| Depth to Water | feet | 17.63 | 17.64 | 17.64 | 17.64 | 17.64 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | |
| Time | 24-hour | 1150 | 1155 | 1200 | 1205 | 1210 | 1215 | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | |
| Purge rate | mL/min | 140 | 140 | 140 | 140 | 140 | 140 | | | | | | |
| pH | su | 6.1 | 5.9 | 5.9 | 6.2 | 6.2 | 6.2 | | | | | | |
| Temp. | °C | 22.1 | 22.6 | 22.1 | 22.2 | 21.9 | 21.9 | | | | | | |
| Conductivity | µS/cm | 545 | 543 | 544 | 549 | 549 | 550 | | | | | | |
| DO | mg/L | 5.0 | 4.6 | 4.5 | 4.6 | 4.7 | 5.0 | | | | | | |
| ORP | mV | 89.1 | 104.9 | 101.8 | 90.2 | 86.7 | 86.6 | | | | | | |
| Turbidity | NTU | 2.9 | 2.7 | 2.4 | 2.0 | 1.6 | 2.3 | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-113 | 6/29/2021 | 1225 | 1 | 0 | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-116 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 6/29/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 94 | Wind: southeast at 4 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 6/29/2021 | 6/29/2021 | 6/29/2021 | 6/29/2021 | 6/29/2021 | |
| Time | 24-hour | 1022 | 1515 | 1527 | 1547 | 1558 | |
| Depth to Water | feet | 16.55 | 16.55 | 16.55 | 16.55 | 16.55 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1520 | 1525 | 1530 | 1535 | 1540 | 1545 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 210 | 210 | 210 | 210 | 210 | 210 | | | | | | | |
| pH | su | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | | | | |
| Temp. | °C | 19.6 | 19.7 | 19.8 | 19.6 | 19.7 | 19.5 | | | | | | | |
| Conductivity | µS/cm | 963 | 1001 | 1018 | 1032 | 1042 | 1052 | | | | | | | |
| DO | mg/L | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | | | | | | | |
| ORP | mV | 48.8 | 48.4 | 52.3 | 49.2 | 48.5 | 46.7 | | | | | | | |
| Turbidity | NTU | 2.1 | 1.5 | 2.0 | 2.7 | 2.0 | 1.8 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-116 | 6/29/2021 | 1555 | 1 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-117 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 6/29/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: cloudy | Air Temp. (°F): 93 | Wind: south-southeast at 5 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 6/29/2021 | 6/29/2021 | 6/29/2021 | 6/29/2021 | 6/29/2021 | |
| Time | 24-hour | 1031 | 1605 | 1622 | 1637 | 1710 | |
| Depth to Water | feet | 14.73 | 14.73 | 14.73 | 14.73 | 14.73 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1610 | 1615 | 1620 | 1625 | 1630 | 1635 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 180 | 180 | 180 | 180 | 180 | 180 | | | | | | | |
| pH | su | 6.5 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | | | | | | | |
| Temp. | °C | 19.9 | 20.0 | 20.2 | 20.3 | 20.2 | 20.0 | | | | | | | |
| Conductivity | µS/cm | 570 | 567 | 566 | 566 | 565 | 566 | | | | | | | |
| DO | mg/L | 2.8 | 2.5 | 2.5 | 2.4 | 2.4 | 2.5 | | | | | | | |
| ORP | mV | 51.2 | 57.6 | 56.2 | 56.4 | 55.7 | 58.4 | | | | | | | |
| Turbidity | NTU | 3.4 | 1.4 | 1.4 | 1.6 | 1.5 | 1.4 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|------------|-----------|------|--------------|------------|------------------|
| MW-117 | 6/29/2021 | 1650 | 2 | 0 | |
| MW-117 DUP | 6/29/2021 | 1655 | 2 | 0 | duplicate sample |
| EPA EB-1 | 6/29/2021 | 1710 | 3 | 0 | equipment blank |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Second Half 2021 Sampling Event



Groundwater Level Data Sheet

| | | | |
|--|--|---|--------------------|
| Project Name: Plum Point Energy Station 2021 Groundwater Services | Project Number: R14590-2496-001 EPA Program | Investigator: Michael Clayton | Page 1 of 1 |
| Weather Conditions: Partly cloudy, 70°F | Measuring Device: Solinst 101 | | |

| Well ID | Date | Time | Depth to Water (feet below TOC) | Damages/Repairs | | |
|---------|-----------|------|---------------------------------|---|---|--|
| MW-101 | 10/4/2021 | 1055 | 20.61 | <input type="checkbox"/> Damaged well pad/casing <input checked="" type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-102 | 10/4/2021 | 1102 | 22.67 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-103 | 10/4/2021 | 1043 | 21.31 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-108 | 10/4/2021 | 0854 | 25.83 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-113 | 10/4/2021 | 0848 | 24.38 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-115 | 10/4/2021 | 0840 | 23.02 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-116 | 10/4/2021 | 1047 | 22.48 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-117 | 10/4/2021 | 1118 | 21.16 | <input type="checkbox"/> Damaged well pad/casing <input checked="" type="checkbox"/> Damaged bollards <input checked="" type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input checked="" type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-118 | 10/4/2021 | 1032 | 19.53 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input checked="" type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-119 | 10/4/2021 | 1048 | 24.49 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-101 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/7/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 72 | Wind: west-southwest at 1 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/7/2021 | 10/7/2021 | 10/7/2021 | 10/7/2021 | |
| Time | 24-hour | 1055 | 1022 | 1028 | 1053 | 1107 | |
| Depth to Water | feet | 20.61 | 20.77 | 20.77 | 20.77 | 20.77 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1025 | 1030 | 1035 | 1040 | 1045 | 1050 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 210 | 210 | 210 | 210 | 210 | 210 | | | | | | | |
| pH | su | 7.1 | 6.7 | 6.6 | 6.7 | 6.7 | 6.7 | | | | | | | |
| Temp. | °C | 20.0 | 18.9 | 18.7 | 18.6 | 18.5 | 18.6 | | | | | | | |
| Conductivity | µS/cm | 600 | 605 | 605 | 609 | 610 | 612 | | | | | | | |
| DO | mg/L | 3.3 | 0.6 | 0.4 | 0.3 | 0.2 | 0.2 | | | | | | | |
| ORP | mV | 174.2 | 134.1 | 132.9 | 124.5 | 123.1 | 122.1 | | | | | | | |
| Turbidity | NTU | 6.2 | 3.1 | 1.8 | 1.4 | 1.2 | 1.3 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-101 | 10/7/2021 | 1055 | 3 | 0 | |
| EPA EB | 10/7/2021 | 1125 | 3 | 0 | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-102 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/6/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | |
|---|--|---|
| Weather: partly cloudy | Air Temp. (°F): 75 | Wind: south-southeast at 6 mph |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter: inches 2 Well locked? Total depth from TOC: feet <input checked="" type="checkbox"/> Yes TOC below/above ground: feet <input type="checkbox"/> No |
| Damages/repairs needed: Large ant nest in well | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | |
| Time | 24-hour | 1102 | 1235 | 1312 | 1348 | 1410 | |
| Depth to Water | feet | 22.67 | 22.77 | 22.82 | 22.82 | 22.82 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|-------|-------|-------|-------|-------|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | |
| Time | 24-hour | 1240 | 1245 | 1250 | 1255 | 1300 | 1305 | 1310 | 1315 | 1320 | 1325 | 1330 | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | |
| Purge rate | mL/min | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | |
| pH | su | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.7 | 6.5 | 6.7 | 6.7 | 6.7 | 6.7 | |
| Temp. | °C | 20.8 | 20.9 | 20.8 | 20.5 | 20.5 | 20.5 | 20.1 | 20.3 | 20.4 | 20.2 | 20.5 | |
| Conductivity | µS/cm | 624 | 623 | 625 | 625 | 625 | 625 | 625 | 628 | 627 | 629 | 627 | |
| DO | mg/L | 0.6 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| ORP | mV | 129.8 | 117.5 | 112.5 | 113.1 | 116.9 | 111.1 | 91.3 | 17.4 | -11.4 | -46.2 | -52.4 | |
| Turbidity | NTU | 2.2 | 2.1 | 1.5 | 1.5 | 1.7 | 2.4 | 3.9 | 4.0 | 4.1 | 4.4 | 4.3 | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | clear | clear | clear | clear | |
| Odor | -- | none | none | none | none | none | none | none | sour | sour | sour | sour | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|------------|
| MW-102 | 10/6/2021 | --- | --- | --- | see page 2 |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-102 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/6/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | |
|---|--|---|
| Weather: partly cloudy | Air Temp. (°F): 75 | Wind: south-southeast at 6 mph |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter: inches 2 Total depth from TOC: feet TOC below/above ground: feet Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Damages/repairs needed: Large ant nest in well | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | |
| Time | 24-hour | 1102 | 1235 | 1312 | 1348 | 1410 | |
| Depth to Water | feet | 22.67 | 22.77 | 22.82 | 22.82 | 22.82 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | |
|--|---------|---|-------|-------|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | |
| Time | 24-hour | 1335 | 1340 | 1345 | | | Remarks |
| Purge vol. | gallons | | | | | | |
| Purge rate | mL/min | 160 | 160 | 160 | | | |
| pH | su | 6.7 | 6.7 | 6.8 | | | |
| Temp. | °C | 20.3 | 20.9 | 21.1 | | | |
| Conductivity | µS/cm | 631 | 627 | 630 | | | |
| DO | mg/L | 0.3 | 0.2 | 0.3 | | | |
| ORP | mV | -61.4 | -66.2 | -57.9 | | | |
| Turbidity | NTU | 4.1 | 4.3 | 4.3 | | | |
| Color/tint | -- | clear | clear | clear | | | |
| Odor | -- | sour | sour | sour | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-102 | 10/6/2021 | 1350 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-103 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/7/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 63 | Wind: northwest at 2 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/7/2021 | 10/7/2021 | 10/7/2021 | 10/7/2021 | |
| Time | 24-hour | 1043 | 0810 | 0837 | 0854 | 0916 | |
| Depth to Water | feet | 21.31 | 21.44 | 21.50 | 21.50 | 21.50 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|-------|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 0820 | 0825 | 0830 | 0835 | 0840 | 0845 | 0850 | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 190 | 190 | 190 | 190 | 190 | 190 | 190 | | | | | | |
| pH | su | 6.5 | 6.2 | 6.1 | 6.3 | 6.4 | 6.5 | 6.5 | | | | | | |
| Temp. | °C | 18.3 | 18.2 | 18.3 | 18.4 | 18.4 | 18.4 | 18.4 | | | | | | |
| Conductivity | µS/cm | 497 | 493 | 491 | 494 | 494 | 494 | 496 | | | | | | |
| DO | mg/L | 0.8 | 0.6 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | | | | | | |
| ORP | mV | 177.9 | 193.0 | 168.0 | 154.7 | 156.7 | 150.4 | 146.3 | | | | | | |
| Turbidity | NTU | 2.4 | 2.5 | 3.4 | 3.0 | 3.2 | 2.7 | 2.9 | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | | | | | | |
| Odor | -- | none | none | none | none | none | none | none | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-103 | 10/7/2021 | 0900 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-108 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/5/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 72 | Wind: north-northeast at 7 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input type="checkbox"/> Mark/notch on TOC <input checked="" type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/5/2021 | 10/5/2021 | 10/5/2021 | 10/5/2021 | |
| Time | 24-hour | 0854 | 1142 | 1212 | 1241 | 1253 | |
| Depth to Water | feet | 25.83 | 25.95 | 25.95 | 25.95 | 25.95 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | |
|--|---------|---|---|-------|-------|-------|--|-------|-------|-------|-------|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | |
| Purge depth | feet | | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | |
| Time | 24-hour | 1155 | 1200 | 1205 | 1210 | 1215 | 1220 | 1225 | 1230 | 1235 | 1240 | Remarks |
| Purge vol. | gallons | | | | | | | | | | | |
| Purge rate | mL/min | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | |
| pH | su | 7.0 | 6.6 | 6.3 | 6.4 | 6.4 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | |
| Temp. | °C | 55.9 | 21.1 | 20.8 | 20.7 | 20.4 | 20.8 | 20.9 | 21.0 | 20.7 | 20.8 | |
| Conductivity | µS/cm | 766 | 775 | 774 | 774 | 774 | 771 | 768 | 759 | 761 | 756 | |
| DO | mg/L | 3.2 | 1.3 | 1.0 | 0.6 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | |
| ORP | mV | 74.9 | 77.5 | 81.5 | 70.5 | 71.5 | 63.2 | 61.2 | 56.9 | 55.8 | 56.5 | |
| Turbidity | NTU | 4.6 | 3.7 | 3.7 | 2.9 | 4.4 | 3.4 | 3.0 | 2.8 | 2.8 | 2.3 | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | clear | clear | clear | |
| Odor | -- | none | none | none | none | none | none | none | none | none | none | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-108 | 10/5/2021 | 1245 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-113 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/5/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 76 | Wind: north-northeast at 6 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input type="checkbox"/> Mark/notch on TOC <input checked="" type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/5/2021 | 10/5/2021 | 10/5/2021 | 10/5/2021 | |
| Time | 24-hour | 0848 | 1040 | 1113 | 1123 | 1138 | |
| Depth to Water | feet | 24.38 | 24.47 | 24.47 | 24.47 | 24.47 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1055 | 1100 | 1105 | 1110 | 1115 | 1120 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 150 | 150 | 150 | 150 | 150 | 150 | | | | | | | |
| pH | su | 6.3 | 6.4 | 6.5 | 6.6 | 6.6 | 6.6 | | | | | | | |
| Temp. | °C | 19.8 | 20.0 | 20.1 | 20.2 | 20.3 | 20.4 | | | | | | | |
| Conductivity | µS/cm | 424 | 420 | 417 | 415 | 416 | 417 | | | | | | | |
| DO | mg/L | 4.0 | 3.7 | 4.5 | 4.1 | 3.8 | 3.6 | | | | | | | |
| ORP | mV | 65.6 | 68.2 | 56.0 | 57.7 | 57.3 | 54.0 | | | | | | | |
| Turbidity | NTU | 1.5 | 1.5 | 1.8 | 1.5 | 1.1 | 1.1 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-113 | 10/5/2021 | 1125 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-115 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/5/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 68 | Wind: north-northeast at 7 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input type="checkbox"/> Mark/notch on TOC <input checked="" type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/5/2021 | 10/5/2021 | 10/5/2021 | 10/5/2021 | |
| Time | 24-hour | 0840 | 0920 | 0941 | 1008 | 1021 | |
| Depth to Water | feet | 23.02 | 23.12 | 23.12 | 23.12 | 23.12 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|-------|-------|-------|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | |
| Time | 24-hour | 0925 | 0930 | 0935 | 0940 | 0945 | 0950 | 0955 | 1000 | 1005 | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | |
| Purge rate | mL/min | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | | | |
| pH | su | 6.2 | 6.1 | 6.3 | 6.4 | 6.5 | 6.6 | 6.7 | 6.7 | 6.7 | | | |
| Temp. | °C | 19.1 | 19.3 | 19.4 | 19.5 | 19.6 | 19.6 | 20.0 | 20.2 | 20.2 | | | |
| Conductivity | µS/cm | 626 | 591 | 588 | 587 | 584 | 583 | 583 | 584 | 584 | | | |
| DO | mg/L | 4.9 | 3.7 | 3.5 | 4.0 | 5.5 | 5.9 | 5.9 | 6.0 | 5.9 | | | |
| ORP | mV | 105.8 | 148.2 | 132.1 | 118.5 | 63.8 | 62.1 | 77.9 | 76.1 | 73.3 | | | |
| Turbidity | NTU | 1.9 | 1.4 | 1.3 | 1.1 | 1.1 | 1.0 | 1.0 | 0.9 | 1.0 | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | clear | clear | | | |
| Odor | -- | none | none | none | none | none | none | none | none | none | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-115 | 10/5/2021 | 1010 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-116 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/6/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 76 | Wind: south-southeast at 4 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input type="checkbox"/> Mark/notch on TOC <input checked="" type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | |
| Time | 24-hour | 1047 | 1420 | 1451 | 1503 | 1526 | |
| Depth to Water | feet | 22.48 | 22.57 | 22.57 | 22.57 | 22.57 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|-------|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1430 | 1435 | 1440 | 1445 | 1450 | 1455 | 1500 | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 175 | 175 | 175 | 175 | 175 | 175 | 175 | | | | | | |
| pH | su | 6.7 | 6.3 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | | | |
| Temp. | °C | 22.2 | 20.3 | 20.6 | 20.3 | 20.3 | 20.8 | 19.9 | | | | | | |
| Conductivity | µS/cm | 907 | 924 | 934 | 939 | 944 | 946 | 948 | | | | | | |
| DO | mg/L | 2.1 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 | | | | | | |
| ORP | mV | 14.7 | 41.1 | 39.4 | 45.5 | 46.5 | 48.8 | 51.6 | | | | | | |
| Turbidity | NTU | 2.1 | 1.5 | 1.4 | 1.1 | 1.1 | 1.0 | 1.0 | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | | | | | | |
| Odor | -- | none | none | none | none | none | none | none | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-116 | 10/6/2021 | 1510 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-117 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/6/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: cloudy | Air Temp. (°F): 74 | Wind: south-southeast at 6 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | |
| Time | 24-hour | 1118 | 1120 | 1147 | 1157 | 1223 | |
| Depth to Water | feet | 21.16 | 21.28 | 21.30 | 21.30 | 21.30 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|-------|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1125 | 1130 | 1135 | 1140 | 1145 | 1150 | 1155 | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 200 | 200 | 200 | 200 | 200 | 200 | 200 | | | | | | |
| pH | su | 6.6 | 6.4 | 6.4 | 6.5 | 6.5 | 6.4 | 6.5 | | | | | | |
| Temp. | °C | 20.1 | 20.1 | 20.0 | 20.1 | 20.0 | 19.6 | 19.6 | | | | | | |
| Conductivity | µS/cm | 488 | 488 | 489 | 490 | 489 | 490 | 491 | | | | | | |
| DO | mg/L | 3.5 | 3.1 | 2.9 | 2.7 | 2.9 | 2.9 | 3.1 | | | | | | |
| ORP | mV | 103.1 | 125.8 | 126.7 | 124.0 | 124.1 | 126.1 | 126.1 | | | | | | |
| Turbidity | NTU | 1.3 | 0.8 | 1.4 | 1.2 | 1.7 | 1.0 | 2.1 | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | | | | | | |
| Odor | -- | none | none | none | none | none | none | none | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|------------|-----------|------|--------------|------------|---------|
| MW-117 | 10/6/2021 | 1200 | 3 | 0 | |
| MW-117 DUP | 10/6/2021 | 1205 | 3 | 0 | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-118 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/6/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: cloudy | Air Temp. (°F): 74 | Wind: southeast at 4 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 10/4/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | 10/6/2021 | |
| Time | 24-hour | 1032 | 1014 | 1023 | 1047 | 1059 | |
| Depth to Water | feet | 19.53 | 19.65 | 19.65 | 19.65 | 19.65 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 1020 | 1025 | 1030 | 1035 | 1040 | 1045 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 200 | 200 | 200 | 200 | 200 | 200 | | | | | | | |
| pH | su | 6.6 | 6.3 | 6.3 | 6.3 | 6.4 | 6.4 | | | | | | | |
| Temp. | °C | 18.9 | 18.6 | 18.7 | 18.8 | 18.9 | 18.8 | | | | | | | |
| Conductivity | µS/cm | 454 | 456 | 456 | 456 | 456 | 457 | | | | | | | |
| DO | mg/L | 3.7 | 3.0 | 3.5 | 3.2 | 2.8 | 2.7 | | | | | | | |
| ORP | mV | 137.8 | 133.9 | 129.7 | 127.1 | 126.8 | 126.3 | | | | | | | |
| Turbidity | NTU | 6.2 | 1.4 | 1.4 | 1.0 | 1.2 | 1.1 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-118 | 10/6/2021 | 1050 | 3 | 0 | |
| | | | | | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|-----------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-119 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 10/7/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | |
|---|--|--------------------------|--------|------|--|--|
| Weather: partly cloudy | Air Temp. (°F): 68 | Wind: northwest at 2 mph | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | Total depth from TOC | | feet | | |
| | | TOC below/above ground | | feet | | |
| Damages/repairs needed: | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|-----------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | Remarks |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | |
| Date | mm/dd/yy | 10/4/2021 | 10/7/2021 | 10/7/2021 | 10/7/2021 | 10/7/2021 | |
| Time | 24-hour | 1048 | 0925 | 0937 | 0958 | 1014 | |
| Depth to Water | feet | 24.49 | 24.62 | 24.62 | 24.62 | 24.62 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

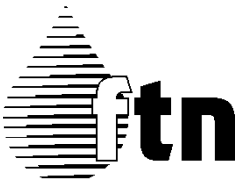
| | | | | | | | | | | | | | | |
|--|---------|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | |
| Time | 24-hour | 0930 | 0935 | 0940 | 0945 | 0950 | 0955 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | |
| Purge rate | mL/min | 225 | 225 | 225 | 225 | 225 | 225 | | | | | | | |
| pH | su | 6.9 | 6.7 | 6.6 | 6.6 | 6.7 | 6.7 | | | | | | | |
| Temp. | °C | 19.8 | 19.3 | 19.2 | 19.3 | 16.5 | 19.7 | | | | | | | |
| Conductivity | µS/cm | 586 | 583 | 584 | 581 | 581 | 579 | | | | | | | |
| DO | mg/L | 2.1 | 0.6 | 0.3 | 0.2 | 0.3 | 0.3 | | | | | | | |
| ORP | mV | 123.3 | 128.5 | 130.7 | 128.4 | 123.8 | 118.6 | | | | | | | |
| Turbidity | NTU | 6.5 | 3.0 | 2.1 | 1.4 | 1.6 | 2.0 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|-----------|------|--------------|------------|---------|
| MW-119 | 10/7/2021 | 1000 | 3 | 0 | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Second Half 2021 Verification Sampling Event



Groundwater Level Data Sheet

| | | | |
|--|--|---|--------------------|
| Project Name: Plum Point Energy Station 2021 Groundwater Services | Project Number: R14590-2496-001 EPA Program | Investigator: Michael Clayton | Page 1 of 1 |
| Weather Conditions: Cloudy, 56°F, SSE @ 8 mph | Measuring Device: Solinst 101 | | |

| Well ID | Date | Time | Depth to Water (feet below TOC) | Damages/Repairs | | |
|---------|------------|------|---------------------------------|--|--|--|
| MW-101 | 12/14/2021 | 1021 | 22.97 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-102 | 12/14/2021 | 1029 | 25.72 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-103 | 12/14/2021 | 1010 | 24.02 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-108 | 12/14/2021 | 0925 | 29.00 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input checked="" type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-113 | 12/14/2021 | 0918 | 28.64 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-115 | 12/14/2021 | 0912 | 28.37 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-116 | 12/14/2021 | 1025 | 25.35 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-117 | 12/14/2021 | 1047 | 24.45 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input checked="" type="checkbox"/> Damaged equipment | <input checked="" type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input checked="" type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-118 | 12/14/2021 | 1004 | 22.67 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input checked="" type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| MW-119 | 12/14/2021 | 1016 | 26.83 | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |
| | | | | <input type="checkbox"/> Damaged well pad/casing <input type="checkbox"/> Damaged bollards <input type="checkbox"/> Damaged equipment | <input type="checkbox"/> Damaged TOC <input type="checkbox"/> Damaged lock <input type="checkbox"/> Unkept vegetation | <input type="checkbox"/> Lacks visibility <input type="checkbox"/> Lacks access <input type="checkbox"/> See GW sample record |

Groundwater Sampling Record

| | | |
|---------------------------------------|------------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-116 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 12/14/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | | | | | | | |
|---|--|--|--|--------|---|--|----------------------|------|--|------------------------|------|--|
| Weather: partly cloudy | Air Temp. (°F): 66 | Wind: south-southeast at 9 mph | | | | | | | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Well diameter</td> <td style="width: 16.5%;">inches</td> <td style="width: 16.5%;">2</td> <td rowspan="3" style="width: 34%;">Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Total depth from TOC</td> <td>feet</td> <td></td> </tr> <tr> <td>TOC below/above ground</td> <td>feet</td> <td></td> </tr> </table> | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Total depth from TOC | feet | | TOC below/above ground | feet | |
| Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| Total depth from TOC | feet | | | | | | | | | | | |
| TOC below/above ground | feet | | | | | | | | | | | |
| Damages/repairs needed: | | | | | | | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|------------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | Remarks |
| Date | mm/dd/yy | 12/14/2021 | 12/14/2021 | 12/14/2021 | 12/14/2021 | 12/14/2021 | |
| Time | 24-hour | 1025 | 1200 | 1217 | 1245 | 1304 | |
| Depth to Water | feet | 25.35 | 25.35 | 25.35 | 25.35 | 25.35 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | |
|--|---------|---|---|-------|-------|-------|-------|-------|--|-------|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | |
| Purge depth | feet | | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | |
| Time | 24-hour | 1205 | 1210 | 1215 | 1220 | 1225 | 1230 | 1235 | 1240 | 1245 | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | |
| Purge rate | mL/min | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | | | |
| pH | su | 6.3 | 6.5 | 6.6 | 6.6 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | | | |
| Temp. | °C | 18.7 | 19.0 | 19.1 | 19.0 | 19.3 | 19.4 | 19.5 | 19.5 | 19.5 | | | |
| Conductivity | µS/cm | 897 | 891 | 892 | 896 | 899 | 900 | 901 | 901 | 901 | | | |
| DO | mg/L | 0.7 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | | | |
| ORP | mV | 125.8 | 119.5 | 109.3 | 108.1 | 109.1 | 101.7 | 99.4 | 98.3 | 99.6 | | | |
| Turbidity | NTU | 1.9 | 2.6 | 1.6 | 1.2 | 1.4 | 1.1 | 1.2 | 1.2 | 1.1 | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | clear | clear | | | |
| Odor | -- | none | none | none | none | none | none | none | none | none | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|------------|------------|------|--------------|------------|---------|
| MW-116 | 12/14/2021 | 1250 | 3 | 0 | |
| MW-116 DUP | 12/14/2021 | 1253 | 3 | 0 | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

Groundwater Sampling Record

| | | |
|---------------------------------------|------------------|--|
| Facility: Plum Point Energy Station | Site ID: MW-117 | Sampler: Michael Clayton |
| Project Number: R14590-2496-001 (EPA) | Date: 12/14/2021 | Sampler Organization: FTN Associates, Ltd. |

Site Description

| | | | | | | |
|---|--|------------------------|--------|------|--|--|
| Weather: cloudy | Air Temp. (°F): 67 | Wind: south at 7 mph | | | | |
| Site type: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Extraction Well <input type="checkbox"/> Production Well <input type="checkbox"/> Borehole <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Spring <input type="checkbox"/> Other: | Well casing material: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Iron <input type="checkbox"/> Other: | Well diameter | inches | 2 | Well locked? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| | | Total depth from TOC | | feet | | |
| | | TOC below/above ground | | feet | | |
| Damages/repairs needed: well casing lid difficult to open | | | | | | |

Water Level Data

| | | | | | | | |
|---|------------------|---|------------------------|----------------|------------|----------------|---------|
| Measuring point description: <input checked="" type="checkbox"/> Mark/notch on TOC <input type="checkbox"/> North rim of TOC <input type="checkbox"/> Other: | | Water level meter: <input type="checkbox"/> Geotech/Keck 100' <input type="checkbox"/> Geotech/Keck 200' <input type="checkbox"/> Heron Dipper-T <input checked="" type="checkbox"/> Solinst 101 <input type="checkbox"/> Other: | | | | | Remarks |
| | | Pre-purge initial | Pre-purge confirmation | During purging | Purge end | After sampling | |
| Date | mm/dd/yy | 12/14/2021 | 12/14/2021 | 12/14/2021 | 12/14/2021 | 12/14/2021 | |
| Time | 24-hour | 1047 | 1317 | 1341 | 1357 | 1408 | |
| Depth to Water | feet | 24.45 | 24.45 | 24.45 | 24.45 | 24.45 | |
| Product/Thickness | LNAPL/DNAPL feet | | | | | | |

Field Data

| | | | | | | | | | | | | | | | |
|--|---------|---|---|-------|-------|-------|--|-------|--|--|--|--|--|--|---------|
| Field data meters: <input type="checkbox"/> YSI ProPlus <input checked="" type="checkbox"/> Hach 2100P Turbidimeter <input checked="" type="checkbox"/> YSI MPS 556 <input type="checkbox"/> HF Scientific Turbidimeter <input type="checkbox"/> Other: <input type="checkbox"/> Other: | | | Pump description: <input checked="" type="checkbox"/> Peristaltic <input type="checkbox"/> Bladder [<input type="checkbox"/> dedicated / <input type="checkbox"/> portable] <input type="checkbox"/> Submersible | | | | Bailer description: <input type="checkbox"/> Disposable polyethylene <input type="checkbox"/> Disposable Teflon <input type="checkbox"/> Disposable PVC | | | | | | | | |
| Purge depth | feet | | Well goes dry during purging: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | | | | | | | | |
| Casing vol. | gallons | = [total depth (feet) – depth to water (feet)] × [internal diameter of well (inches)] ² × 0.0408 | | | | | | | | | | | | | |
| Time | 24-hour | 1325 | 1330 | 1335 | 1340 | 1345 | 1350 | 1355 | | | | | | | Remarks |
| Purge vol. | gallons | | | | | | | | | | | | | | |
| Purge rate | mL/min | 180 | 180 | 180 | 180 | 180 | 180 | 180 | | | | | | | |
| pH | su | 6.7 | 6.4 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | | | | |
| Temp. | °C | 18.8 | 18.9 | 19.1 | 19.3 | 19.9 | 18.8 | 18.8 | | | | | | | |
| Conductivity | µS/cm | 446 | 439 | 436 | 435 | 437 | 435 | 435 | | | | | | | |
| DO | mg/L | 3.5 | 3.2 | 2.9 | 2.8 | 3.0 | 2.6 | 2.7 | | | | | | | |
| ORP | mV | 198.9 | 139.7 | 140.1 | 115.7 | 112.1 | 113.2 | 111.8 | | | | | | | |
| Turbidity | NTU | 1.3 | 1.1 | 1.4 | 1.3 | 1.4 | 1.1 | 1.1 | | | | | | | |
| Color/tint | -- | clear | clear | clear | clear | clear | clear | clear | | | | | | | |
| Odor | -- | none | none | none | none | none | none | none | | | | | | | |

Sample Data

| Sample ID | Date | Time | # Containers | # Filtered | Remarks |
|-----------|------------|------|--------------|------------|---------|
| MW-117 | 12/14/2021 | 1400 | 3 | 0 | |
| EPA EB-1 | 12/14/2021 | 1435 | 3 | 0 | |
| | | | | | |

| | |
|---|---------------------------------------|
| Sampler's Name (print): Michael Clayton | Sampler Signature: transcribed by HLF |
|---|---------------------------------------|

APPENDIX B

Laboratory Reports

First Half 2021 Sampling Event

Plum Point Services Co., LLC

Sample Delivery Group: L1340644
Samples Received: 04/17/2021
Project Number: R14590-2496-001
Description: Plum Point Energy Station

Report To: Dana Derrington
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

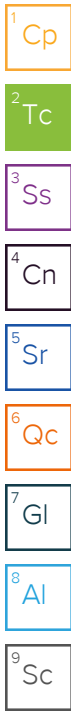
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

MW-101 L1340644-01 GW

Collected by Michael Clayton Collected date/time 04/15/21 13:05 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656129 | 1 | 04/21/21 14:13 | 04/21/21 17:54 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 13:25 | 04/26/21 13:25 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:13 | CCE | Mt. Juliet, TN |



MW-102 L1340644-02 GW

Collected by Michael Clayton Collected date/time 04/15/21 15:25 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656129 | 1 | 04/21/21 14:13 | 04/21/21 17:54 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 13:48 | 04/26/21 13:48 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:15 | CCE | Mt. Juliet, TN |

MW-103 L1340644-03 GW

Collected by Michael Clayton Collected date/time 04/15/21 11:10 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656129 | 1 | 04/21/21 14:13 | 04/21/21 17:54 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 14:23 | 04/26/21 14:23 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:23 | CCE | Mt. Juliet, TN |

MW-108 L1340644-04 GW

Collected by Michael Clayton Collected date/time 04/13/21 11:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 14:34 | 04/26/21 14:34 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:26 | CCE | Mt. Juliet, TN |

MW-113 L1340644-05 GW

Collected by Michael Clayton Collected date/time 04/13/21 10:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 14:46 | 04/26/21 14:46 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 03:57 | CCE | Mt. Juliet, TN |

MW-115 L1340644-06 GW

Collected by Michael Clayton Collected date/time 04/13/21 09:15 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 15:20 | 04/26/21 15:20 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:29 | CCE | Mt. Juliet, TN |

SAMPLE SUMMARY

MW-116 L1340644-07 GW

Collected by Michael Clayton Collected date/time 04/15/21 14:05 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656117 | 1 | 04/21/21 14:08 | 04/21/21 15:38 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 15:31 | 04/26/21 15:31 | MCG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 5 | 04/26/21 17:03 | 04/26/21 17:03 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:31 | CCE | Mt. Juliet, TN |



MW-117 L1340644-08 GW

Collected by Michael Clayton Collected date/time 04/13/21 14:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 15:43 | 04/26/21 15:43 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:34 | CCE | Mt. Juliet, TN |

MW-118 L1340644-09 GW

Collected by Michael Clayton Collected date/time 04/15/21 09:10 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656117 | 1 | 04/21/21 14:08 | 04/21/21 15:38 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 15:54 | 04/26/21 15:54 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:37 | CCE | Mt. Juliet, TN |

MW-119 L1340644-10 GW

Collected by Michael Clayton Collected date/time 04/15/21 12:10 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656117 | 1 | 04/21/21 14:08 | 04/21/21 15:38 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 16:06 | 04/26/21 16:06 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:39 | CCE | Mt. Juliet, TN |

MW-117 DUP L1340644-11 GW

Collected by Michael Clayton Collected date/time 04/13/21 14:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 16:17 | 04/26/21 16:17 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:42 | CCE | Mt. Juliet, TN |

EPA EB L1340644-12 GW

Collected by Michael Clayton Collected date/time 04/15/21 16:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656117 | 1 | 04/21/21 14:08 | 04/21/21 15:38 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 16:40 | 04/26/21 16:40 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:45 | CCE | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 335000 | | 10000 | 1 | 04/21/2021 17:54 | WG1656129 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 855 | J | 379 | 1000 | 1 | 04/26/2021 13:25 | WG1658783 |
| Fluoride | 385 | | 64.0 | 150 | 1 | 04/26/2021 13:25 | WG1658783 |
| Sulfate | 5730 | | 594 | 5000 | 1 | 04/26/2021 13:25 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 60.8 | J | 20.0 | 200 | 1 | 04/29/2021 04:13 | WG1659933 |
| Calcium | 96900 | | 79.3 | 1000 | 1 | 04/29/2021 04:13 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 446000 | | 10000 | 1 | 04/21/2021 17:54 | WG1656129 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 2310 | | 379 | 1000 | 1 | 04/26/2021 13:48 | WG1658783 |
| Fluoride | 210 | | 64.0 | 150 | 1 | 04/26/2021 13:48 | WG1658783 |
| Sulfate | 79400 | | 594 | 5000 | 1 | 04/26/2021 13:48 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 96.6 | J | 20.0 | 200 | 1 | 04/29/2021 04:15 | WG1659933 |
| Calcium | 118000 | | 79.3 | 1000 | 1 | 04/29/2021 04:15 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 294000 | | 10000 | 1 | 04/21/2021 17:54 | WG1656129 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 976 | J | 379 | 1000 | 1 | 04/26/2021 14:23 | WG1658783 |
| Fluoride | 258 | | 64.0 | 150 | 1 | 04/26/2021 14:23 | WG1658783 |
| Sulfate | 11400 | | 594 | 5000 | 1 | 04/26/2021 14:23 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 72.6 | J | 20.0 | 200 | 1 | 04/29/2021 04:23 | WG1659933 |
| Calcium | 85900 | | 79.3 | 1000 | 1 | 04/29/2021 04:23 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 541000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 2670 | | 379 | 1000 | 1 | 04/26/2021 14:34 | WG1658783 |
| Fluoride | 216 | | 64.0 | 150 | 1 | 04/26/2021 14:34 | WG1658783 |
| Sulfate | 36800 | | 594 | 5000 | 1 | 04/26/2021 14:34 | WG1658783 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 125 | J | 20.0 | 200 | 1 | 04/29/2021 04:26 | WG1659933 |
| Calcium | 149000 | | 79.3 | 1000 | 1 | 04/29/2021 04:26 | WG1659933 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 372000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 2500 | | 379 | 1000 | 1 | 04/26/2021 14:46 | WG1658783 |
| Fluoride | 102 | J | 64.0 | 150 | 1 | 04/26/2021 14:46 | WG1658783 |
| Sulfate | 9830 | | 594 | 5000 | 1 | 04/26/2021 14:46 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 67.3 | J | 20.0 | 200 | 1 | 04/29/2021 03:57 | WG1659933 |
| Calcium | 95400 | V | 79.3 | 1000 | 1 | 04/29/2021 03:57 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 441000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 789 | J | 379 | 1000 | 1 | 04/26/2021 15:20 | WG1658783 |
| Fluoride | 239 | | 64.0 | 150 | 1 | 04/26/2021 15:20 | WG1658783 |
| Sulfate | 5670 | | 594 | 5000 | 1 | 04/26/2021 15:20 | WG1658783 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 37.9 | J | 20.0 | 200 | 1 | 04/29/2021 04:29 | WG1659933 |
| Calcium | 117000 | | 79.3 | 1000 | 1 | 04/29/2021 04:29 | WG1659933 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 541000 | | 10000 | 1 | 04/21/2021 15:38 | WG1656117 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 9090 | | 379 | 1000 | 1 | 04/26/2021 15:31 | WG1658783 |
| Fluoride | 226 | | 64.0 | 150 | 1 | 04/26/2021 15:31 | WG1658783 |
| Sulfate | 126000 | | 2970 | 25000 | 5 | 04/26/2021 17:03 | WG1658783 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 85.4 | J | 20.0 | 200 | 1 | 04/29/2021 04:31 | WG1659933 |
| Calcium | 144000 | | 79.3 | 1000 | 1 | 04/29/2021 04:31 | WG1659933 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 351000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 976 | J | 379 | 1000 | 1 | 04/26/2021 15:43 | WG1658783 |
| Fluoride | 152 | | 64.0 | 150 | 1 | 04/26/2021 15:43 | WG1658783 |
| Sulfate | 7460 | | 594 | 5000 | 1 | 04/26/2021 15:43 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 70.5 | J | 20.0 | 200 | 1 | 04/29/2021 04:34 | WG1659933 |
| Calcium | 98800 | | 79.3 | 1000 | 1 | 04/29/2021 04:34 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 329000 | | 10000 | 1 | 04/21/2021 15:38 | WG1656117 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 911 | J | 379 | 1000 | 1 | 04/26/2021 15:54 | WG1658783 |
| Fluoride | 185 | | 64.0 | 150 | 1 | 04/26/2021 15:54 | WG1658783 |
| Sulfate | 20000 | | 594 | 5000 | 1 | 04/26/2021 15:54 | WG1658783 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 66.3 | J | 20.0 | 200 | 1 | 04/29/2021 04:37 | WG1659933 |
| Calcium | 94100 | | 79.3 | 1000 | 1 | 04/29/2021 04:37 | WG1659933 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 413000 | | 10000 | 1 | 04/21/2021 15:38 | WG1656117 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 2430 | | 379 | 1000 | 1 | 04/26/2021 16:06 | WG1658783 |
| Fluoride | 267 | | 64.0 | 150 | 1 | 04/26/2021 16:06 | WG1658783 |
| Sulfate | 33600 | | 594 | 5000 | 1 | 04/26/2021 16:06 | WG1658783 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 68.7 | J | 20.0 | 200 | 1 | 04/29/2021 04:39 | WG1659933 |
| Calcium | 115000 | | 79.3 | 1000 | 1 | 04/29/2021 04:39 | WG1659933 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 353000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 972 | J | 379 | 1000 | 1 | 04/26/2021 16:17 | WG1658783 |
| Fluoride | 153 | P1 | 64.0 | 150 | 1 | 04/26/2021 16:17 | WG1658783 |
| Sulfate | 7410 | | 594 | 5000 | 1 | 04/26/2021 16:17 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 70.8 | J | 20.0 | 200 | 1 | 04/29/2021 04:42 | WG1659933 |
| Calcium | 99000 | | 79.3 | 1000 | 1 | 04/29/2021 04:42 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | ND | | 10000 | 1 | 04/21/2021 15:38 | WG1656117 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | U | | 379 | 1000 | 1 | 04/26/2021 16:40 | WG1658783 |
| Fluoride | U | | 64.0 | 150 | 1 | 04/26/2021 16:40 | WG1658783 |
| Sulfate | U | | 594 | 5000 | 1 | 04/26/2021 16:40 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | U | | 20.0 | 200 | 1 | 04/29/2021 04:45 | WG1659933 |
| Calcium | U | | 79.3 | 1000 | 1 | 04/29/2021 04:45 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3644900-1 04/20/21 01:42

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1340535-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1340535-16 04/20/21 01:42 • (DUP) R3644900-3 04/20/21 01:42

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 836000 | 835000 | 1 | 0.120 | | 5 |

L1340650-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1340650-09 04/20/21 01:42 • (DUP) R3644900-4 04/20/21 01:42

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 424000 | 422000 | 1 | 0.473 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3644900-2 04/20/21 01:42

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8930000 | 101 | 77.4-123 | |

Method Blank (MB)

(MB) R3645394-1 04/21/21 15:38

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

L1340644-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1340644-07 04/21/21 15:38 • (DUP) R3645394-3 04/21/21 15:38

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 541000 | 537000 | 1 | 0.742 | | 5 |

4 Cn

5 Sr

L1340644-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1340644-09 04/21/21 15:38 • (DUP) R3645394-4 04/21/21 15:38

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 329000 | 332000 | 1 | 0.908 | | 5 |

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3645394-2 04/21/21 15:38

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8680000 | 98.6 | 77.4-123 | |

9 Sc

Method Blank (MB)

(MB) R3645382-1 04/21/21 17:54

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

L1340602-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1340602-06 04/21/21 17:54 • (DUP) R3645382-3 04/21/21 17:54

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 319000 | 315000 | 1 | 1.26 | | 5 |

4 Cn

5 Sr

L1340602-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1340602-07 04/21/21 17:54 • (DUP) R3645382-4 04/21/21 17:54

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 188000 | 171000 | 1 | 9.47 | J3 | 5 |

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3645382-2 04/21/21 17:54

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8690000 | 98.8 | 77.4-123 | |

Method Blank (MB)

(MB) R3646883-1 04/26/21 11:42

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Chloride | U | | 379 | 1000 |
| Fluoride | U | | 64.0 | 150 |
| Sulfate | U | | 594 | 5000 |

L1340644-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1340644-01 04/26/21 13:25 • (DUP) R3646883-3 04/26/21 13:37

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Chloride | 855 | 933 | 1 | 8.79 | J | 15 |
| Fluoride | 385 | 384 | 1 | 0.390 | | 15 |
| Sulfate | 5730 | 5790 | 1 | 0.917 | | 15 |

L1340644-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1340644-11 04/26/21 16:17 • (DUP) R3646883-6 04/26/21 16:29

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Chloride | 972 | 1010 | 1 | 4.29 | | 15 |
| Fluoride | 153 | 120 | 1 | 24.0 | J P1 | 15 |
| Sulfate | 7410 | 7330 | 1 | 1.16 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3646883-2 04/26/21 11:53

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Chloride | 40000 | 39200 | 97.9 | 80.0-120 | |
| Fluoride | 8000 | 8030 | 100 | 80.0-120 | |
| Sulfate | 40000 | 39900 | 99.6 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1340644-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1340644-02 04/26/21 13:48 • (MS) R3646883-4 04/26/21 14:00 • (MSD) R3646883-5 04/26/21 14:11

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Chloride | 50000 | 2310 | 53000 | 52900 | 101 | 101 | 1 | 80.0-120 | | | 0.276 | 15 |
| Fluoride | 5000 | 210 | 5430 | 5440 | 104 | 105 | 1 | 80.0-120 | | | 0.0386 | 15 |
| Sulfate | 50000 | 79400 | 127000 | 127000 | 95.2 | 94.7 | 1 | 80.0-120 | E | E | 0.192 | 15 |

L1340644-12 Original Sample (OS) • Matrix Spike (MS)

(OS) L1340644-12 04/26/21 16:40 • (MS) R3646883-7 04/26/21 16:52

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|--------------|
| Chloride | 50000 | U | 51900 | 104 | 1 | 80.0-120 | |
| Fluoride | 5000 | U | 5410 | 108 | 1 | 80.0-120 | |
| Sulfate | 50000 | U | 52300 | 105 | 1 | 80.0-120 | |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3648131-1 04/29/21 03:52

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| | ug/l | | ug/l | ug/l |
| Boron | U | | 20.0 | 200 |
| Calcium | U | | 79.3 | 1000 |

Laboratory Control Sample (LCS)

(LCS) R3648131-2 04/29/21 03:54

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| | ug/l | ug/l | % | % | |
| Boron | 1000 | 934 | 93.4 | 80.0-120 | |
| Calcium | 10000 | 9510 | 95.1 | 80.0-120 | |

L1340644-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1340644-05 04/29/21 03:57 • (MS) R3648131-4 04/29/21 04:02 • (MSD) R3648131-5 04/29/21 04:04

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| Boron | 1000 | 67.3 | 1020 | 1000 | 95.3 | 93.6 | 1 | 75.0-125 | | | 1.68 | 20 |
| Calcium | 10000 | 95400 | 102000 | 103000 | 70.2 | 75.6 | 1 | 75.0-125 | V | | 0.525 | 20 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

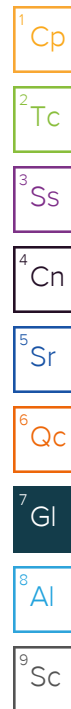
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|-------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn


⁵ Sr


⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

| Company Name/Address: Plum Point Services Co., LLC 2739 SCR 623 Osceola, AR 72370 | | Billing Information: Accounts Payable P.O. Box 567 Osceola, AR 72370 | | Pres Chk | | Analysis / Container / Preservative | | | | | | Chain of Custody Page <u>2</u> of <u>9</u> | |
|--|-----------|---|-------|---|------|---|---|--|---|--|--|---|--|
| Report to: Dana Derrington | | Email To: dld@ftn-assoc.com;mmv@ftn-assoc.com;hlf@ftn-assoc.com;hlf@ftn- | | | | | | | | | |  12065 Lebanon Road Mt Juliet, TN 37122 Phone: 615-758-5858 Alt: 800-767-5859 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubs/pas-standard-terms.pdf SDG # 1340644 C093 Acctnum: NAESOAR Template: T175308 Prelogin: P839309 PM: 134 - Mark W. Beasley PB: Shipped Via: FedEX Ground | |
| Project Description: Plum Point Energy Station | | City/State Collected: Osceola AR | | Please Circle: PT MT CT ET | | | | | | | | | |
| Phone: 501-920-9642 | | Client Project # R14590-2496-001 | | Lab Project # NAESOAR-PLUMPOINT | | CI, F, SO4 125mlHDPE-NoPres TDS 250mlHDPE-NoPres Total B, Ca 250mlHDPE-HNO3 | | | | | | | |
| Collected by (print): <i>Michael Clayton</i> | | Site/Facility ID # | | P.O. # 2020-00128 | | | | | | | | | |
| Collected by (signature): <i>Michael Clayton</i> | | Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day | | Quote # | | Date Results Needed | | No. of Cntrs | | | | | |
| Immediately Packed on Ice N ___ Y <u>Y</u> | | | | | | | | | | | | | |
| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | | | | | | | | |
| MW-101 | GRAB | GW | | 4/15/21 | 1305 | 3 | X | X | X | | | | |
| MW-102 | | GW | | 4/15/21 | 1525 | 3 | X | X | X | | | | |
| MW-103 | | GW | | 4/15/21 | 1110 | 3 | X | X | X | | | | |
| MW-108 | | GW | | 4/13/21 | 1120 | 3 | X | X | X | | | | |
| MW-113 | | GW | | 4/13/21 | 1020 | 3 | X | X | X | | | | |
| MW-115 | | GW | | 4/13/21 | 915 | 3 | X | X | X | | | | |
| MW-116 | | GW | | 4/15/21 | 1405 | 3 | X | X | X | | | | |
| MW-117 | | GW | | 4/13/21 | 1420 | 3 | X | X | X | | | | |
| MW-118 | | GW | | 4/13/21 | 910 | 3 | X | X | X | | | | |
| MW-119 | | GW | | 4/15/21 | 1210 | 3 | X | X | X | | | | |
| * Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other | | Remarks: | | pH _____ Temp _____ | | Flow _____ Other _____ | | Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | | | | | |
| Samples returned via: ___ UPS ___ FedEx ___ Courier | | Tracking # | | 5016 1221 3727 | | | | | | | | | |
| Relinquished by: (Signature) <i>Michael Clayton</i> | | Date: 4/16/21 | | Time: 1800 | | Received by: (Signature) | | Trip Blank Received: Yes/No HCL/MeOH TBR | | Bottles Received: 36 | | | |
| Relinquished by: (Signature) | | Date: | | Time: | | Received by: (Signature) | | Temp: 13.01 °C 1.4+2.1.6 | | If preservation required by Login: Date/Time | | | |
| Relinquished by: (Signature) | | Date: | | Time: | | Received for lab by: (Signature) | | Date: 4-17-21 | | Time: 0900 | | | |
| | | | | | | | | Hold: | | Condition: NCF / <input checked="" type="checkbox"/> OK | | | |

| Company Name/Address: Plum Point Services Co., LLC 2739 SCR 623 Osceola, AR 72370 | | Billing Information: Accounts Payable P.O. Box 567 Osceola, AR 72370 | | Pres Chk | | Analysis / Container / Preservative | | | | | | Chain of Custody Page 2 of 2 | |
|---|-------------|---|-------|---|-------------|---|---|--------------|---|----------------------------------|--|---|-----------|
| Report to: Dana Derrington | | Email To: dld@ftn-assoc.com ; mmv@ftn-assoc.com ; hlf@ftn-assoc.com ; hlf@ftn-assoc.com | | | | L2 Cl, F, SO4 125mlHDPE-NoPres TDS 250mlHDPE-NoPres Total B, Ca 250mlHDPE-HNO3 | | | | | |  National Center for Testing & Innovation 12065 Lebanon Road Mt Juliet, TN 37122 Phone: 615-758-5858 Alt: 800-787-5859 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 | |
| Project Description: Plum Point Energy Station | | City/State Collected: <i>Osceola AR</i> | | Please Circle: PT MT CT ET | | | | | | | | SDG # <i>L13V064</i> | |
| Phone: 501-920-9642 | | Client Project # R14590-2496-001 | | Lab Project # NAESOAR-PLUMPOINT | | P.O. # 2020-00128 | | Quote # | | Prelogin: P839309 | | PM: 134 - Mark W. Beasley | |
| Collected by (print): <i>Michael Clayton</i> | | Site/Facility ID # | | Rush? (Lab MUST Be Notified) | | Date Results Needed | | No. of Cntrs | | Shipped Via: FedEX Ground | | Remarks | |
| Collected by (signature): <i>Michael Clayton</i> | | Rush? (Lab MUST Be Notified) | | <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day | | | | | | PB: | | Sample # (lab only) | |
| Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/> | | | | | | | | | | | | | |
| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | | | | | | | | |
| MW-117 DUP | <i>GRAB</i> | GW | | <i>4/13/21</i> | <i>1420</i> | 3 | X | X | X | | | | <i>11</i> |
| EPA EB | <i>↓</i> | GW | | <i>4/15/21</i> | <i>1620</i> | 3 | X | X | X | | | | <i>12</i> |
| | | GW | | | | 3 | X | X | X | | | | |
| | | GW | | | | 3 | X | X | X | | | | |

| | | | | | | | | | |
|--|--|----------------------|--|--|--|--|--|--|--|
| * Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other | | Remarks: | | pH _____ Temp _____ | | Flow _____ Other _____ | | Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> NP <input type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | |
| Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier | | Tracking # | | Trip Blank Received: Yes/No <input checked="" type="checkbox"/> No | | HCL/MeOH TBR | | Bottles Received: <i>36</i> | |
| Relinquished by: (Signature) <i>Michael Clayton</i> | | Date: <i>4/16/21</i> | | Time: <i>1800</i> | | Received by: (Signature) <i>[Signature]</i> | | Temp: <i>1.47-2.16</i> °C | |
| Relinquished by: (Signature) | | Date: | | Time: | | Received by: (Signature) | | If preservation required by Login: Date/Time | |
| Relinquished by: (Signature) | | Date: | | Time: | | Received for lab by: (Signature) <i>[Signature]</i> | | Date: <i>4-17-21</i> Time: <i>0900</i> | |

First Half 2021 Verification Sampling Event

Plum Point Services Co., LLC

Sample Delivery Group: L1373490
Samples Received: 07/01/2021
Project Number: R14590-2275-001
Description: Plum Point Energy Station

Report To: Dana Derrington
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

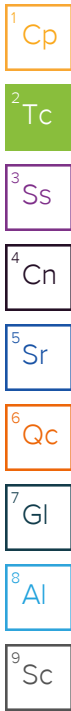
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

MW-116 L1373490-01 GW

Collected by Michael Clayton Collected date/time 06/29/21 15:55 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Metals (ICP) by Method 6010B | WG1706313 | 1 | 07/19/21 05:52 | 07/19/21 12:57 | EL | Mt. Juliet, TN |

MW-117 L1373490-02 GW

Collected by Michael Clayton Collected date/time 06/29/21 16:50 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1699630 | 1 | 07/03/21 02:27 | 07/03/21 05:11 | VRP | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1706313 | 1 | 07/19/21 05:52 | 07/19/21 13:46 | EL | Mt. Juliet, TN |

MW-117 DUP L1373490-03 GW

Collected by Michael Clayton Collected date/time 06/29/21 16:55 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1699630 | 1 | 07/03/21 02:27 | 07/03/21 05:11 | VRP | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1706313 | 1 | 07/19/21 05:52 | 07/19/21 13:48 | EL | Mt. Juliet, TN |

EPA EB-1 L1373490-04 GW

Collected by Michael Clayton Collected date/time 06/29/21 17:10 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1699630 | 1 | 07/03/21 02:27 | 07/03/21 05:11 | VRP | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1705405 | 1 | 07/15/21 17:58 | 07/15/21 17:58 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1706313 | 1 | 07/19/21 05:52 | 07/19/21 13:56 | EL | Mt. Juliet, TN |

MW-101 L1373490-05 GW

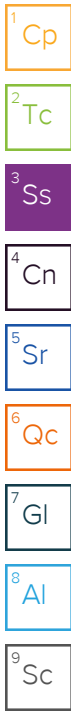
Collected by Michael Clayton Collected date/time 06/29/21 15:00 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 9056A | WG1705405 | 1 | 07/15/21 18:47 | 07/15/21 18:47 | MCG | Mt. Juliet, TN |

MW-113 L1373490-06 GW

Collected by Michael Clayton Collected date/time 06/29/21 12:25 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1699630 | 1 | 07/03/21 02:27 | 07/03/21 05:11 | VRP | Mt. Juliet, TN |



CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|---------------------|------|------|----------|----------------------|---------------------------|
| Calcium | 169000 | O1V | 79.3 | 1000 | 1 | 07/19/2021 12:57 | WG1706313 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 314000 | | 10000 | 1 | 07/03/2021 05:11 | WG1699630 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | 83700 | | 79.3 | 1000 | 1 | 07/19/2021 13:46 | WG1706313 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 321000 | | 10000 | 1 | 07/03/2021 05:11 | WG1699630 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | 84400 | | 79.3 | 1000 | 1 | 07/19/2021 13:48 | WG1706313 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | ND | | 10000 | 1 | 07/03/2021 05:11 | WG1699630 |

¹ Cp

² Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|-----|----------|----------------------|---------------------------|
| Fluoride | U | | 64.0 | 150 | 1 | 07/15/2021 17:58 | WG1705405 |

³ Ss

⁴ Cn

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | U | | 79.3 | 1000 | 1 | 07/19/2021 13:56 | WG1706313 |

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|-----|----------|----------------------|---------------------------|
| Fluoride | 307 | | 64.0 | 150 | 1 | 07/15/2021 18:47 | WG1705405 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 303000 | | 10000 | 1 | 07/03/2021 05:11 | WG1699630 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3677111-1 07/03/21 05:11

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1372527-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1372527-14 07/03/21 05:11 • (DUP) R3677111-3 07/03/21 05:11

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 3690000 | 3680000 | 1 | 0.217 | | 5 |

L1372994-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1372994-01 07/03/21 05:11 • (DUP) R3677111-4 07/03/21 05:11

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 129000 | 118000 | 1 | 8.91 | J3 | 5 |

Laboratory Control Sample (LCS)

(LCS) R3677111-2 07/03/21 05:11

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8950000 | 102 | 77.4-123 | |

Method Blank (MB)

(MB) R3680269-1 07/15/21 11:06

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Fluoride | U | | 64.0 | 150 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1373161-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1373161-02 07/15/21 13:03 • (DUP) R3680269-3 07/15/21 13:19

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Fluoride | 66.4 | 71.1 | 1 | 6.84 | U | 15 |

L1373490-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1373490-04 07/15/21 17:58 • (DUP) R3680269-6 07/15/21 18:14

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Fluoride | U | U | 1 | 0.000 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3680269-2 07/15/21 11:22

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Fluoride | 8000 | 8040 | 101 | 80.0-120 | |

L1373161-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373161-02 07/15/21 13:03 • (MS) R3680269-4 07/15/21 13:35 • (MSD) R3680269-5 07/15/21 13:52

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Fluoride | 5000 | 66.4 | 4880 | 4920 | 96.3 | 97.1 | 1 | 80.0-120 | | | 0.832 | 15 |

L1373490-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1373490-04 07/15/21 17:58 • (MS) R3680269-7 07/15/21 18:31

| Analyte | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|----------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| Fluoride | 5000 | U | 5000 | 100 | 1 | 80.0-120 | |

Method Blank (MB)

(MB) R3681167-1 07/19/21 12:52

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Calcium | U | | 79.3 | 1000 |

¹Cp

²Tc

³Ss

Laboratory Control Sample (LCS)

(LCS) R3681167-2 07/19/21 12:54

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Calcium | 10000 | 9400 | 94.0 | 80.0-120 | |

⁴Cn

⁵Sr

L1373490-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373490-01 07/19/21 12:57 • (MS) R3681167-4 07/19/21 13:02 • (MSD) R3681167-5 07/19/21 13:04

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Calcium | 10000 | 169000 | 175000 | 174000 | 55.7 | 47.6 | 1 | 75.0-125 | <u>V</u> | <u>V</u> | 0.462 | 20 |

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

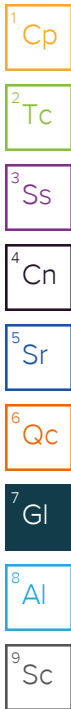
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| O1 | The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|-------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address: **Plum Point Services Co., LLC**
 2739 SCR 623
 Osceola, AR 72370

Billing Information:
 Accounts Payable
 P.O. Box 567
 Osceola, AR 72370

Report to:
Cynthia Medlin

Project Description:
Plum Point Energy Station

City/State Collected: _____ Please Circle: PT MT CT ET

Phone: 501-920-9642 Client Project # **R14590-2275-001** Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): _____ Site/Facility ID # _____ P.O. # **2020-00128**

Collected by (signature): *Michael Clayton* **Rush?** (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Immediately Packed on Ice N Y

Email To: **cynthia.medlin@ppenergy.net**

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace Analytical

12065 Lebanon Rd Mount Juliet, TN 37122
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | Analysis / Container / Preservative | | | | Remarks | Sample # (lab only) |
|------------|-----------|----------|-------|---------|------|--------------|-------------------------------------|---------------------------|----------------------|--|---------|---------------------|
| | | | | | | | CAICP 250mlHDPE-HNO3 | FLUORIDE 125mlHDPE-NoPres | TDS 250mlHDPE-NoPres | | | |
| MW-116 | Grab | GW | | 6/29/21 | 1555 | 2 | X | | | | | -01 |
| MW-117 | ↓ | GW | | ↓ | 1650 | 2 | X | X | | | | 02 |
| MW-117 DUP | ↓ | GW | | ↓ | 1655 | 2 | X | X | X | | | 03 |
| EPA EB-1 | ↓ | GW | | ↓ | 1710 | 2 | X | X | X | | | 04 |
| MW-101 | ↓ | GW | | ↓ | 1500 | 2 | X | X | | | | 05 |
| MW-113 | ↓ | GW | | | 1225 | 2 | | X | | | | 06 |

* Matrix: SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other _____

Remarks: _____ pH _____ Temp _____
 Flow _____ Other _____

Samples returned via: UPS FedEx Courier _____ Tracking # **516376984974**

Relinquished by: (Signature) *Michael Clayton* Date: **6/30/21** Time: **1400** Received by: (Signature) _____ Trip Blank Received: Yes/No
 HCL / MeOH
 TBR

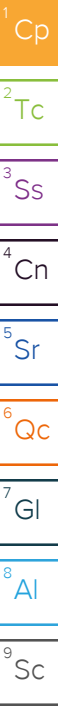
Relinquished by: (Signature) _____ Date: _____ Time: _____ Received by: (Signature) _____ Temp: **18.2-22.0** °C Bottles Received: **10** If preservation required by Login: Date/Time

Relinquished by: (Signature) _____ Date: _____ Time: _____ Received for lab by: (Signature) *[Signature]* Date: **7/1/21** Time: **9:00** Hold: _____ Condition: NCF **OK**

Sample Receipt Checklist

| | | | |
|-------------------------------|----|---|---|
| COC Seal Present/Intact: | NP | Y | N |
| COC Signed/Accurate: | | Y | N |
| Bottles arrive intact: | | Y | N |
| Correct bottles used: | | Y | N |
| Sufficient volume sent: | | Y | N |
| If Applicable | | | |
| VOA Zero Headspace: | | Y | N |
| Preservation Correct/Checked: | | Y | N |
| RAD Screen <0.5 mR/hr: | | Y | N |

Second Half 2021 Sampling Event



Plum Point Services Co., LLC

Sample Delivery Group: L1415555
Samples Received: 10/08/2021
Project Number: R14590-2496-001
Description: Plum Point Energy Station

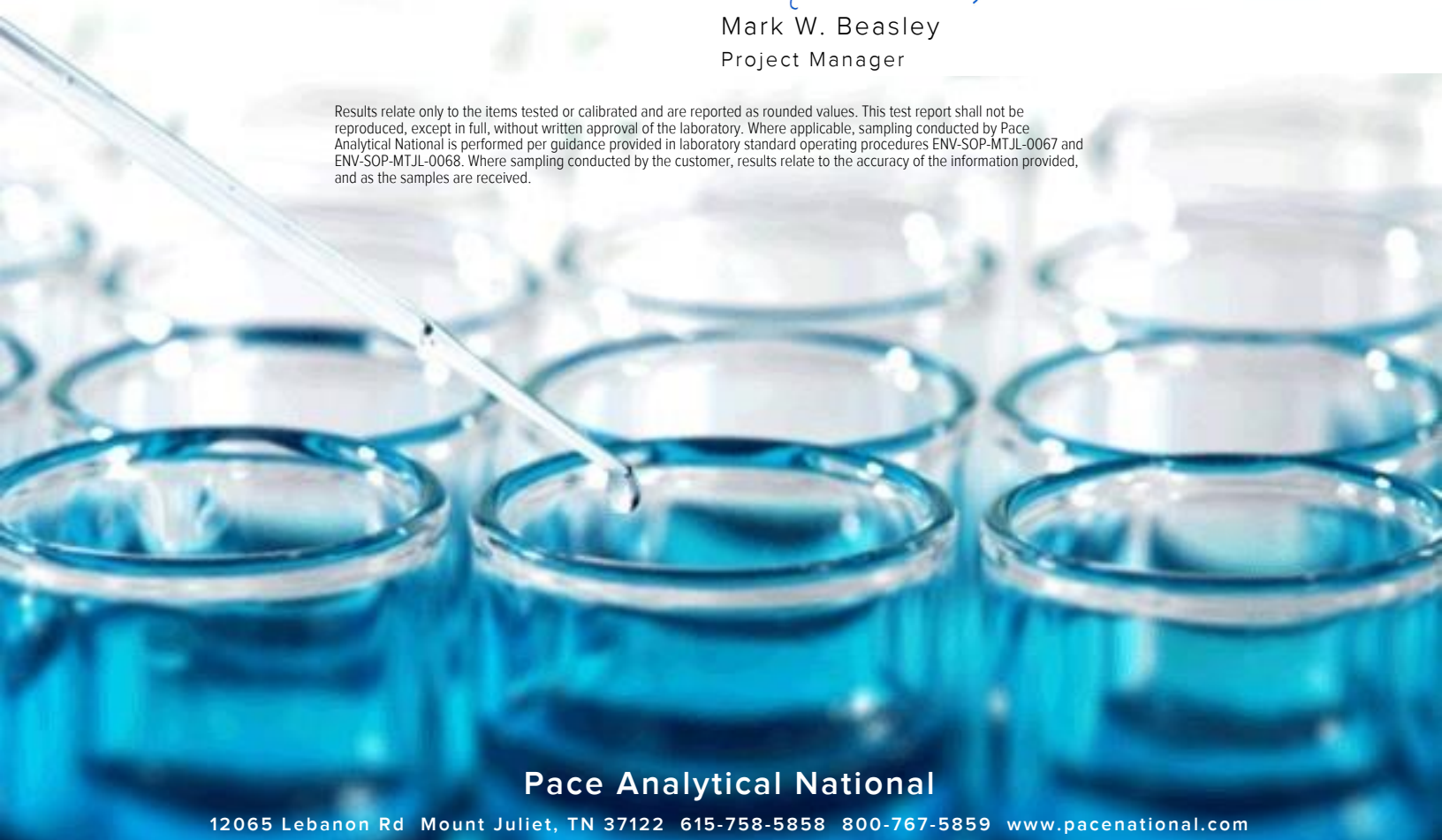
Report To: Dana Derrington
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:



Mark W. Beasley
Project Manager










Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

MW-101 L1415555-01 GW

Collected by Michael Clayton
 Collected date/time 10/07/21 10:55
 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1757080 | 1 | 10/14/21 12:01 | 10/14/21 12:54 | VRP | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 02:29 | 10/15/21 02:29 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:04 | CCE | Mt. Juliet, TN |



MW-102 L1415555-02 GW

Collected by Michael Clayton
 Collected date/time 10/06/21 13:50
 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1756452 | 1 | 10/13/21 13:58 | 10/13/21 14:33 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 03:01 | 10/15/21 03:01 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:07 | CCE | Mt. Juliet, TN |

MW-103 L1415555-03 GW

Collected by Michael Clayton
 Collected date/time 10/07/21 09:00
 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1757189 | 1 | 10/14/21 13:49 | 10/14/21 15:51 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 03:18 | 10/15/21 03:18 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:15 | CCE | Mt. Juliet, TN |

MW-108 L1415555-04 GW

Collected by Michael Clayton
 Collected date/time 10/05/21 12:45
 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1755519 | 1 | 10/12/21 12:31 | 10/12/21 14:09 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 03:34 | 10/15/21 03:34 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:18 | CCE | Mt. Juliet, TN |

MW-113 L1415555-05 GW

Collected by Michael Clayton
 Collected date/time 10/05/21 11:25
 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1755519 | 1 | 10/12/21 12:31 | 10/12/21 14:09 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 03:51 | 10/15/21 03:51 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:21 | CCE | Mt. Juliet, TN |

MW-115 L1415555-06 GW

Collected by Michael Clayton
 Collected date/time 10/05/21 10:10
 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1755519 | 1 | 10/12/21 12:31 | 10/12/21 14:09 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 04:07 | 10/15/21 04:07 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:24 | CCE | Mt. Juliet, TN |

SAMPLE SUMMARY

MW-116 L1415555-07 GW

Collected by Michael Clayton Collected date/time 10/06/21 15:10 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1756452 | 1 | 10/13/21 13:58 | 10/13/21 14:33 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 04:23 | 10/15/21 04:23 | ELN | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1758277 | 5 | 10/16/21 15:48 | 10/16/21 15:48 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:27 | CCE | Mt. Juliet, TN |



MW-117 L1415555-08 GW

Collected by Michael Clayton Collected date/time 10/06/21 12:00 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1756375 | 1 | 10/13/21 12:32 | 10/13/21 14:11 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 05:13 | 10/15/21 05:13 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:30 | CCE | Mt. Juliet, TN |

MW-118 L1415555-09 GW

Collected by Michael Clayton Collected date/time 10/06/21 10:50 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1756452 | 1 | 10/13/21 13:58 | 10/13/21 14:33 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 05:29 | 10/15/21 05:29 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:33 | CCE | Mt. Juliet, TN |

MW-119 L1415555-10 GW

Collected by Michael Clayton Collected date/time 10/07/21 10:00 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1757189 | 1 | 10/14/21 13:49 | 10/14/21 15:51 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 05:46 | 10/15/21 05:46 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:36 | CCE | Mt. Juliet, TN |

MW-117 DUP L1415555-11 GW

Collected by Michael Clayton Collected date/time 10/06/21 12:05 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1756375 | 1 | 10/13/21 12:32 | 10/13/21 14:11 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 06:02 | 10/15/21 06:02 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:39 | CCE | Mt. Juliet, TN |

EPA EB L1415555-12 GW

Collected by Michael Clayton Collected date/time 10/06/21 11:25 Received date/time 10/08/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1756503 | 1 | 10/13/21 16:14 | 10/13/21 17:20 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1757240 | 1 | 10/15/21 06:18 | 10/15/21 06:18 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1761047 | 1 | 10/22/21 13:29 | 10/23/21 00:42 | CCE | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 380000 | | 10000 | 1 | 10/14/2021 12:54 | WG1757080 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 975 | J | 379 | 1000 | 1 | 10/15/2021 02:29 | WG1757240 |
| Fluoride | 312 | | 64.0 | 150 | 1 | 10/15/2021 02:29 | WG1757240 |
| Sulfate | 10200 | | 594 | 5000 | 1 | 10/15/2021 02:29 | WG1757240 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 55.5 | J | 20.0 | 200 | 1 | 10/23/2021 00:04 | WG1761047 |
| Calcium | 113000 | | 79.3 | 1000 | 1 | 10/23/2021 00:04 | WG1761047 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 415000 | | 10000 | 1 | 10/13/2021 14:33 | WG1756452 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 2480 | | 379 | 1000 | 1 | 10/15/2021 03:01 | WG1757240 |
| Fluoride | 215 | | 64.0 | 150 | 1 | 10/15/2021 03:01 | WG1757240 |
| Sulfate | 95300 | | 594 | 5000 | 1 | 10/15/2021 03:01 | WG1757240 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 78.4 | J | 20.0 | 200 | 1 | 10/23/2021 00:07 | WG1761047 |
| Calcium | 116000 | | 79.3 | 1000 | 1 | 10/23/2021 00:07 | WG1761047 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 324000 | | 10000 | 1 | 10/14/2021 15:51 | WG1757189 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 1160 | | 379 | 1000 | 1 | 10/15/2021 03:18 | WG1757240 |
| Fluoride | 256 | | 64.0 | 150 | 1 | 10/15/2021 03:18 | WG1757240 |
| Sulfate | 12600 | | 594 | 5000 | 1 | 10/15/2021 03:18 | WG1757240 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 68.1 | J | 20.0 | 200 | 1 | 10/23/2021 00:15 | WG1761047 |
| Calcium | 89700 | | 79.3 | 1000 | 1 | 10/23/2021 00:15 | WG1761047 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 505000 | | 10000 | 1 | 10/12/2021 14:09 | WG1755519 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 1370 | | 379 | 1000 | 1 | 10/15/2021 03:34 | WG1757240 |
| Fluoride | 203 | | 64.0 | 150 | 1 | 10/15/2021 03:34 | WG1757240 |
| Sulfate | 23400 | | 594 | 5000 | 1 | 10/15/2021 03:34 | WG1757240 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 111 | J | 20.0 | 200 | 1 | 10/23/2021 00:18 | WG1761047 |
| Calcium | 149000 | | 79.3 | 1000 | 1 | 10/23/2021 00:18 | WG1761047 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 275000 | | 10000 | 1 | 10/12/2021 14:09 | WG1755519 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 877 | J | 379 | 1000 | 1 | 10/15/2021 03:51 | WG1757240 |
| Fluoride | 139 | J | 64.0 | 150 | 1 | 10/15/2021 03:51 | WG1757240 |
| Sulfate | 3750 | J | 594 | 5000 | 1 | 10/15/2021 03:51 | WG1757240 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 81.7 | J | 20.0 | 200 | 1 | 10/23/2021 00:21 | WG1761047 |
| Calcium | 67500 | | 79.3 | 1000 | 1 | 10/23/2021 00:21 | WG1761047 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 379000 | | 10000 | 1 | 10/12/2021 14:09 | WG1755519 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 964 | J | 379 | 1000 | 1 | 10/15/2021 04:07 | WG1757240 |
| Fluoride | 225 | | 64.0 | 150 | 1 | 10/15/2021 04:07 | WG1757240 |
| Sulfate | 3700 | J | 594 | 5000 | 1 | 10/15/2021 04:07 | WG1757240 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 65.5 | J | 20.0 | 200 | 1 | 10/23/2021 00:24 | WG1761047 |
| Calcium | 109000 | | 79.3 | 1000 | 1 | 10/23/2021 00:24 | WG1761047 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 670000 | | 10000 | 1 | 10/13/2021 14:33 | WG1756452 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|-------|----------|----------------------|---------------------------|
| Chloride | 11200 | | 379 | 1000 | 1 | 10/15/2021 04:23 | WG1757240 |
| Fluoride | 214 | | 64.0 | 150 | 1 | 10/15/2021 04:23 | WG1757240 |
| Sulfate | 166000 | | 2970 | 25000 | 5 | 10/16/2021 15:48 | WG1758277 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 97.3 | J | 20.0 | 200 | 1 | 10/23/2021 00:27 | WG1761047 |
| Calcium | 185000 | | 79.3 | 1000 | 1 | 10/23/2021 00:27 | WG1761047 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 314000 | | 10000 | 1 | 10/13/2021 14:11 | WG1756375 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 921 | J | 379 | 1000 | 1 | 10/15/2021 05:13 | WG1757240 |
| Fluoride | 162 | | 64.0 | 150 | 1 | 10/15/2021 05:13 | WG1757240 |
| Sulfate | 9090 | | 594 | 5000 | 1 | 10/15/2021 05:13 | WG1757240 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 67.7 | J | 20.0 | 200 | 1 | 10/23/2021 00:30 | WG1761047 |
| Calcium | 88800 | | 79.3 | 1000 | 1 | 10/23/2021 00:30 | WG1761047 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 280000 | | 10000 | 1 | 10/13/2021 14:33 | WG1756452 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 1150 | | 379 | 1000 | 1 | 10/15/2021 05:29 | WG1757240 |
| Fluoride | 189 | | 64.0 | 150 | 1 | 10/15/2021 05:29 | WG1757240 |
| Sulfate | 11500 | | 594 | 5000 | 1 | 10/15/2021 05:29 | WG1757240 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 65.6 | J | 20.0 | 200 | 1 | 10/23/2021 00:33 | WG1761047 |
| Calcium | 82900 | | 79.3 | 1000 | 1 | 10/23/2021 00:33 | WG1761047 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 388000 | | 10000 | 1 | 10/14/2021 15:51 | WG1757189 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 2400 | | 379 | 1000 | 1 | 10/15/2021 05:46 | WG1757240 |
| Fluoride | 269 | | 64.0 | 150 | 1 | 10/15/2021 05:46 | WG1757240 |
| Sulfate | 39100 | | 594 | 5000 | 1 | 10/15/2021 05:46 | WG1757240 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 59.4 | J | 20.0 | 200 | 1 | 10/23/2021 00:36 | WG1761047 |
| Calcium | 104000 | | 79.3 | 1000 | 1 | 10/23/2021 00:36 | WG1761047 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 305000 | | 10000 | 1 | 10/13/2021 14:11 | WG1756375 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 920 | J | 379 | 1000 | 1 | 10/15/2021 06:02 | WG1757240 |
| Fluoride | 156 | | 64.0 | 150 | 1 | 10/15/2021 06:02 | WG1757240 |
| Sulfate | 9180 | | 594 | 5000 | 1 | 10/15/2021 06:02 | WG1757240 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 70.2 | J | 20.0 | 200 | 1 | 10/23/2021 00:39 | WG1761047 |
| Calcium | 88800 | | 79.3 | 1000 | 1 | 10/23/2021 00:39 | WG1761047 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | ND | | 10000 | 1 | 10/13/2021 17:20 | WG1756503 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | U | | 379 | 1000 | 1 | 10/15/2021 06:18 | WG1757240 |
| Fluoride | U | | 64.0 | 150 | 1 | 10/15/2021 06:18 | WG1757240 |
| Sulfate | U | | 594 | 5000 | 1 | 10/15/2021 06:18 | WG1757240 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | U | | 20.0 | 200 | 1 | 10/23/2021 00:42 | WG1761047 |
| Calcium | U | | 79.3 | 1000 | 1 | 10/23/2021 00:42 | WG1761047 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3716571-1 10/12/21 14:09

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|------------------|-------------------|--------------|----------------|----------------|
| Dissolved Solids | U | | 10000 | 10000 |

¹Cp

²Tc

³Ss

L1411702-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1411702-02 10/12/21 14:09 • (DUP) R3716571-3 10/12/21 14:09

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 676000 | 683000 | 1 | 0.982 | | 5 |

⁴Cn

⁵Sr

L1413623-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1413623-05 10/12/21 14:09 • (DUP) R3716571-4 10/12/21 14:09

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 427000 | 429000 | 1 | 0.467 | | 5 |

⁶Qc

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3716571-2 10/12/21 14:09

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------|----------------------|--------------------|---------------|------------------|---------------|
| Dissolved Solids | 8800000 | 8670000 | 98.5 | 77.4-123 | |

⁹Sc

Method Blank (MB)

(MB) R3717162-1 10/13/21 14:11

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

¹Cp

²Tc

³Ss

L1416228-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1416228-08 10/13/21 14:11 • (DUP) R3717162-3 10/13/21 14:11

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 1350000 | 1340000 | 1 | 0.149 | | 5 |

⁴Cn

⁵Sr

L1416228-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1416228-09 10/13/21 14:11 • (DUP) R3717162-4 10/13/21 14:11

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 1850000 | 1860000 | 1 | 0.270 | | 5 |

⁶Qc

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3717162-2 10/13/21 14:11

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8680000 | 98.6 | 77.4-123 | |

⁹Sc

Method Blank (MB)

(MB) R3717327-1 10/13/21 14:33

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|------------------|-------------------|--------------|----------------|----------------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

L1415554-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1415554-09 10/13/21 14:33 • (DUP) R3717327-3 10/13/21 14:33

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 663000 | 697000 | 1 | 5.00 | | 5 |

4 Cn

5 Sr

L1415555-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1415555-07 10/13/21 14:33 • (DUP) R3717327-4 10/13/21 14:33

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 670000 | 690000 | 1 | 2.94 | | 5 |

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3717327-2 10/13/21 14:33

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------|----------------------|--------------------|---------------|------------------|---------------|
| Dissolved Solids | 8800000 | 8310000 | 94.4 | 77.4-123 | |

9 Sc

Method Blank (MB)

(MB) R3717175-1 10/13/21 17:20

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|------------------|-------------------|--------------|----------------|----------------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

L1415583-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1415583-06 10/13/21 17:20 • (DUP) R3717175-3 10/13/21 17:20

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 1180000 | 1180000 | 1 | 0.170 | | 5 |

4 Cn

5 Sr

L1415583-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1415583-09 10/13/21 17:20 • (DUP) R3717175-4 10/13/21 17:20

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 1100000 | 1100000 | 1 | 0.181 | | 5 |

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3717175-2 10/13/21 17:20

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------|----------------------|--------------------|---------------|------------------|---------------|
| Dissolved Solids | 8800000 | 8700000 | 98.9 | 77.4-123 | |

9 Sc

Method Blank (MB)

(MB) R3718311-1 10/14/21 12:54

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

L1414612-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1414612-20 10/14/21 12:54 • (DUP) R3718311-3 10/14/21 12:54

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 1080000 | 1170000 | 1 | 8.20 | J3 | 5 |

4 Cn

5 Sr

6 Qc

L1414612-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1414612-23 10/14/21 12:54 • (DUP) R3718311-4 10/14/21 12:54

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 848000 | 904000 | 1 | 6.39 | J3 | 5 |

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3718311-2 10/14/21 12:54

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8140000 | 92.5 | 77.4-123 | |

Method Blank (MB)

(MB) R3718287-1 10/14/21 15:51

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1415583-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1415583-01 10/14/21 15:51 • (DUP) R3718287-3 10/14/21 15:51

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 1030000 | 1000000 | 1 | 2.17 | | 5 |

L1415844-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1415844-01 10/14/21 15:51 • (DUP) R3718287-4 10/14/21 15:51

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 1900000 | 1880000 | 1 | 1.19 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3718287-2 10/14/21 15:51

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8660000 | 98.4 | 77.4-123 | |

Method Blank (MB)

(MB) R3717169-1 10/14/21 14:24

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Chloride | U | | 379 | 1000 |
| Fluoride | U | | 64.0 | 150 |
| Sulfate | U | | 594 | 5000 |

L1415555-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1415555-01 10/15/21 02:29 • (DUP) R3717169-7 10/15/21 02:45

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Chloride | 975 | 983 | 1 | 0.858 | U | 15 |
| Fluoride | 312 | 313 | 1 | 0.0960 | | 15 |
| Sulfate | 10200 | 10100 | 1 | 0.774 | | 15 |

L1415555-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1415555-12 10/15/21 06:18 • (DUP) R3717169-8 10/15/21 06:35

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Chloride | U | U | 1 | 0.000 | | 15 |
| Fluoride | U | U | 1 | 0.000 | | 15 |
| Sulfate | U | U | 1 | 0.000 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3717169-2 10/14/21 14:40

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Chloride | 40000 | 39200 | 98.1 | 80.0-120 | |
| Fluoride | 8000 | 8120 | 101 | 80.0-120 | |
| Sulfate | 40000 | 39300 | 98.2 | 80.0-120 | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1415451-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1415451-01 10/14/21 23:28 • (MS) R3717169-3 10/14/21 23:44 • (MSD) R3717169-4 10/15/21 00:01

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Chloride | 50000 | 75800 | 122000 | 122000 | 93.0 | 92.8 | 1 | 80.0-120 | E | E | 0.0957 | 15 |
| Fluoride | 5000 | 174 | 5100 | 5090 | 98.5 | 98.3 | 1 | 80.0-120 | | | 0.198 | 15 |
| Sulfate | 50000 | U | 49200 | 48900 | 98.4 | 97.9 | 1 | 80.0-120 | | | 0.504 | 15 |

L1415451-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1415451-02 10/15/21 00:17 • (MS) R3717169-5 10/15/21 00:34 • (MSD) R3717169-6 10/15/21 00:50

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Chloride | 50000 | 8550 | 56100 | 55900 | 95.2 | 94.7 | 1 | 80.0-120 | | | 0.449 | 15 |
| Fluoride | 5000 | 130 | 4790 | 4760 | 93.2 | 92.7 | 1 | 80.0-120 | | | 0.536 | 15 |
| Sulfate | 50000 | 789 | 47100 | 46900 | 92.6 | 92.2 | 1 | 80.0-120 | | | 0.401 | 15 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3717773-1 10/16/21 07:00

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Sulfate | U | | 594 | 5000 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1415555-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1415555-07 10/16/21 15:48 • (DUP) R3717773-3 10/16/21 16:04

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Sulfate | 166000 | 166000 | 5 | 0.249 | | 15 |

L1418554-334 Original Sample (OS) • Duplicate (DUP)

(OS) L1418554-334 10/16/21 21:48 • (DUP) R3717773-6 10/16/21 22:07

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Sulfate | 1020000 | 1040000 | 20 | 1.40 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3717773-2 10/16/21 07:16

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Sulfate | 40000 | 39300 | 98.2 | 80.0-120 | |

L1418554-328 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418554-328 10/16/21 18:31 • (MS) R3717773-4 10/16/21 18:48 • (MSD) R3717773-5 10/16/21 19:04

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Sulfate | 50000 | 503000 | 549000 | 554000 | 92.5 | 103 | 1 | 80.0-120 | <u>E</u> | <u>E</u> | 0.918 | 15 |

L1418554-336 Original Sample (OS) • Matrix Spike (MS)

(OS) L1418554-336 10/16/21 22:56 • (MS) R3717773-7 10/16/21 23:13

| Analyte | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|---------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| Sulfate | 50000 | 1430000 | 1440000 | 14.4 | 1 | 80.0-120 | <u>E V</u> |

Method Blank (MB)

(MB) R3720344-1 10/22/21 23:40

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| | ug/l | | ug/l | ug/l |
| Boron | U | | 20.0 | 200 |
| Calcium | U | | 79.3 | 1000 |

Laboratory Control Sample (LCS)

(LCS) R3720344-2 10/22/21 23:43

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| | ug/l | ug/l | % | % | |
| Boron | 1000 | 985 | 98.5 | 80.0-120 | |
| Calcium | 10000 | 9600 | 96.0 | 80.0-120 | |

L1415480-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1415480-01 10/22/21 23:46 • (MS) R3720344-4 10/22/21 23:52 • (MSD) R3720344-5 10/22/21 23:55

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| Boron | 1000 | 495 | 1490 | 1480 | 99.4 | 98.9 | 1 | 75.0-125 | | | 0.394 | 20 |
| Calcium | 10000 | 494000 | 490000 | 483000 | 0.000 | 0.000 | 1 | 75.0-125 | <u>V</u> | <u>V</u> | 1.33 | 20 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

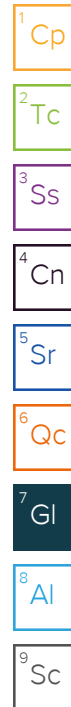
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

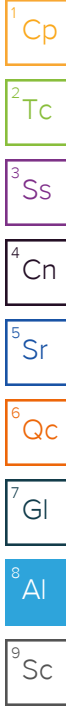
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|-------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.


* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:
Plum Point Services Co., LLC
 2739 SCR 623
 Osceola, AR 72370

Billing Information:
 Accounts Payable
 P.O. Box 567
 Osceola, AR 72370

Analysis / Container / Preservative
 Pres Chk

Chain of Custody Page 2 of 2


Report to:
Dana Derrington

Email To: dld@ftn-assoc.com; hlf@ftn-assoc.com; ajp@ftn-assoc.com

Project Description:
Plum Point Energy Station

City/State Collected: Osceola AR

Please Circle:
 PT MT CT ET

Phone: **501-920-9642**

Client Project #
R14590-2496-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Clayton

Site/Facility ID #

P.O. #
2020-00128

Collected by (signature):
Michael Clayton
 Immediately
 Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote #
 Date Results Needed

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs |
|-----------|-----------|----------|-------|------|------|--------------|
|-----------|-----------|----------|-------|------|------|--------------|

| | | | | | | |
|--------|------|----|--|---------|------|---|
| MW-101 | Grab | GW | | 10/7/21 | 1055 | 3 |
| MW-102 | | GW | | 10/6/21 | 1350 | 3 |
| MW-103 | | GW | | 10/2/21 | 900 | 3 |
| MW-108 | | GW | | 10/5/21 | 1245 | 3 |
| MW-113 | | GW | | 10/5/21 | 1125 | 3 |
| MW-115 | | GW | | 10/5/21 | 1010 | 3 |
| MW-116 | | GW | | 10/6/21 | 1510 | 3 |
| MW-117 | | GW | | 10/6/21 | 1200 | 3 |
| MW-118 | | GW | | 10/6/21 | 1050 | 3 |
| MW-119 | | GW | | 10/7/21 | 1000 | 3 |

| CI, F, SO4 | 125mlHDPE - NoPres | TDS 250mlHDPE - NoPres | Total B, Ca 250mlHDPE - HNO3 |
|------------|--------------------|------------------------|------------------------------|
| X | X | X | X |
| X | X | X | X |
| X | X | X | X |
| X | X | X | X |
| X | X | X | X |
| X | X | X | X |
| X | X | X | X |
| X | X | X | X |
| X | X | X | X |
| X | X | X | X |

12065 Lebanon Rd Mount Juliet, TN 37122
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

SDG # L1415555
C200

Acctnum: **NAESOAR**
 Template: **T175308**
 Prelogin: **P877336**
 PM: **134 - Mark W. Beasley**
 PB:

Shipped Via: **FedEX Ground**

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other _____

Remarks:
 pH _____ Temp _____
 Flow _____ Other _____
 Samples returned via: UPS FedEx Courier
 Tracking # 5300 4295 7176

Sample Receipt Checklist
 COC Seal Present/Intact: NP Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)
Michael Clayton

Date: 10/7/21
 Time: 1500

Received by: (Signature)
 Trip Blank Received: Yes / No
 HCL/ MeOH
 TBR

Temp 22.40 °C Bottles Received: 2.0-1.9 36

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: _____
 Time: _____

Received by: (Signature)

Date: 10/8/21
 Time: 900

Hold: _____

Relinquished by: (Signature)

Date: _____
 Time: _____

Received for lab by: (Signature)

Date: 10/8/21
 Time: 900

Condition: NCF OK

Company Name/Address:
Plum Point Services Co., LLC
 2739 SCR 623
 Osceola, AR 72370

Billing Information:
Accounts Payable
 P.O. Box 567
 Osceola, AR 72370

Pres Chk



12065 Lebanon Rd Mount Juliet, TN 37122
 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>

Report to:
Dana Derrington

Email To: dld@ftn-assoc.com; hlf@ftn-assoc.com; ajp@ftn-assoc.com

Project Description:
Plum Point Energy Station

City/State Collected: **OSCEOLA AR**

Please Circle:
 PT MT CT ET

Phone: **501-920-9642**

Client Project #
R14590-2496-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michelle Clayton

Site/Facility ID #

P.O. #
2020-00128

Collected by (signature):
Michelle Clayton

Rush? (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote #
 Date Results Needed

Immediately
 Packed on Ice N ___ Y ___

No. of Cntrs

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | Cl, F, SO4 125mlHDPE-NoPres | TDS 250mlHDPE-NoPres | Total B, Ca 250mlHDPE-HNO3 | | | | | | |
|------------|-----------|----------|-------|---------|------|--------------|-----------------------------|----------------------|----------------------------|--|--|--|--|--|--|
| MW-117 DUP | Grab | GW | | 10/6/21 | 1205 | 3 | X | X | X | | | | | | |
| EPA EB | ↓ | GW | | 10/6/21 | 1125 | 3 | X | X | X | | | | | | |
| | | GW | | | | 3 | X | X | X | | | | | | |
| | | GW | | | | 3 | X | X | X | | | | | | |

SDG # **L1415555**
 Table #
 Acctnum: **NAESOAR**
 Template: **T175308**
 Prelogin: **P877336**
 PM: **134 - Mark W. Beasley**
 PB:
 Shipped Via: **FedEX Ground**

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:
 pH _____ Temp _____
 Flow _____ Other _____
 Samples returned via:
 ___ UPS ___ FedEx ___ Courier
 Tracking # " "

Sample Receipt Checklist
 COC Seal Present/Intact: Y NP N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 IF Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)
Michelle Clayton

Date: **10/7/21**

Time: **1500**

Received by: (Signature)

Trip Blank Received: Yes / No
 HCL / MeOH
 TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: **22.60°C** Bottles Received:
2.0--151.9

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)
[Signature]

Date: **10/8/21** Time: **900**

Hold: Condition: **NCF / OK**

Second Half 2021 Verification Sampling Event

Plum Point Services Co., LLC

Sample Delivery Group: L1443406
Samples Received: 12/16/2021
Project Number: R14590-2496-001
Description: Plum Point Energy Station

Report To: Dana Derrington
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:












Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

MW-116 L1443406-01 GW

Collected by Michael Clayton Collected date/time 12/14/21 12:58 Received date/time 12/16/21 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1792248 | 1 | 12/20/21 10:32 | 12/20/21 18:45 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1796352 | 5 | 01/03/22 12:57 | 01/03/22 12:57 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1801153 | 1 | 01/13/22 09:31 | 01/18/22 23:01 | KMG | Mt. Juliet, TN |

1 Cp

2 Tc

3 Ss

MW-116 DUP L1443406-02 GW

Collected by Michael Clayton Collected date/time 12/14/21 12:55 Received date/time 12/16/21 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1792248 | 1 | 12/20/21 10:32 | 12/20/21 18:45 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1796352 | 5 | 01/03/22 13:10 | 01/03/22 13:10 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1801153 | 1 | 01/13/22 09:31 | 01/18/22 23:04 | KMG | Mt. Juliet, TN |

4 Cn

5 Sr

6 Qc

MW-117 L1443406-03 GW

Collected by Michael Clayton Collected date/time 12/14/21 14:05 Received date/time 12/16/21 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1792248 | 1 | 12/20/21 10:32 | 12/20/21 18:45 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1796352 | 1 | 12/30/21 15:08 | 12/30/21 15:08 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1801419 | 1 | 01/13/22 11:40 | 01/19/22 02:11 | CCE | Mt. Juliet, TN |

7 Gl

8 Al

9 Sc

EPA EB-1 L1443406-04 GW

Collected by Michael Clayton Collected date/time 12/14/21 14:30 Received date/time 12/16/21 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1792248 | 1 | 12/20/21 10:32 | 12/20/21 18:45 | BRG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1796352 | 1 | 12/30/21 15:21 | 12/30/21 15:21 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1801419 | 1 | 01/13/22 11:40 | 01/19/22 02:13 | CCE | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 730000 | | 10000 | 1 | 12/20/2021 18:45 | WG1792248 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|-------|----------|----------------------|---------------------------|
| Sulfate | 200000 | | 2970 | 25000 | 5 | 01/03/2022 12:57 | WG1796352 |

3 Ss

4 Cn

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | 190000 | | 79.3 | 1000 | 1 | 01/18/2022 23:01 | WG1801153 |

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 724000 | | 10000 | 1 | 12/20/2021 18:45 | WG1792248 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|-------|----------|----------------------|---------------------------|
| Sulfate | 200000 | | 2970 | 25000 | 5 | 01/03/2022 13:10 | WG1796352 |

3 Ss

4 Cn

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | 189000 | | 79.3 | 1000 | 1 | 01/18/2022 23:04 | WG1801153 |

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 308000 | | 10000 | 1 | 12/20/2021 18:45 | WG1792248 |

¹ Cp

² Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|-----|------|----------|----------------------|---------------------------|
| Sulfate | 9310 | | 594 | 5000 | 1 | 12/30/2021 15:08 | WG1796352 |

³ Ss

⁴ Cn

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | 82000 | | 79.3 | 1000 | 1 | 01/19/2022 02:11 | WG1801419 |

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | ND | | 10000 | 1 | 12/20/2021 18:45 | WG1792248 |

¹ Cp

² Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|-----|------|----------|----------------------|---------------------------|
| Sulfate | U | | 594 | 5000 | 1 | 12/30/2021 15:21 | WG1796352 |

³ Ss

⁴ Cn

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | U | | 79.3 | 1000 | 1 | 01/19/2022 02:13 | WG1801419 |

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3744484-1 12/20/21 18:45

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1443377-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1443377-04 12/20/21 18:45 • (DUP) R3744484-3 12/20/21 18:45

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 1690000 | 1670000 | 1 | 1.67 | | 5 |

L1444231-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1444231-10 12/20/21 18:45 • (DUP) R3744484-4 12/20/21 18:45

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 3730000 | 3810000 | 1 | 2.12 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3744484-2 12/20/21 18:45

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8400000 | 95.5 | 77.4-123 | |

Method Blank (MB)

(MB) R3746963-1 12/30/21 09:33

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Sulfate | U | | 594 | 5000 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1442956-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1442956-03 12/30/21 12:22 • (DUP) R3746963-3 12/30/21 12:35

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Sulfate | 40800 | 40700 | 1 | 0.216 | | 15 |

L1443406-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1443406-04 12/30/21 15:21 • (DUP) R3746963-6 12/30/21 15:59

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Sulfate | U | U | 1 | 0.000 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3746963-2 12/30/21 09:46

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Sulfate | 40000 | 41200 | 103 | 80.0-120 | |

L1442956-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1442956-03 12/30/21 12:22 • (MS) R3746963-4 12/30/21 12:48 • (MSD) R3746963-5 12/30/21 13:26

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Sulfate | 50000 | 40800 | 89300 | 91400 | 96.9 | 101 | 1 | 80.0-120 | | | 2.43 | 15 |

L1443406-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1443406-04 12/30/21 15:21 • (MS) R3746963-7 12/30/21 16:12

| Analyte | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|---------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| Sulfate | 50000 | U | 51500 | 103 | 1 | 80.0-120 | |

Method Blank (MB)

(MB) R3751550-1 01/19/22 12:15

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Calcium | 88.3 | ⌵ | 79.3 | 1000 |

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3751550-2 01/19/22 12:17

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Calcium | 10000 | 9960 | 99.6 | 80.0-120 | |

4 Cn

5 Sr

L1443268-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1443268-13 01/18/22 23:17 • (MS) R3751556-4 01/18/22 23:22 • (MSD) R3751556-5 01/18/22 23:24

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Calcium | 10000 | 257000 | 264000 | 263000 | 63.8 | 54.3 | 1 | 75.0-125 | ⌵ | ⌵ | 0.362 | 20 |

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3751163-1 01/19/22 01:55

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Calcium | U | | 79.3 | 1000 |

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3751163-2 01/19/22 01:58

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Calcium | 10000 | 10300 | 103 | 80.0-120 | |

4 Cn

5 Sr

L1443692-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1443692-17 01/19/22 02:00 • (MS) R3751163-4 01/19/22 02:06 • (MSD) R3751163-5 01/19/22 02:08

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Calcium | 10000 | 613 | 10800 | 10700 | 102 | 101 | 1 | 75.0-125 | | | 1.45 | 20 |

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

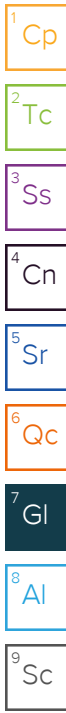
Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| MDL | Method Detection Limit. |
|------------------------------|--|
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |
| Qualifier | Description |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|-------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address:

Plum Point Services Co., LLC

2739 SCR 623
Osceola, AR 72370

Billing Information:

Accounts Payable
P.O. Box 567
Osceola, AR 72370

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2



12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

Report to:
Dana Derrington

Email To: dld@ftn-assoc.com; hlf@ftn-assoc.com; ajp@ftn-assoc.com

Project Description:
Plum Point Energy Station

City/State Collected: **Osceola AR**

Please Circle:
PT MT CT ET

Phone: **501-920-9642**

Client Project #
R14590-2496-001

Lab Project #
NAESOAR-PLUMPOINT

Collected by (print):
Michael Clayton

Site/Facility ID #

P.O. #
2020-00128

Collected by (signature):
Michael Clayton

Rush? (Lab MUST Be Notified)

Quote #

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

Immediately
Parked on ice N Y

No. of
Cntrs

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | CAICP 250mlHDPE-HNO3 | SULFATE 125mlHDPE-NoPres | TDS 250mlHDPE-NoPres | Remarks | Sample # (lab only) |
|------------|-----------|----------|-------|----------|------|--------------|----------------------|--------------------------|----------------------|---------|---------------------|
| MW-116 | Grab | GW | | 12/14/21 | 1258 | 3 | X | X | X | | -01 |
| MW-116 DUP | | GW | | | 1255 | 3 | X | X | X | | -02 |
| MW-117 | | GW | | | 1405 | 3 | X | X | X | | -03 |
| EPA EB-1 | | GW | | | 1430 | 3 | X | X | X | | -04 |
| | | GW | | | | | | | | | |
| | | GW | | | | | | | | | |
| | | GW | | | | | | | | | |

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:
 UPS FedEx Courier

Tracking #

5318 0961 3544

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)
Michael Clayton

Date: 12/15/21
Time: 1430

Received by: (Signature)

Trip Blank Received: Yes (No)
HCL/MeOH
TBR
DKA2

Relinquished by: (Signature)

Date:

Received by: (Signature)

Temp: 1.7°C to 1.7°C
Bottles Received: 12

Relinquished by: (Signature)

Date:

Received for lab by: (Signature)
Only

Date: 12-16-21
Time: 0915

Hold: Condition: NCF OK

APPENDIX C

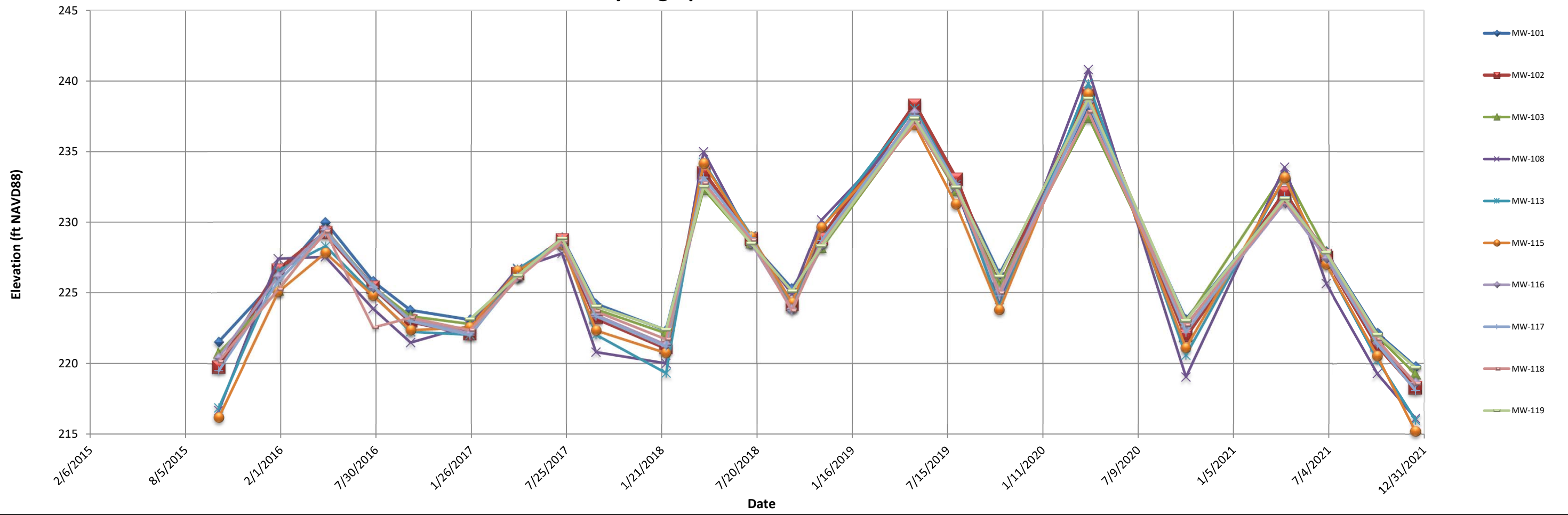
Water Elevation Data and Hydrographs

Historical water levels.

| Date | Water Surface Elevation (ft, North American Vertical Datum of 1988) | | | | | | | | | |
|------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | MW-101 | MW-102 | MW-103 | MW-108 | MW-113 | MW-115 | MW-116 | MW-117 | MW-118 | MW-119 |
| 10/7/2015 | 221.51 | 219.73 | 220.71 | 216.68 | 216.87 | 216.17 | 220.40 | 219.48 | 220.12 | N/A* |
| 1/28/2016 | 226.07 | 226.58 | 225.16 | 227.39 | 226.53 | 225.03 | 226.14 | 225.78 | 225.22 | N/A* |
| 4/26/2016 | 229.97 | 229.24 | 229.48 | 227.53 | 228.30 | 227.80 | 229.43 | 229.23 | 229.33 | N/A* |
| 7/25/2016 | 225.79 | 225.38 | 225.41 | 223.87 | 224.87 | 224.78 | 225.33 | 225.45 | 222.53 | N/A* |
| 10/4/2016 | 223.76 | 223.00 | 223.33 | 221.47 | 222.23 | 222.34 | 223.10 | 222.99 | 223.23 | N/A* |
| 1/24/2017 | 223.08 | 222.09 | 222.79 | 222.66 | 222.03 | 222.54 | 222.12 | 222.00 | 222.34 | 223.14 |
| 4/24/2017 | 226.04 | 226.33 | 226.33 | 226.71 | 226.65 | 226.53 | 226.07 | 226.11 | 225.98 | 226.22 |
| 7/17/2017 | 228.89 | 228.74 | 228.48 | 227.77 | 228.65 | 228.41 | 228.53 | 228.77 | 228.65 | 228.86 |
| 9/19/2017 | 224.21 | 223.23 | 223.82 | 220.80 | 222.03 | 222.32 | 223.42 | 223.33 | 223.67 | 224.04 |
| 1/29/2018 | 222.35 | 221.12 | 222.14 | 220.01 | 219.32 | 220.74 | 221.33 | 221.18 | 221.71 | 222.39 |
| 4/10/2018 | 232.63 | 233.50 | 232.34 | 234.99 | 234.23 | 234.15 | 232.89 | 233.19 | 232.76 | 232.52 |
| 7/9/2018 | 228.52 | 228.81 | 228.50 | 228.72 | 229.03 | 228.95 | 228.49 | 228.87 | 228.73 | 228.49 |
| 9/24/2018 | 225.29 | 224.15 | 224.16 | 224.89 | 224.08 | 224.29 | 223.83 | 223.71 | 223.72 | 225.11 |
| 11/19/2018 | 228.54 | 228.80 | 228.16 | 230.16 | 229.57 | 229.62 | 228.31 | 228.71 | 228.46 | 228.33 |
| 2/18/2019 | NM | NM | NM | NM | NM | NM | NM | NM | NM | 236.90 |
| 5/14/2019 | 237.60 | 238.28 | 237.17 | 237.13 | 238.03 | 236.89 | 237.76 | 237.55 | 237.08 | 237.35 |
| 7/31/2019 | 232.75 | 233.02 | 232.22 | 232.39 | 232.66 | 231.26 | 232.55 | 232.75 | 232.40 | 232.48 |
| 10/21/2019 | 226.32 | 225.29 | 225.52 | 224.14 | 223.95 | 223.78 | 225.08 | 224.77 | 224.98 | 226.16 |
| 4/6/2020 | 238.06 | 239.09 | 237.46 | 240.81 | 239.83 | 239.08 | 238.49 | 238.51 | 237.83 | 238.76 |
| 10/7/2020 | 223.12 | 221.96 | 222.96 | 219.05 | 220.58 | 221.09 | 222.58 | 222.19 | 222.70 | 223.03 |
| 4/12/2021 | 231.65 | 232.06 | 233.51 | 233.90 | 233.12 | 233.15 | 231.38 | 231.81 | 231.53 | 231.69 |
| 6/29/2021 | 227.90 | 227.49 | 227.88 | 225.64 | 227.00 | 226.99 | 227.42 | 227.80 | 227.97 | 227.85 |
| 10/4/2021 | 222.14 | 221.32 | 221.94 | 219.28 | 220.25 | 220.53 | 221.49 | 221.37 | 221.7 | 222.04 |
| 12/14/2021 | 219.78 | 218.27 | 219.23 | 216.11 | 215.99 | 215.18 | 218.62 | 218.08 | 218.56 | 219.70 |

*Monitoring well not installed yet.

Hydrographs of Groundwater Elevations



APPENDIX D

Appendix III Groundwater Quality Historical Database

Plum Point Energy Station EPA CCR Landfill Historical Database

| Well ID | Sampling Date | Boron (mg/L) | Calcium (mg/L) | Chloride (mg/L) | Fluoride (mg/L) | Sulfate (mg/L) | TDS (mg/L) | pH (su) |
|---------------|---------------------|--------------|----------------|-----------------|-----------------|----------------|------------|---------|
| MW-101 | downgradient | | | | | | | |
| | 10/7/2015 | 0.0858(J) | 116 | 3.02 | 0.281 | 12.4 | 401 | 6.4 |
| | 1/28/2016 | 0.114(J) | 117 | 2.74 | 0.274 | 11.4 | 421(B) | 6.6 |
| | 4/27/2016 | 0.105(J) | 120 | 6.61 | 0.283 | 19.9 | 437 | 6.3 |
| | 7/26/2016 | 0.0877(J) | 115 | 3.41 | 0.241 | 12.8 | 448(B) | 6.6 |
| | 10/6/2016 | 0.0890(J) | 110 | 1.93 | 0.267 | 8.44 | 387 | 6.2 |
| | 1/25/2017 | 0.0681(J) | 109 | 1.67 | 0.300 | 11.5 | 381 | 6.7 |
| | 4/26/2017 | <1.80(O) | 80.5 | 2.14 | 0.273 | 9.57 | 407 | 6.9 |
| | 7/20/2017 | 0.0903(BJ) | 110 | 1.98 | 0.331 | 13.5 | 414 | 6.7 |
| | 9/20/2017 | 0.0718(J) | 153 | 1.57 | 0.328 | 9.68 | 385 | 7.0 |
| | 12/11/2017 | n/a | 120 | n/a | n/a | n/a | n/a | 6.4 |
| | 4/12/2018 | 0.0840(BJ) | 121 | 2.75 | 0.307 | 17.4 | 420 | 6.4 |
| | 9/26/2018 | 0.0981(BJ) | 115 | 1.94(B) | 0.290(B) | 14.6 | 421 | 6.8 |
| | 5/16/2019 | 0.118(J) | 103 | 1.01 | 0.263(B) | 9.17 | 392 | 6.6 |
| | 10/23/2019 | 0.0491(J) | 109 | 1.37 | 0.264 | 11.9 | 404 | 7.0 |
| | 4/8/2020 | 0.0780(J) | 105 | 0.823(J) | 0.279 | 10.3 | 362 | 6.8 |
| | 10/9/2020 | 0.0556(J) | 107 | 1.75 | 0.309 | 9.91 | 389 | 6.7 |
| | 4/15/2021 | 0.0608(J) | 96.9 | 0.855(J) | 0.385 | 5.73 | 335 | 7.1 |
| | 6/29/2021 | n/a | n/a | n/a | 0.307 | n/a | n/a | 6.7 |
| | 10/7/2021 | 0.0555(J) | 113 | 0.975(J) | 0.312 | 10.2 | 380 | 6.7 |
| MW-102 | downgradient | | | | | | | |
| | 11/10/2015 | 0.0818(J) | 121 | 5.53 | 0.160 | 82.3 | 434 | 6.8 |
| | 1/28/2016 | 0.125(J) | 123 | 5.33 | 0.157 | 85.9 | 470 | 6.8 |
| | 4/27/2016 | 0.135(J) | 131 | 6.32 | 0.154 | 103 | 478 | 6.7 |
| | 7/26/2016 | 0.122(J) | 122 | 5.42 | 0.150 | 88.1 | 474(B) | 7.7(R) |
| | 10/6/2016 | 0.0999(J) | 120 | 5.18 | 0.158 | 83.2 | 458 | 6.0 |
| | 1/25/2017 | 0.0938(J) | 118 | 4.50 | 0.182 | 88.8 | 435 | 5.8 |
| | 4/27/2017 | 0.120(J) | 121 | 4.85 | 0.175 | 91.0 | 504 | 6.7 |
| | 7/19/2017 | 0.108(BJ) | 126 | 4.28 | 0.207 | 85.4 | 461 | 6.6 |
| | 9/20/2017 | 0.0536(J) | 25.9(O) | 4.29 | 0.194 | 88.7 | 454 | 6.7 |
| | 4/11/2018 | 0.144(BJ) | 136 | 1.77 | 0.206 | 46.7 | 472 | 6.3 |
| | 7/9/2018 | n/a | 124 | n/a | n/a | n/a | n/a | 6.7 |
| | 9/27/2018 | 0.121(BJ) | 121 | 3.84 | 0.183(B) | 88.6 | 453 | 6.5 |
| | 5/16/2019 | 0.150(J) | 121 | 2.87 | 0.196(B) | 75.4 | 466 | 6.6 |
| | 10/23/2019 | 0.0602(J) | 117 | 3.62 | 0.201 | 85.6 | 461 | 6.7 |
| | 4/7/2020 | 0.0890(J) | 116 | 2.79 | 0.199 | 84.7 | 461 | 6.6 |
| | 10/9/2020 | 0.0699(J) | 115 | 3.30 | 0.178 | 96.1 | 438 | 6.5 |
| | 4/15/2021 | 0.0966(J) | 118 | 2.31 | 0.210 | 79.4 | 446 | 6.9 |
| | 10/6/2021 | 0.0784(J) | 116 | 2.48 | 0.215 | 95.3 | 415 | 6.8 |
| MW-103 | downgradient | | | | | | | |
| | 10/7/2015 | 0.119(J) | 168 | 3.92 | 0.198 | 95.0 | 591 | 6.5 |
| | 1/28/2016 | 0.149(J) | 153 | 2.66 | 0.188 | 60.1 | 539(B) | 6.3 |
| | 4/27/2016 | 0.166(J) | 147 | 4.06 | 0.170 | 62.0 | 517 | 6.5 |

B: analyte was detected in associated blank sample.

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Plum Point Energy Station EPA CCR Landfill Historical Database

| Well ID | Sampling Date | Boron (mg/L) | Calcium (mg/L) | Chloride (mg/L) | Fluoride (mg/L) | Sulfate (mg/L) | TDS (mg/L) | pH (su) |
|----------------|-------------------|--------------|----------------|-----------------|-----------------|----------------|------------|---------|
| MW-103 | 7/26/2016 | 0.142(J) | 148 | 3.63 | 0.163 | 60.9 | 539(B) | 6.3 |
| (cont.) | 10/6/2016 | 0.137(J) | 152 | 2.69 | 0.201 | 54.5 | 518 | 6.3 |
| | 1/26/2017 | 0.138(J) | 135 | 2.82 | 0.223 | 52.0 | 477 | 6.8 |
| | 4/27/2017 | 0.137(J) | 136 | 2.89 | 0.200 | 49.8 | 513 | 6.5 |
| | 7/20/2017 | 0.124(BJ) | 136 | 2.28 | 0.240 | 52.2 | 506 | 6.6 |
| | 9/20/2017 | 0.134(J) | 141 | 1.79 | 0.240 | 48.2 | 496 | 6.6 |
| | 4/11/2018 | 0.122(BJ) | 128 | 3.24 | 0.163 | 80.6 | 468 | 6.2 |
| | 9/26/2018 | 0.145(BJ) | 129 | 1.36(B) | 0.217(B) | 32.8 | 440 | 6.6 |
| | 5/15/2019 | 0.154(J) | 106 | 1.10 | 0.213(B) | 23.4 | 396 | 6.6 |
| | 10/22/2019 | 0.0816(J) | 107 | 1.29 | 0.253 | 24.4 | 384 | 6.7 |
| | 4/8/2020 | 0.0541(J) | 88.2 | 0.726(J) | 0.219 | 9.93 | 318 | 6.7 |
| | 10/8/2020 | 0.0763(J) | 91.9 | 3.55 | 0.234 | 15.0 | 319 | 6.4 |
| | 4/15/2021 | 0.0726(J) | 85.9 | 0.976(J) | 0.258 | 11.4 | 294 | 6.9 |
| | 10/7/2021 | 0.0681(J) | 89.7 | 1.16 | 0.256 | 12.6 | 324 | 6.5 |
| MW-108 | upgradient | | | | | | | |
| | 1/28/2016 | 0.164(J) | 166 | 5.34 | 0.158 | 44.4 | 555 | 6.7 |
| | 4/28/2016 | 0.194(J) | 178 | 2.81 | 0.134 | 45.2 | 638(B) | 6.6 |
| | 7/26/2016 | 0.158(J) | 144 | 2.43 | 0.144 | 39.3 | 475(B) | 9.8(R) |
| | 10/6/2016 | 0.174(J) | 158 | 2.48 | 0.169 | 41.4 | 539 | 6.2 |
| | 1/26/2017 | 0.164(J) | 154 | 2.64 | 0.202 | 51.6 | 513 | 7.0 |
| | 4/25/2017 | 0.147(J) | 151 | 3.10 | 0.167 | 45.7 | 488 | 6.8 |
| | 7/18/2017 | 0.162(J) | 167 | 3.03 | 0.191 | 39.4 | 576 | 6.7 |
| | 9/19/2017 | 0.158(J) | 170 | 2.06 | 0.199 | 43.8 | 578 | 6.7 |
| | 4/10/2018 | 0.171(BJ) | 183 | 3.03 | 0.177 | 44.5 | 582 | 6.5 |
| | 9/25/2018 | 0.183(BJ) | 163 | 3.11 | 0.188(B) | 52.2 | 537 | 6.7 |
| | 5/14/2019 | 0.224(BR) | 169 | 2.44 | 0.184(B) | 34.5 | 529 | 6.8 |
| | 8/1/2019 | 0.127(BJ) | n/a | n/a | n/a | n/a | n/a | 7.1 |
| | 10/22/2019 | 0.110(J) | 153 | 1.95 | 0.205 | 32.9 | 528 | 6.7 |
| | 4/6/2020 | 0.143(J) | 160 | 1.87 | 0.185 | 33.8 | 557 | 6.9 |
| | 10/7/2020 | 0.111(J) | 151 | 2.23 | 0.185 | 42.4 | 515 | 6.8 |
| | 4/13/2021 | 0.125(J) | 149 | 2.67 | 0.216 | 36.8 | 541 | 7.0 |
| | 10/5/2021 | 0.111(J) | 149 | 1.37 | 0.203 | 23.4 | 505 | 6.7 |
| MW-113 | upgradient | | | | | | | |
| | 1/28/2016 | 0.102(J) | 84.7 | 3.61 | 0.0808(J) | 11.0 | 320(B) | 6.6 |
| | 4/28/2016 | 0.127(J) | 72.5 | 2.05 | 0.0604(J) | 8.99 | 321(B) | 6.9 |
| | 7/26/2016 | 0.144(J) | 69.8 | 0.856(J) | 0.0570(J) | 4.97(J) | 281(B) | 8.1(R) |
| | 10/5/2016 | 0.0963(J) | 84.7 | 2.63 | 0.0827(J) | 9.51 | 323 | 6.0 |
| | 1/26/2017 | 0.0891(J) | 88.9 | 5.81 | 0.0901(J) | 13.3 | 332 | 7.1 |
| | 4/25/2017 | 0.0890(J) | 87.9 | 5.49 | 0.0944(J) | 11.8 | 339 | 6.9 |
| | 7/18/2017 | 0.0982(BJ) | 82.5 | 3.96 | 0.119 | 10.9 | 321 | 6.8 |
| | 9/19/2017 | 0.0998(J) | 84.1 | 2.19 | 0.117 | 9.45 | 326 | 6.9 |
| | 4/10/2018 | 0.0899(BJ) | 92.0 | 2.94 | 0.0562(J) | 10.1 | 340 | 6.4 |
| | 9/25/2018 | 0.111(BJ) | 90.0 | 2.84(B) | 0.114(B) | 9.81 | 337 | 6.7 |

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Plum Point Energy Station EPA CCR Landfill Historical Database

| Well ID | Sampling Date | Boron (mg/L) | Calcium (mg/L) | Chloride (mg/L) | Fluoride (mg/L) | Sulfate (mg/L) | TDS (mg/L) | pH (su) |
|----------------|---------------------|--------------|----------------|-----------------|-----------------|----------------|------------|---------|
| MW-113 | 5/14/2019 | 0.168(J) | 87.2 | 1.58 | 0.120(B) | 3.15(J) | 342 | 6.7 |
| (cont.) | 10/22/2019 | 0.0881(J) | 75.9 | 1.73 | 0.110 | 4.88(J) | 307 | 6.7 |
| | 4/6/2020 | 0.131(J) | 77.1 | 1.08 | 0.0943(J) | 3.61(J) | 332 | 6.7 |
| | 10/7/2020 | 0.0879(J) | 70.6 | 1.62 | 0.106(J) | 4.61(J) | 274 | 6.5 |
| | 4/13/2021 | 0.0673(J) | 95.4 | 2.50 | 0.102(J) | 9.83 | 372 | 7.1 |
| | 6/29/2021 | n/a | n/a | n/a | n/a | n/a | 303 | 6.2 |
| | 10/5/2021 | 0.0817(J) | 67.5 | 0.877(J) | 0.139(J) | 3.75(J) | 275 | 6.6 |
| MW-115 | upgradient | | | | | | | |
| | 11/10/2015 | 0.0473(J) | 109 | 2.14 | 0.230 | 8.23 | 363 | 7.0 |
| | 1/28/2016 | 0.0617(J) | 103 | 7.55 | 0.201 | 14.8 | 376 | 7.1 |
| | 4/28/2016 | 0.0863(J) | 115 | 1.83 | 0.179 | 5.63 | 443(B) | 6.8 |
| | 7/26/2016 | 0.0604(J) | 114 | 1.22 | 0.200 | 4.79(J) | 399(B) | 9.0(R) |
| | 10/5/2016 | 0.0737(J) | 114 | 1.31 | 0.218 | 4.59(J) | 446 | 6.1 |
| | 1/27/2017 | 0.0602(J) | 110 | 1.77 | 0.244 | 6.52 | 406 | 7.0 |
| | 4/25/2017 | 0.0641(J) | 106 | 2.71 | 0.203 | 6.75 | 385 | 6.8 |
| | 7/18/2017 | 0.0608(BJ) | 105 | 2.32 | 0.238 | 7.10 | 369 | 6.6 |
| | 9/19/2017 | 0.0609(J) | 116 | 0.835(J) | 0.243 | 5.37 | 403 | 6.8 |
| | 4/10/2018 | 0.0666(BJ) | 111 | 1.34 | 0.209 | 5.81 | 368 | 6.3 |
| | 9/25/2018 | 0.0764(BJ) | 121 | 1.18(B) | 0.216(B) | 5.00(J) | 417 | 6.7 |
| | 5/14/2019 | 0.0751(J) | 128 | 0.598(J) | 0.184(B) | 5.63 | 440 | 6.6 |
| | 8/1/2019 | n/a | 125 | n/a | n/a | n/a | n/a | 7.1 |
| | 10/23/2019 | 0.0224(J) | 114 | 1.23 | 0.220 | 5.83 | 411 | 6.9 |
| | 4/6/2020 | 0.0525(J) | 108 | 0.922(J) | 0.192 | 5.37 | 398 | 6.7 |
| | 10/7/2020 | 0.0704(J) | 99.4 | 0.864(J) | 0.180 | 2.97(J) | 334 | 6.6 |
| | 4/13/2021 | 0.0379(J) | 117 | 0.789(J) | 0.239 | 5.67 | 441 | 7.0 |
| | 10/5/2021 | 0.0655(J) | 109 | 0.964(J) | 0.225 | 3.70(J) | 379 | 6.7 |
| MW-116 | downgradient | | | | | | | |
| | 10/8/2015 | 0.108(J) | 103 | 5.84 | 0.173 | 45.1 | 367 | 6.7 |
| | 1/28/2016 | 0.139(J) | 111 | 5.67 | 0.165 | 78.0 | 426 | 6.8 |
| | 4/28/2016 | 0.142(J) | 106 | 4.80 | 0.148 | 83.5 | 461(B) | 6.6 |
| | 7/26/2016 | 0.115(J) | 109 | 5.20 | 0.148 | 81.8 | 395(B) | 6.2 |
| | 10/6/2016 | 0.126(J) | 110 | 4.70 | 0.172 | 86.5 | 443 | 5.9 |
| | 1/25/2017 | 0.141(J) | 118 | 4.85 | 0.201 | 89.2 | 467 | 5.9 |
| | 4/27/2017 | 0.137(J) | 107 | 4.25 | 0.172 | 95.2 | 443 | 6.7 |
| | 7/19/2017 | 0.135(BJ) | 111 | 4.45 | 0.208 | 98.4 | 435 | 6.5 |
| | 9/20/2017 | 0.132(J) | 115 | 4.16 | 0.207 | 94.2 | 451 | 6.7 |
| | 1/30/2018 | n/a | n/a | n/a | n/a | 35.5 | n/a | 6.5 |
| | 4/11/2018 | 0.111(BJ) | 137 | 4.90 | 0.166 | 113 | 511 | 6.4 |
| | 7/9/2018 | n/a | 125 | n/a | n/a | n/a | n/a | 6.6 |
| | 9/26/2018 | 0.153(BJ) | 130 | 4.13 | 0.183(B) | 97.5 | 500 | 6.6 |
| | 5/16/2019 | 0.144(J) | 93.2 | 1.66 | 0.189(B) | 27.0 | 349 | 6.6 |
| | 10/23/2019 | 0.0829(J) | 109 | 2.75 | 0.216 | 63.1 | 417 | 6.7 |
| | 4/8/2020 | 0.0768(J) | 98.3 | 2.50 | 0.184 | 38.7 | 365 | 6.6 |

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Plum Point Energy Station EPA CCR Landfill Historical Database

| Well ID | Sampling Date | Boron (mg/L) | Calcium (mg/L) | Chloride (mg/L) | Fluoride (mg/L) | Sulfate (mg/L) | TDS (mg/L) | pH (su) |
|----------------|---------------------|--------------|----------------|-----------------|-----------------|----------------|------------|---------|
| MW-116 | 10/9/2020 | 0.0772(J) | 134 | 7.05 | 0.187 | 103 | 537 | 6.3 |
| (cont.) | 4/15/2021 | 0.0854(J) | 144 | 9.09 | 0.226 | 126 | 541 | 6.9 |
| | 6/29/2021 | n/a | 169 | n/a | n/a | n/a | n/a | 6.5 |
| | 10/6/2021 | 0.0973(J) | 185 | 11.2 | 0.214 | 166 | 670 | 6.5 |
| | 12/14/2021 | n/a | 190 | n/a | n/a | 200 | 730 | 6.7 |
| MW-117 | downgradient | | | | | | | |
| | 10/8/2015 | 0.0733(J) | 80.4 | 1.17 | 0.0770(J) | 5.21 | 281 | 6.6 |
| | 1/28/2016 | 0.096(J) | 75.2 | 1.61 | 0.126 | 6.32 | 271(B) | 6.5 |
| | 4/27/2016 | 0.130(J) | 76.9 | 1.30 | 0.101 | 6.19 | 272 | 6.6 |
| | 7/26/2016 | 0.105(J) | 78.2 | 1.25 | 0.0971(J) | 5.48 | 271(B) | 7.9(R) |
| | 10/5/2016 | 0.115(J) | 85.5 | 1.53 | 0.110 | 5.68 | 287 | 5.1 |
| | 1/26/2017 | 0.0970(J) | 75.7 | 1.34 | 0.120 | 7.46 | 268 | 6.1 |
| | 4/25/2017 | 0.0835(J) | 76.7 | 1.48 | 0.131 | 6.55 | 277 | 6.6 |
| | 7/18/2017 | 0.102(BJ) | 77.6 | 1.36 | 0.151 | 6.56 | 292 | 6.4 |
| | 9/20/2017 | 0.106(J) | 84.2 | 0.747(J) | 0.144 | 6.43 | 280 | 6.5 |
| | 4/11/2018 | 0.0952(BJ) | 82.5 | 1.57 | 0.124 | 7.28 | 290 | 6.4 |
| | 9/27/2018 | 0.127(BJ) | 89.7 | 1.25(B) | 0.144(B) | 7.19 | 318 | 6.4 |
| | 11/19/2018 | n/a | 85.7 | n/a | n/a | n/a | 288 | 6.6 |
| | 5/15/2019 | 0.133(J) | 98.3 | 1.25 | 0.147(B) | 6.66 | 341 | 6.5 |
| | 8/2/2019 | n/a | 102 | n/a | n/a | n/a | 302 | 6.3 |
| | 10/22/2019 | 0.0610(J) | 80.9 | 0.864(J) | 0.136 | 5.45 | 322 | 6.5 |
| | 4/7/2020 | 0.0759(J) | 98.1 | 1.33 | 0.144(J) | 7.47 | 323 | 6.6 |
| | 6/22/2020 | n/a | 90.1 | n/a | n/a | n/a | n/a | 6.1 |
| | 10/8/2020 | 0.0721(J) | 84.1 | 0.793(J) | 0.137(J) | 7.75 | 298 | 6.3 |
| | 4/13/2021 | 0.0705(J) | 98.8 | 0.976(J) | 0.152 | 7.46 | 351 | 6.9 |
| | 6/29/2021 | n/a | 83.7 | n/a | n/a | n/a | 314 | 6.4 |
| | 10/6/2021 | 0.0677(J) | 88.8 | 0.921(J) | 0.162 | 9.09 | 314 | 6.5 |
| | 12/14/2021 | n/a | 82.0 | n/a | n/a | 9.31 | 308 | 6.5 |
| MW-118 | downgradient | | | | | | | |
| | 10/9/2015 | 0.0916(J) | 75.1 | 1.08 | 0.175 | 12.0 | 271 | 6.4 |
| | 1/28/2016 | 0.121(J) | 73.4 | 1.59 | 0.175 | 11.5 | 269(B) | 6.2 |
| | 4/28/2016 | 0.123(J) | 94.1 | 1.80 | 0.119 | 26.7 | 378(B) | 6.2 |
| | 7/26/2016 | 0.101(J) | 85.4 | 2.13 | 0.133 | 26.6 | 322(B) | 8.0(R) |
| | 10/5/2016 | 0.103(J) | 78.1 | 1.48 | 0.157 | 15.1 | 294 | 6.3 |
| | 1/26/2017 | 0.106(J) | 74.7 | 1.13(B) | 0.188 | 13.4 | 275 | 6.1 |
| | 4/26/2017 | 0.0994(J) | 71.1 | 1.47 | 0.163 | 12.2 | 276 | 6.3 |
| | 7/20/2017 | 0.104(BJ) | 74.9 | 1.62 | 0.172 | 20.4 | 313 | 6.5 |
| | 9/20/2017 | 0.104(J) | 85.1 | 1.17 | 0.187 | 18.5 | 305 | 6.5 |
| | 4/11/2018 | 0.0949(BJ) | 71.8 | 1.36 | 0.157 | 15.2 | 257 | 5.8 |
| | 7/10/2018 | n/a | n/a | n/a | n/a | n/a | n/a | 6.5 |
| | 9/27/2018 | 0.113(BJ) | 80.6 | 1.33(B) | 0.165(B) | 17.0 | 375 | 6.3 |
| | 5/15/2019 | 0.125(J) | 76.4 | 1.44 | 0.185 | 16.5 | 286 | 6.0 |
| | 8/2/2019 | n/a | n/a | n/a | n/a | n/a | n/a | 6.1 |

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Plum Point Energy Station EPA CCR Landfill Historical Database

| Well ID | Sampling Date | Boron (mg/L) | Calcium (mg/L) | Chloride (mg/L) | Fluoride (mg/L) | Sulfate (mg/L) | TDS (mg/L) | pH (su) |
|----------------|---------------------|--------------|----------------|-----------------|-----------------|----------------|------------|---------|
| MW-118 | 10/22/2019 | 0.0459(J) | 91.6 | 1.45 | 0.162 | 17.5 | 335 | 6.4 |
| (cont.) | 4/8/2020 | 0.0739(J) | 82.9 | 1.62 | 0.152 | 16.6 | 304 | 6.1 |
| | 10/8/2020 | 0.0596(J) | 84.8 | 1.13 | 0.150(J) | 18.3 | 301 | 6.1 |
| | 4/15/2021 | 0.0663(J) | 94.1 | 0.911(J) | 0.185 | 20.0 | 329 | 6.6 |
| | 10/6/2021 | 0.0656(J) | 82.9 | 1.15 | 0.189 | 11.5 | 280 | 6.4 |
| MW-119 | downgradient | | | | | | | |
| | 1/25/2017 | 0.0922(J) | 104 | 2.62 | 0.255 | 47.6 | 409 | 6.6 |
| | 4/27/2017 | 0.108(J) | 106 | 2.80 | 0.198 | 39.1 | 403 | 6.8 |
| | 7/20/2017 | 0.0936(BJ) | 103 | 6.84 | 0.256 | 48.7 | 432 | 6.6 |
| | 9/20/2017 | 0.0798(J) | 92.7 | 2.30 | 0.289 | 38.7 | 338 | 6.8 |
| | 1/30/2018 | 0.0805(BJ) | 99.3 | 2.07 | 0.259 | 35.5 | 380 | 6.4 |
| | 4/11/2018 | 0.0950(BJ) | 85.9 | 2.15 | 0.230 | 31.1 | 315 | 6.4 |
| | 9/27/2018 | 0.103(BJ) | 99.0 | 2.30(B) | 0.253(B) | 41.6 | 290 | 6.7 |
| | 11/20/2018 | 0.0826(BJ) | 94.0 | 1.96 | 0.271 | 33.0 | 343 | 6.8 |
| | 2/18/2019 | 0.110(J) | 103 | 2.27 | 0.253 | 43.0 | 374 | 6.6 |
| | 5/16/2019 | 0.109(J) | 135 | 2.86 | 0.252 | 47.4 | 487 | 6.4 |
| | 8/2/2019 | n/a | 97.4 | n/a | n/a | n/a | n/a | 6.4 |
| | 10/22/2019 | 0.0480(J) | 110 | 2.86 | 0.266 | 47.7 | 400 | 6.7 |
| | 4/8/2020 | 0.0639(J) | 109 | 2.45 | 0.229 | 39.4 | 426 | 6.6 |
| | 10/8/2020 | 0.0588(J) | 109 | 2.22 | 0.251 | 52.9 | 415 | 6.5 |
| | 4/15/2021 | 0.0687(J) | 115 | 2.43 | 0.267 | 33.6 | 413 | 6.9 |
| | 10/7/2021 | 0.0594(J) | 104 | 2.40 | 0.269 | 39.1 | 388 | 6.7 |

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APPENDIX E

Background Data Sets Used for Statistics

BACKGROUND DATA SETS

Background data sets are generally evaluated every 2 to 3 years in accordance with the landfill's SAP and Unified Guidance recommendations. This document describes recommended methods and procedures used to evaluate compliance data for inclusion in the background data sets in accordance with §257.94(b), the landfill's SAP, and the Unified Guidance. The Unified Guidance recommends updating background data sets to include more recent observations, because some long-term fluctuation in background levels may be possible even though a given well has not been impacted by the landfill. As identified in the Unified Guidance, the term "background" refers to the natural or baseline groundwater quality at a site. Background conditions can range from an uncontaminated aquifer to a historically contaminated site with baseline conditions that are unaffected by recent releases that are actionable under the Resource Conservation and Recovery Act. The terms "background" and "baseline" are used interchangeably herein. Procedures used for establishing the initial background data sets were described in the 2018 and 2019 annual reports.

Background data sets were evaluated for an update prior to the first half of 2020 monitoring period for all wells except MW-119, which was excluded from the evaluation due to the limited compliance data available for comparison. Background data sets for calcium and total dissolved solids at MW-117 were also excluded from the background evaluation due to confirmed statistically significant increases (SSIs) identified during 2019. However, multiple alternate source demonstrations (ASDs) certified by an Arkansas-registered professional engineer are now on record for these two SSIs (FTN 2019a, 2019b, 2020). Each ASD successfully demonstrated that the SSIs were not due to a release from the CCR unit using multiple lines of evidence. As such, the SSIs are considered the result of statistical error stemming from a background data set that does not fully capture the natural variation in water quality at this well. In view of this, the background data sets for calcium and TDS at MW-117 will be evaluated for an update along with all data for MW-119 prior to statistical evaluation of the first half of 2021 data set.

Updated background data sets used for the first and second half of 2020 statistical evaluations are attached to this appendix.

Exploratory Analyses

Background data sets for the wells installed prior to 2016 (MW-101 through MW-103, MW-108, and MW-115 through MW-118) were screened using exploratory data analyses to identify potential trends, outliers, and spatial variability. Time-series plots and box-and-whiskers plots were applied to all background data sets to identify potential excursions from normal.

Updating Background Data Sets

Existing background and compliance populations for each well-parameter pair were evaluated with the intrawell Mann-Whitney (Wilcoxon Rank-Sum) test. This test evaluates whether the existing background data set is statistically different from the compliance data set. When comparing a minimum of four compliance values to the background data set, the background data set is updated if the test finds no significant difference at the 95% confidence level ($\alpha = 0.05$). When comparing compliance populations of five or more values, background data sets are updated if the test finds no significant difference at the 99% confidence level ($\alpha = 0.01$).

Outliers and Rejected Data in Background Data Sets

The Unified Guidance recommends that background data be screened for potential outliers. However, it also advises that outliers not be removed unless a source of error or reason for the discrepancy can be identified. As advised in the Unified Guidance, select removal of extreme outliers without knowledge of error may be warranted to improve environmental protection, but removal of all outliers can mask real and legitimate changes in background data. Outlier screening included the application of Dixon's or Tukey's outlier tests to the updated background data sets to identify potential outliers for exclusion.

Extreme outliers and data that are excluded from the historical database based on independent evidence of error or that are suspected of being unrepresentative of groundwater

quality (e.g., due to excessively high sample turbidity) are listed in Table E.1. Outlier data that are excluded from statistical evaluations are flagged with an “O” and data that are excluded due to independent evidence of error are flagged with an “R” in the historical database.

Table E.1. Data excluded from statistical analyses.

| Parameter | Well | Date | Value (mg/L) | Flag | Note |
|-----------|--------|-----------|--------------|------|--|
| Boron | MW-101 | 4/26/2017 | <1.8 | O | Laboratory reporting detection limit was nine times higher than normal due to a sample dilution. |
| Boron | MW-108 | 5/14/2019 | 0.224 | R | Suspected laboratory/sampling error; disconfirmed by verification sampling in August 2019. |
| Calcium | MW-102 | 9/20/2017 | 25.9 | O | Statistically low outlier; suspected laboratory error. |
| pH | MW-102 | 7/26/2016 | 7.7 (su) | R | Known equipment malfunction. |
| pH | MW-108 | 7/26/2016 | 9.8 (su) | R | |
| pH | MW-113 | 7/26/2016 | 8.1 (su) | R | |
| pH | MW-115 | 7/26/2016 | 9.0 (su) | R | |
| pH | MW-117 | 7/26/2016 | 7.9 (su) | R | |
| pH | MW-118 | 7/26/2016 | 8.0 (su) | R | |

Screening for Trends in Background Data Sets

EPA guidance recommends screening background populations for statistically significant trends, because some tests (such as a prediction limit test) require a stationary statistical distribution for valid results. The presence of statistically significant trends in background data may violate key assumptions of some statistical tests and require an alternate approach to testing the data. If trends are indicated in background populations, testing strategies that either correct for, or are not sensitive to, temporal variation may be required.

Well-parameter pairs containing statistically significant trends in their background data sets are summarized in Table E.2. The well-parameter pairs below are tested for compliance using the Mann-Kendall test and Theil-Sen trend line as opposed to a prediction limit test. All remaining well-parameter pairs are tested for compliance using prediction limits.

Table E.2. Well-parameter pairs tested with Mann-Kendall test and Theil-Sen trend line.

| Parameter | Well(s) |
|-----------|--------------------------------|
| Calcium | MW-103 |
| Chloride | MW-101, MW-102, MW-103, MW-116 |
| Sulfate | MW-103 |
| TDS | MW-103 |

References

- FTN [FTN Associates, Ltd.]. 2019a. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2019 Monitoring Period, Plum Point Energy Station Landfill*. Prepared for Plum Point Services Company, LLC, and posted to facility operating record on October 24, 2019. Little Rock, AR: FTN Associates, Ltd.
- . 2019b. *Alternate Source Demonstration for Statistically Significant Increases, Second Half of 2019 Monitoring Period, Plum Point Energy Station Landfill*. Prepared for Plum Point Services Company, LLC, and posted to facility operating record on December 17, 2019. Little Rock, AR: FTN Associates, Ltd.
- . 2020. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2020 Monitoring Period, Plum Point Energy Station Landfill*. Prepared for Plum Point Services Company, LLC, and posted to facility operating record on August 3, 2020. Little Rock, AR: FTN Associates, Ltd.

Date Ranges

Date: 11/9/2020 3:31 PM

Plum Point Energy Station

Client: Plum Point Services Company, LLC

Data: PPES EPA CCR Rule Groundwater Database

Boron (mg/l)

MW-101 background:10/7/2015-10/23/2019
MW-102 background:10/7/2015-10/23/2019
MW-103 background:10/7/2015-10/23/2019
MW-108 background:10/7/2015-10/23/2019
MW-113 background:10/7/2015-10/23/2019
MW-115 background:10/7/2015-10/23/2019
MW-116 background:10/7/2015-10/23/2019
MW-117 background:10/7/2015-10/23/2019
MW-118 background:10/7/2015-10/23/2019
MW-119 background:1/25/2017-2/18/2019

Calcium (mg/l)

MW-101 background:10/7/2015-10/23/2019
MW-102 background:10/7/2015-10/23/2019
MW-103 background:10/7/2015-10/23/2019
MW-108 background:10/7/2015-10/23/2019
MW-113 background:10/7/2015-10/23/2019
MW-115 background:10/7/2015-10/23/2019
MW-116 background:10/7/2015-10/23/2019
MW-117 background:10/7/2015-7/20/2017
MW-118 background:10/7/2015-10/23/2019
MW-119 background:1/25/2017-2/18/2019

Chloride (mg/l)

MW-101 background:10/7/2015-10/23/2019
MW-102 background:10/7/2015-10/23/2019
MW-103 background:10/7/2015-10/23/2019
MW-108 background:10/7/2015-10/23/2019
MW-113 background:10/7/2015-10/23/2019
MW-115 background:10/7/2015-10/23/2019
MW-116 background:10/7/2015-10/23/2019
MW-117 background:10/7/2015-10/23/2019
MW-118 background:10/7/2015-10/23/2019
MW-119 background:1/25/2017-2/18/2019

Dissolved Solids (mg/l)

MW-101 background:10/7/2015-10/23/2019
MW-102 background:10/7/2015-10/23/2019
MW-103 background:10/7/2015-10/23/2019
MW-108 background:10/7/2015-10/23/2019
MW-113 background:10/7/2015-10/23/2019
MW-115 background:10/7/2015-10/23/2019
MW-116 background:10/7/2015-10/23/2019
MW-117 background:10/7/2015-7/20/2017
MW-118 background:10/7/2015-10/23/2019
MW-119 background:1/25/2017-2/18/2019

Fluoride (mg/l)

MW-101 background:10/7/2015-10/23/2019
MW-102 background:10/7/2015-7/20/2017
MW-103 background:10/7/2015-10/23/2019
MW-108 background:10/7/2015-10/23/2019
MW-113 background:10/7/2015-10/23/2019
MW-115 background:10/7/2015-10/23/2019
MW-116 background:10/7/2015-10/23/2019
MW-117 background:10/7/2015-7/20/2017
MW-118 background:10/7/2015-10/23/2019
MW-119 background:1/25/2017-2/18/2019

pH (su)

MW-101 background:10/7/2015-10/23/2019
MW-102 background:10/7/2015-10/23/2019
MW-103 background:10/7/2015-10/23/2019
MW-108 background:10/7/2015-10/23/2019
MW-113 background:10/7/2015-10/23/2019
MW-115 background:10/7/2015-10/23/2019
MW-116 background:10/7/2015-10/23/2019

Date Ranges

Date: 11/9/2020 3:31 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

MW-117 background:10/7/2015-10/23/2019

MW-118 background:10/7/2015-10/23/2019

MW-119 background:1/25/2017-2/18/2019

Sulfate (mg/l)

MW-101 background:10/7/2015-10/23/2019

MW-102 background:10/7/2015-10/23/2019

MW-103 background:10/7/2015-10/23/2019

MW-108 background:10/7/2015-10/23/2019

MW-113 background:10/7/2015-10/23/2019

MW-115 background:10/7/2015-10/23/2019

MW-116 background:10/7/2015-10/23/2019

MW-117 background:10/7/2015-10/23/2019

MW-118 background:10/7/2015-10/23/2019

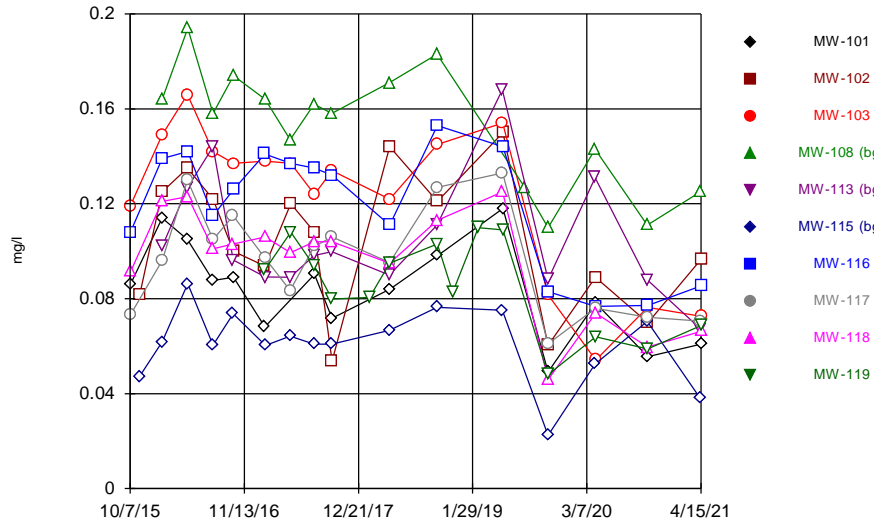
MW-119 background:1/25/2017-2/18/2019

APPENDIX F

Exploratory Data Analysis Plots

Time-Series Plots, First Half of 2021 Data Set

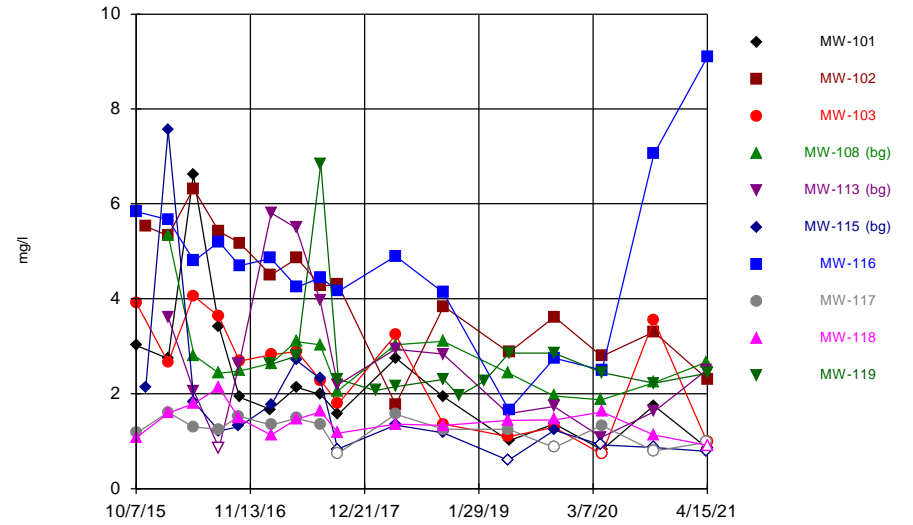
Time Series



Constituent: Boron Analysis Run 1/21/2022 1:40 PM View: 2021-1H Distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

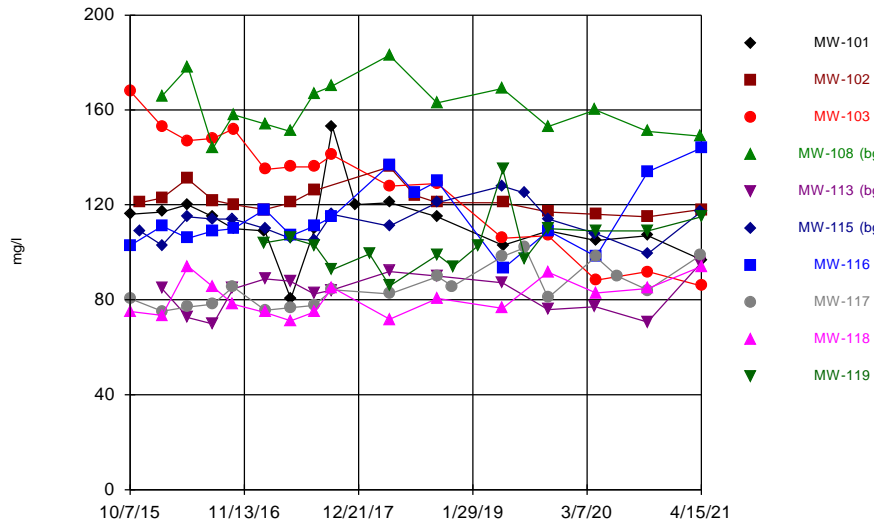
Time Series



Constituent: Chloride Analysis Run 5/12/2021 8:07 AM View: 2021-1H Distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

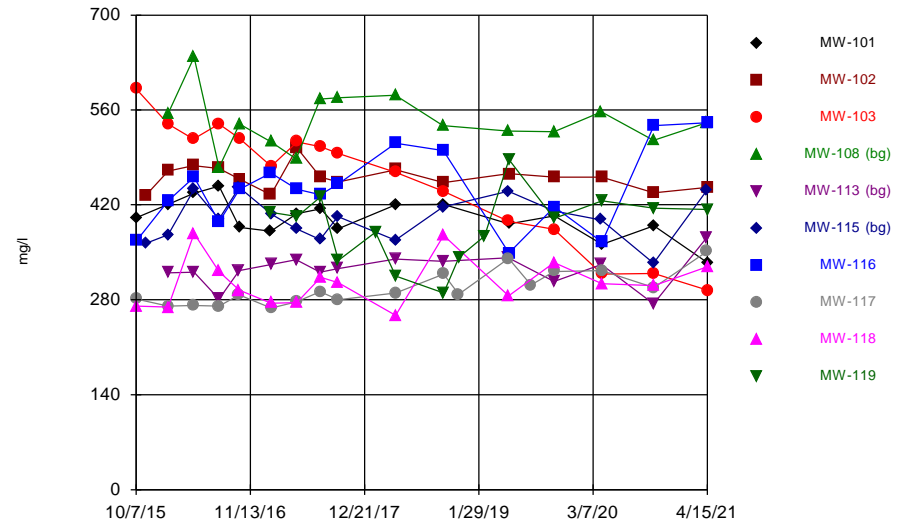
Time Series



Constituent: Calcium Analysis Run 5/12/2021 8:07 AM View: 2021-1H Distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

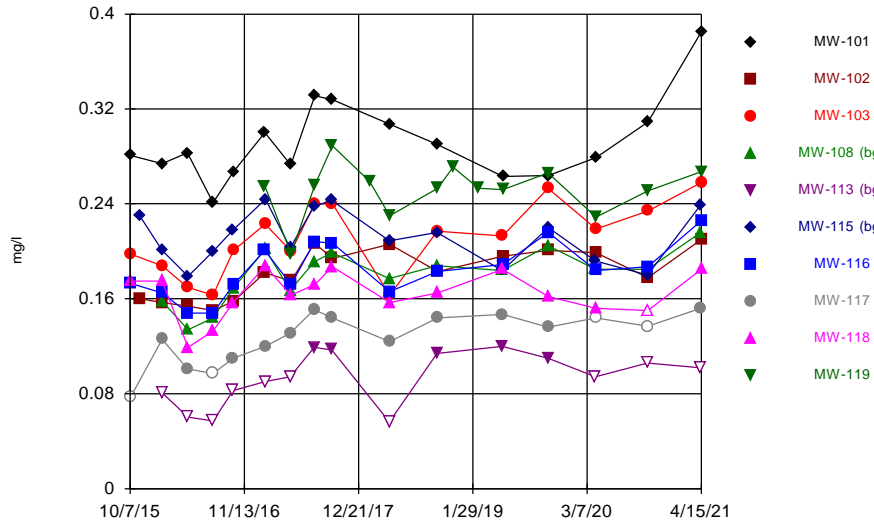
Time Series



Constituent: Dissolved Solids Analysis Run 5/12/2021 8:07 AM View: 2021-1H Distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

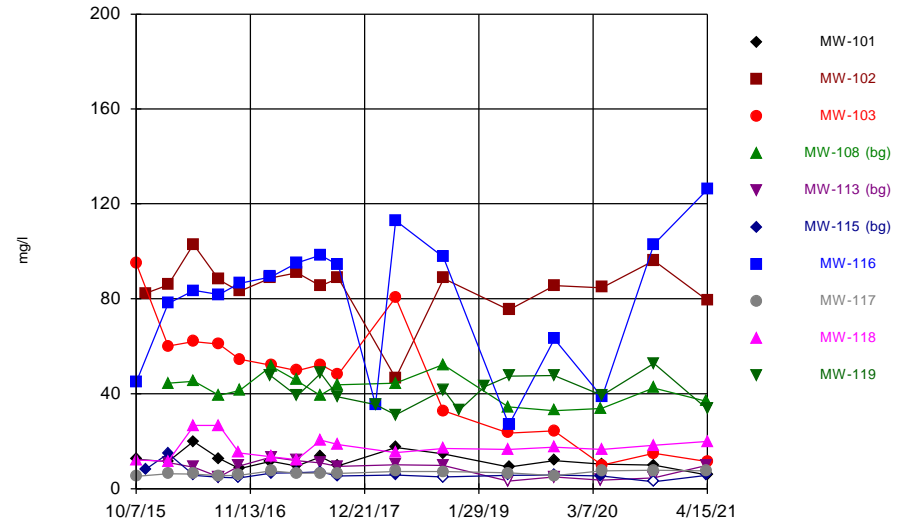
Time Series



Constituent: Fluoride Analysis Run 5/12/2021 8:07 AM View: 2021-1H Distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

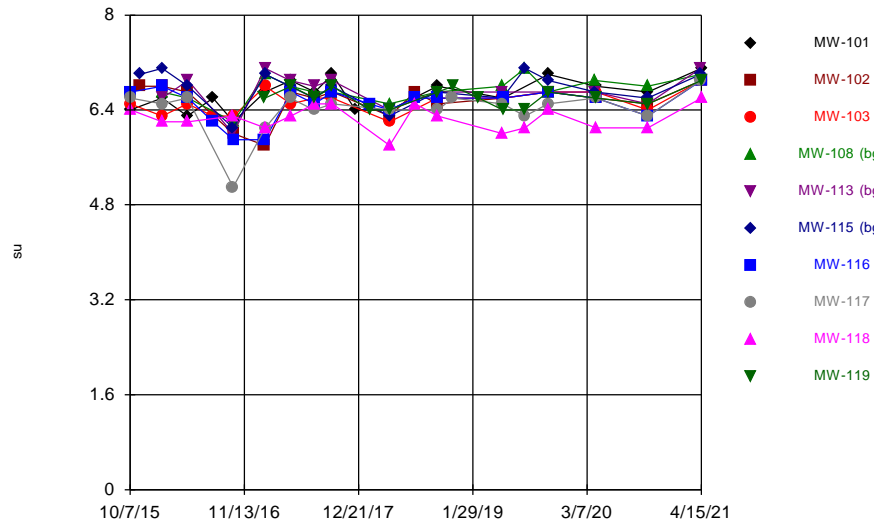
Time Series



Constituent: Sulfate Analysis Run 5/12/2021 8:07 AM View: 2021-1H Distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Time Series

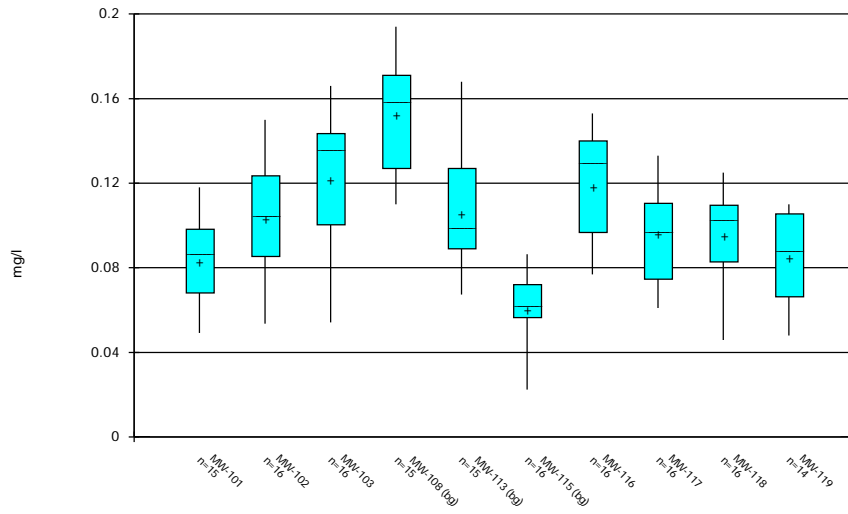


Constituent: pH Analysis Run 5/12/2021 8:07 AM View: 2021-1H Distributional

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

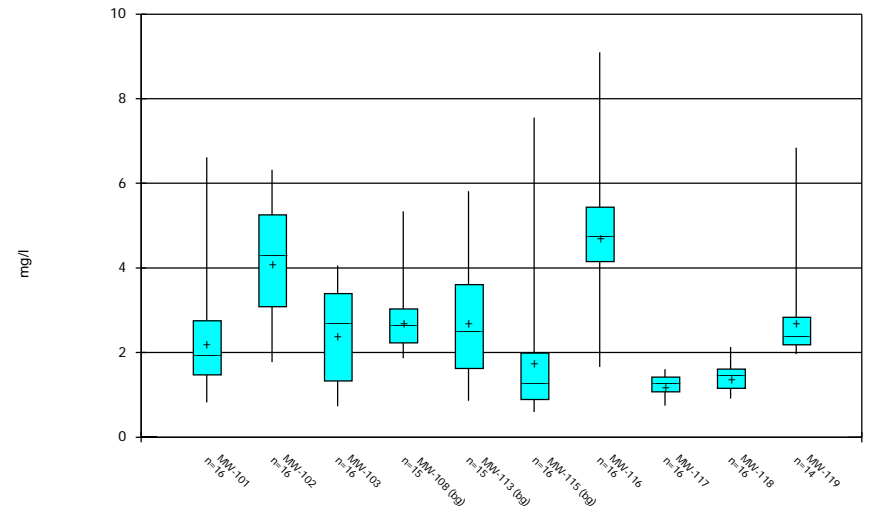
Box-and-Whisker Plots, First Half of 2021 Data Set

Box & Whiskers Plot



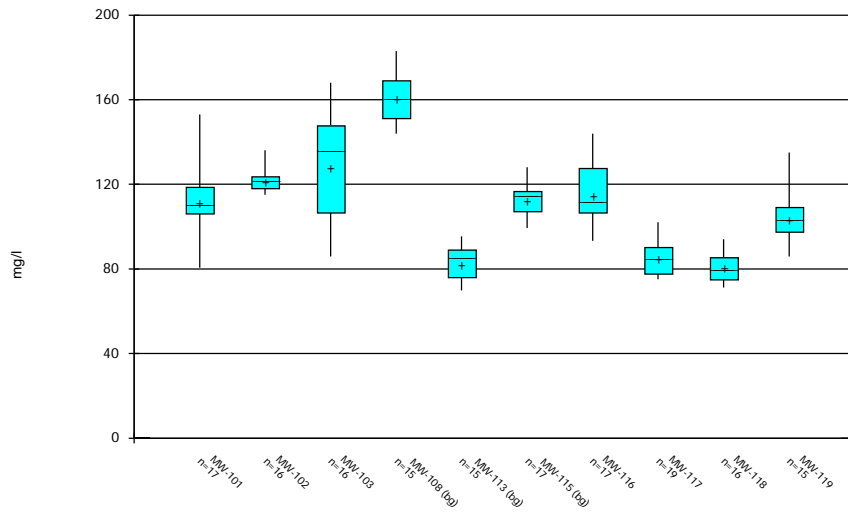
Constituent: Boron Analysis Run 1/21/2022 1:43 PM View: 2021-1H Distributional
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot



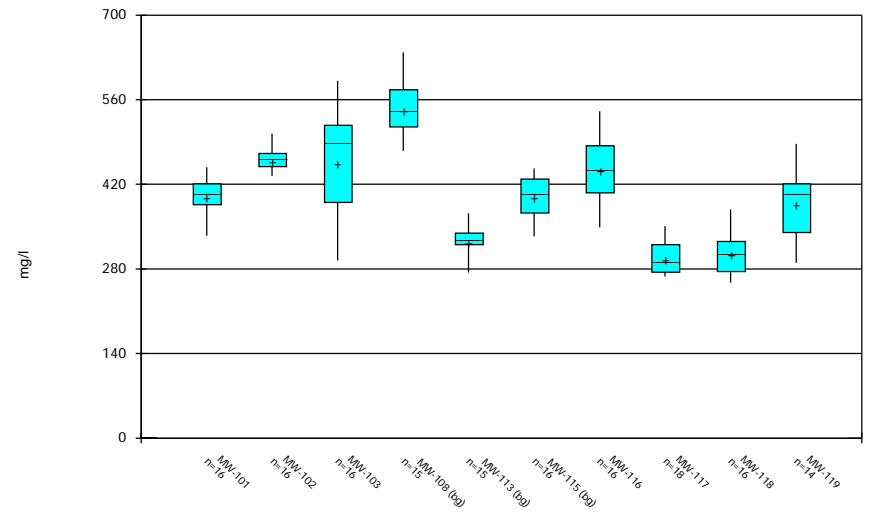
Constituent: Chloride Analysis Run 5/12/2021 8:08 AM View: 2021-1H Distributional
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot



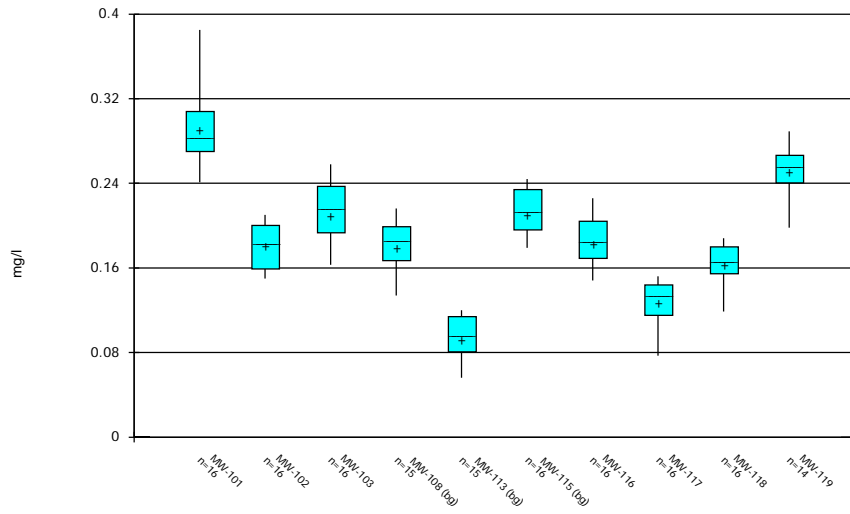
Constituent: Calcium Analysis Run 5/12/2021 8:08 AM View: 2021-1H Distributional
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot



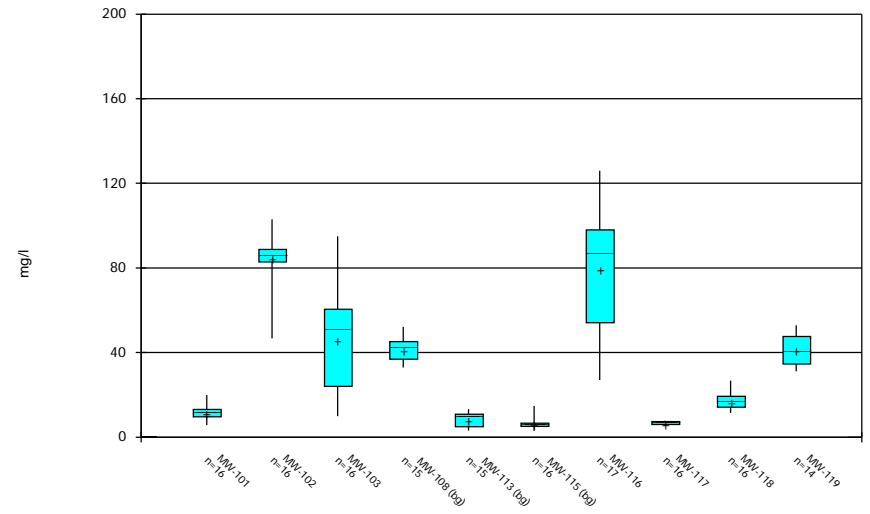
Constituent: Dissolved Solids Analysis Run 5/12/2021 8:08 AM View: 2021-1H Distributional
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot



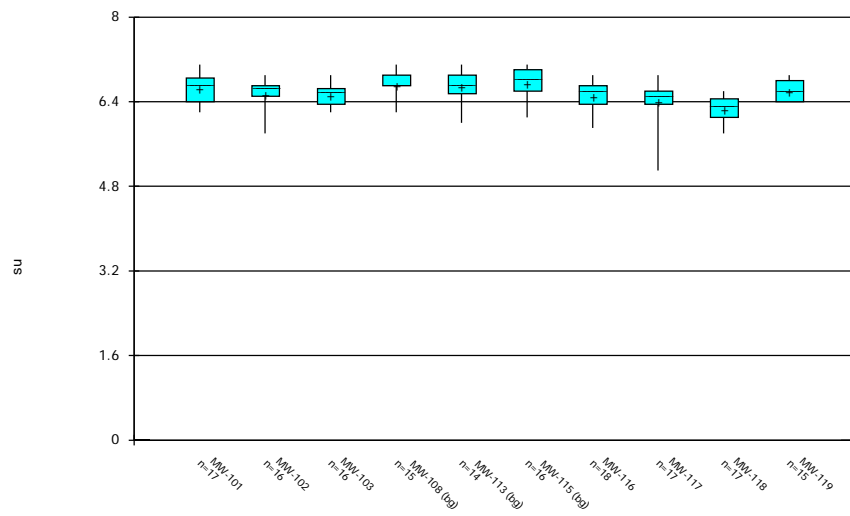
Constituent: Fluoride Analysis Run 5/12/2021 8:08 AM View: 2021-1H Distributional
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot



Constituent: Sulfate Analysis Run 5/12/2021 8:08 AM View: 2021-1H Distributional
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot

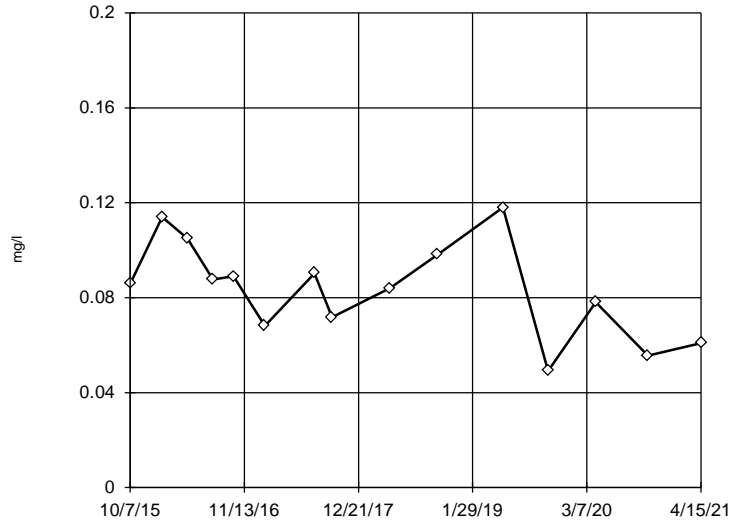


Constituent: pH Analysis Run 5/12/2021 8:08 AM View: 2021-1H Distributional
 Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Outlier Plots, Period-of-Record Data through First Half of 2021

EPA Screening (suspected outliers for Dixon's Test)

MW-101



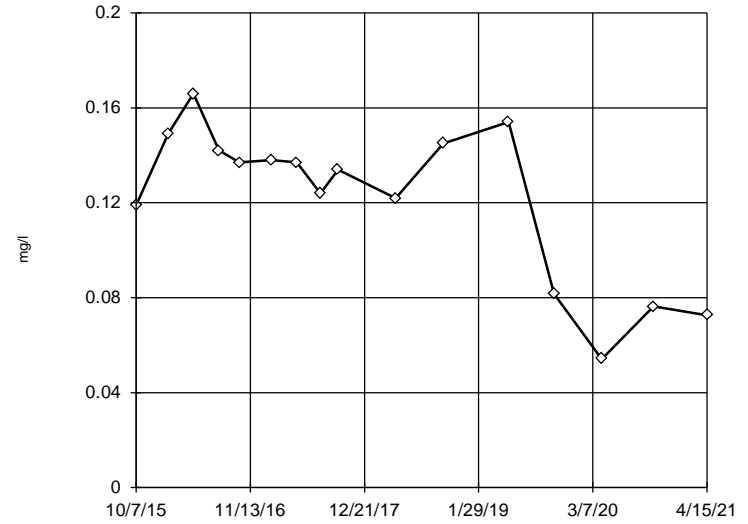
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.08369, std. dev. 0.02031, critical Tn 2.409
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.976
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-103



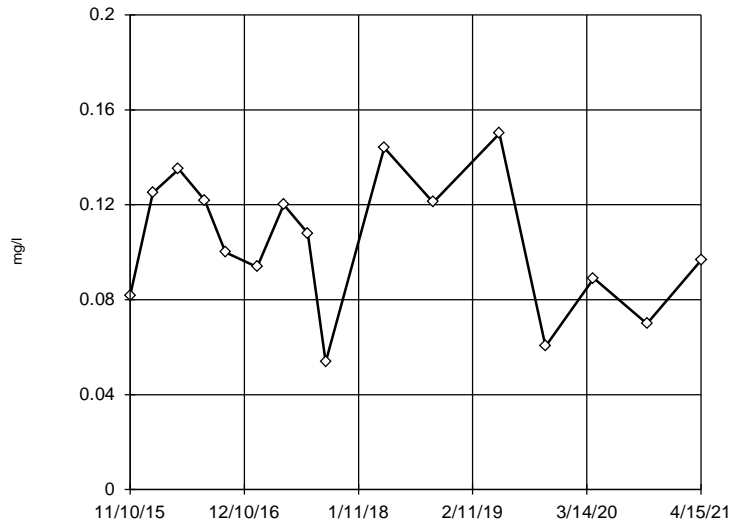
n = 16
 No outliers found.
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were x^4 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.191, low cutoff = -0.1673, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



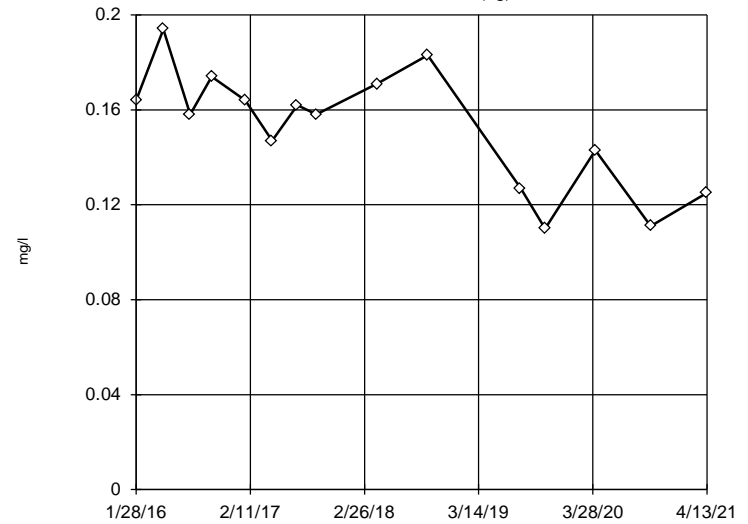
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1044, std. dev. 0.02889, critical Tn 2.443
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9695
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



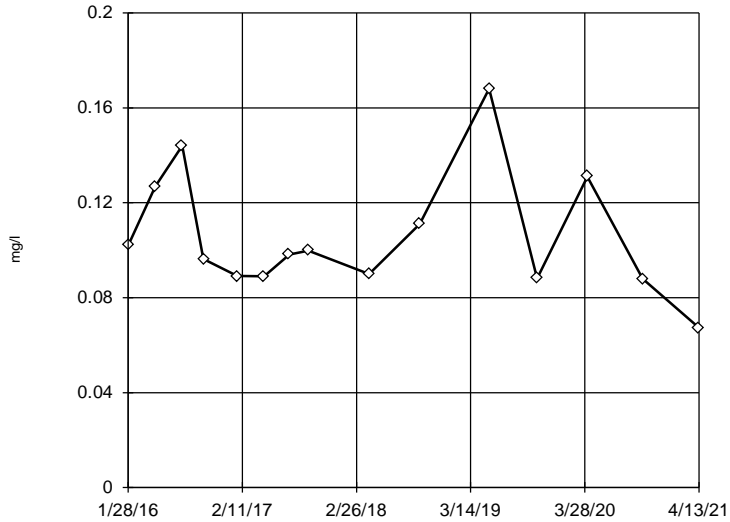
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1527, std. dev. 0.02525, critical Tn 2.409
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9494
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



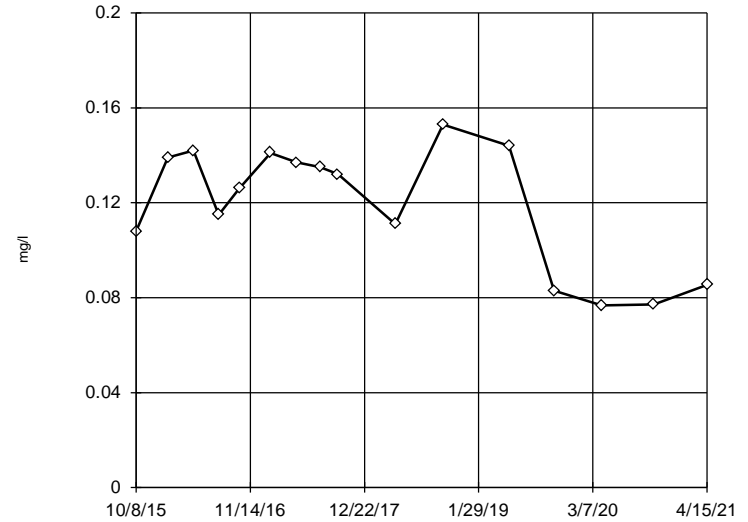
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1059, std. dev. 0.02614, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.936
 Critical = 0.901 (after natural log transformation)
 The distribution was found to be log-normal.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-116



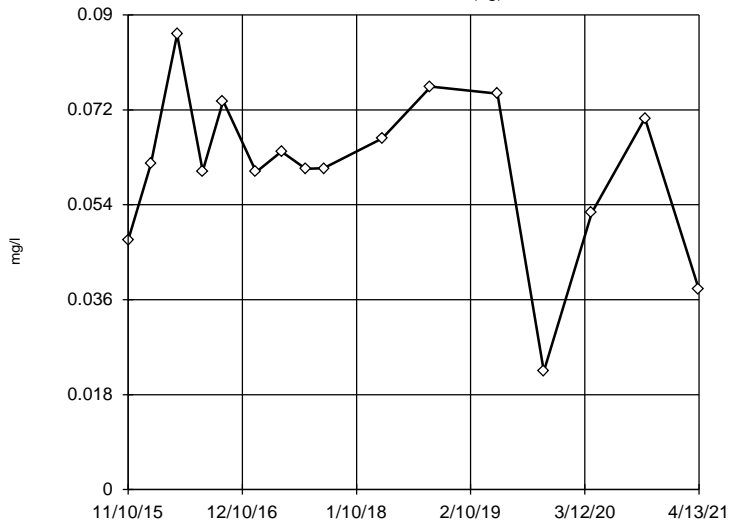
n = 16
 No outliers found.
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were x^4 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.1882, low cutoff = -0.1668, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-115 (bg)



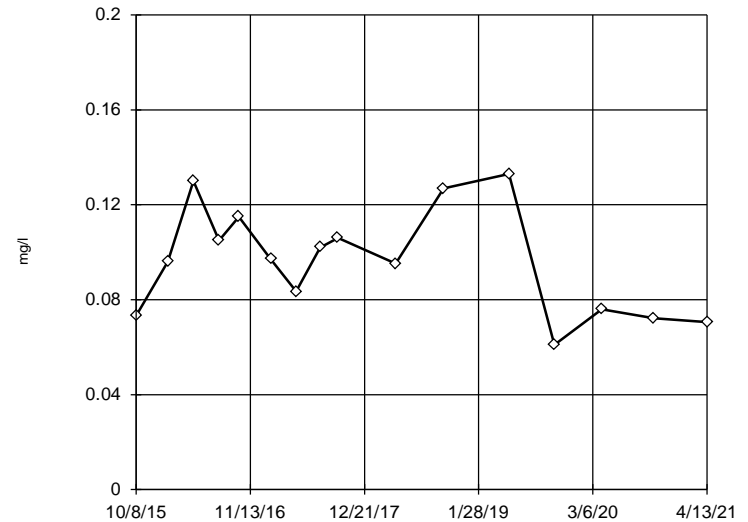
n = 16
 No statistical outliers.
 Testing for 2 low outliers.
 Mean = 0.06104.
 Std. Dev. = 0.0156.
 0.0379 (J); c = 0.3925
 tab1 = 0.507.
 Alpha = 0.05.
 0.0224 (J); c = 0.4725
 tab1 = 0.507.
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9715
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-117



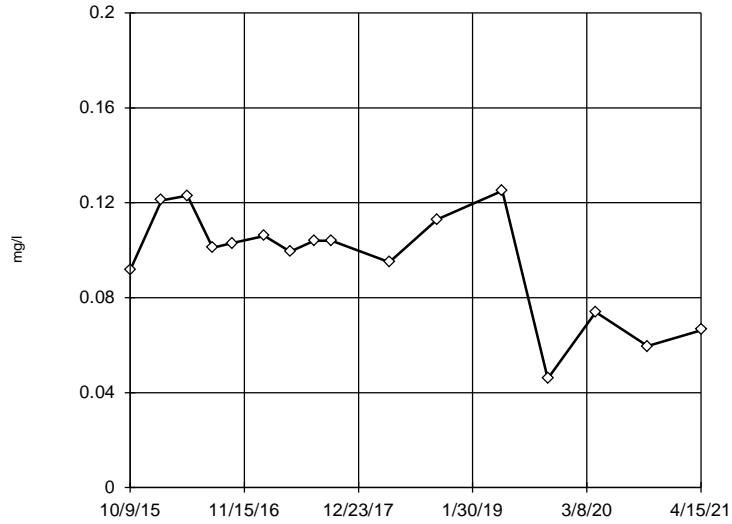
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.09641, std. dev. 0.02249, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.949
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-118



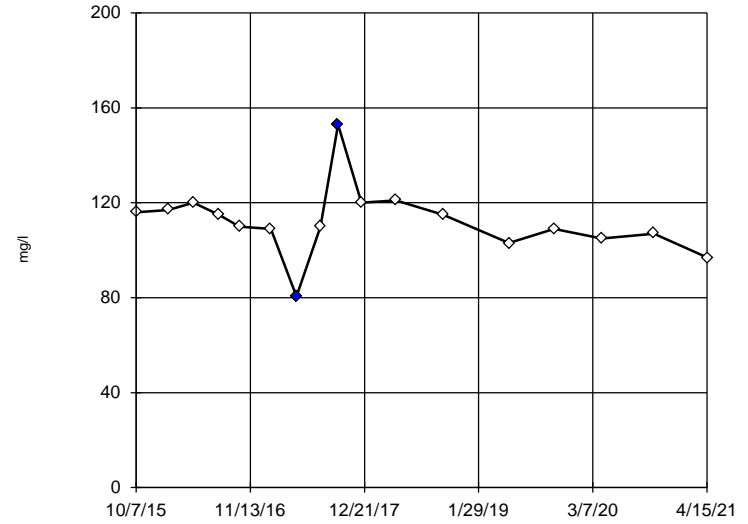
n = 16
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 0.09573.
 Std. Dev. = 0.02313.
 0.0459 (J); c = 0.2716
 tabl = 0.507.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9178
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-101



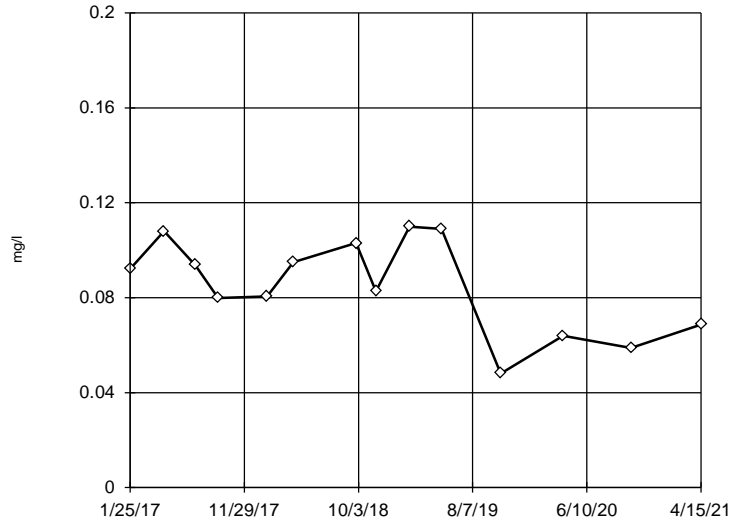
n = 17
 Statistical outliers are drawn as solid.
 Testing for 1 high and 1 low outliers.
 Mean = 112.2.
 Std. Dev. = 14.47.
 153; c = 0.66
 tabl = 0.49.
 80.5; c = 0.5696
 tabl = 0.49.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9522
 Critical = 0.901
 The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-119



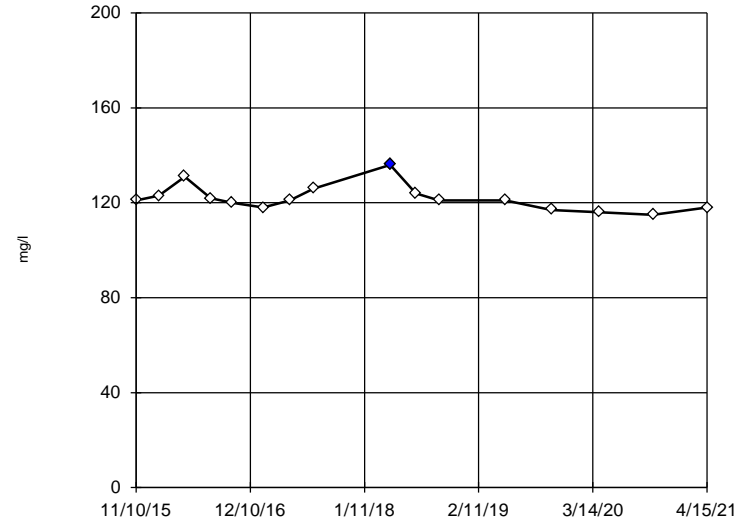
n = 14
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.08522, std. dev. 0.0198, critical Tn 2.371
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9422
 Critical = 0.895
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-102



n = 16
 Statistical outlier is drawn as solid.
 Testing for 1 high outlier.
 Mean = 121.9.
 Std. Dev. = 5.464.
 136; c = 0.5263
 tabl = 0.507.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.94
 Critical = 0.901
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



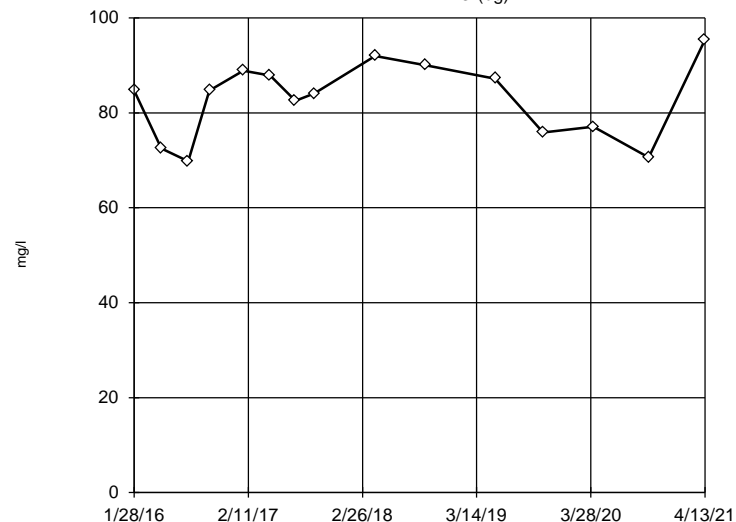
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 128.3, std. dev. 25.16, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.924
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



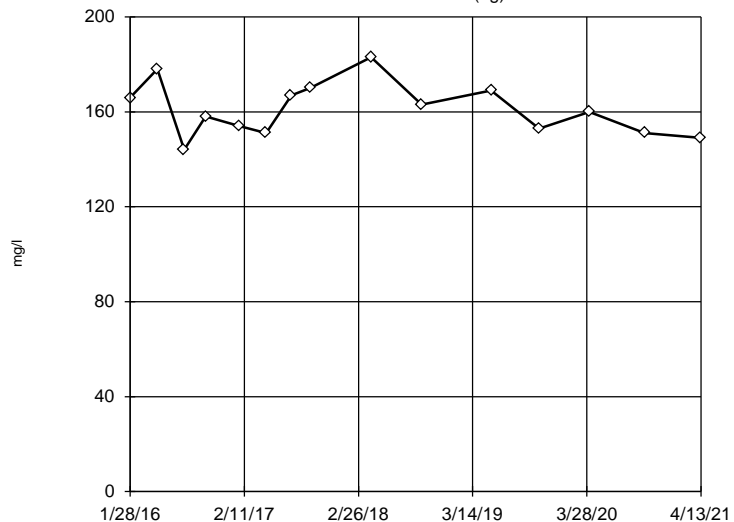
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 82.89, std. dev. 7.976, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.942
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 161.1, std. dev. 11.14, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9648
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

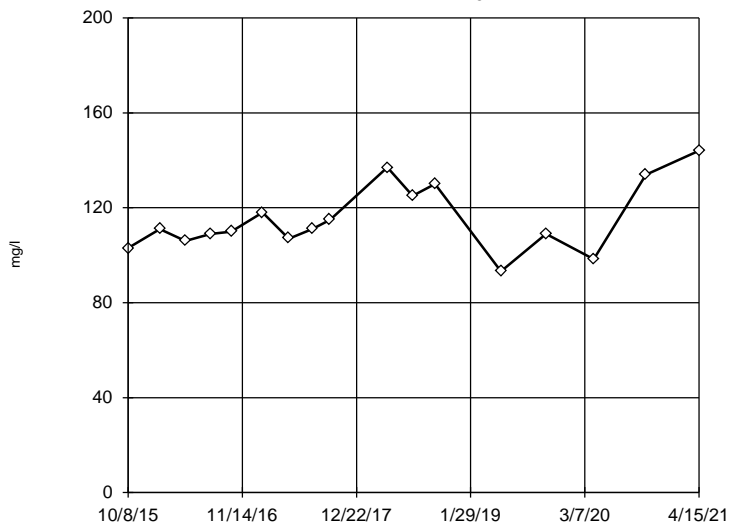
EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



EPA Screening (suspected outliers for Dixon's Test)

MW-116



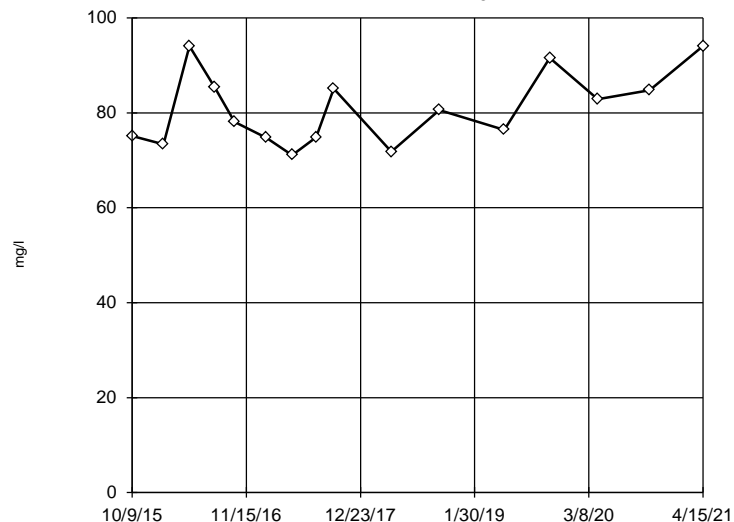
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 115.3, std. dev. 14.12, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.94
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



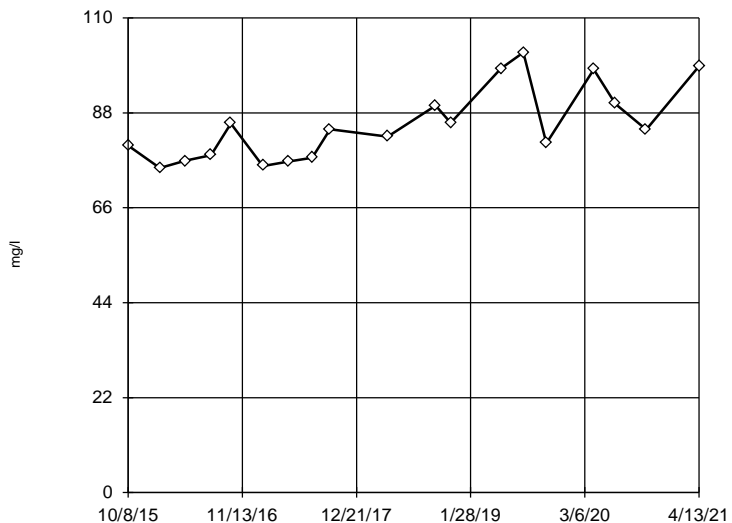
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 80.88, std. dev. 7.709, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9121
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-117



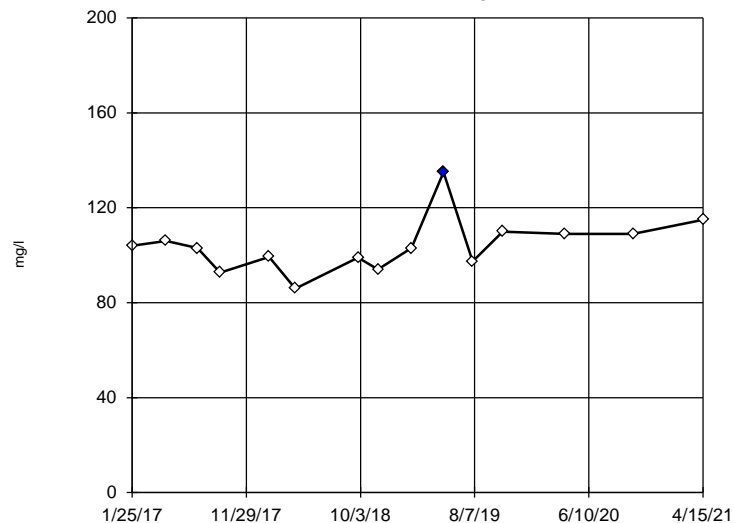
n = 19
 No outliers found.
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 141, low cutoff = 49.58, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-119



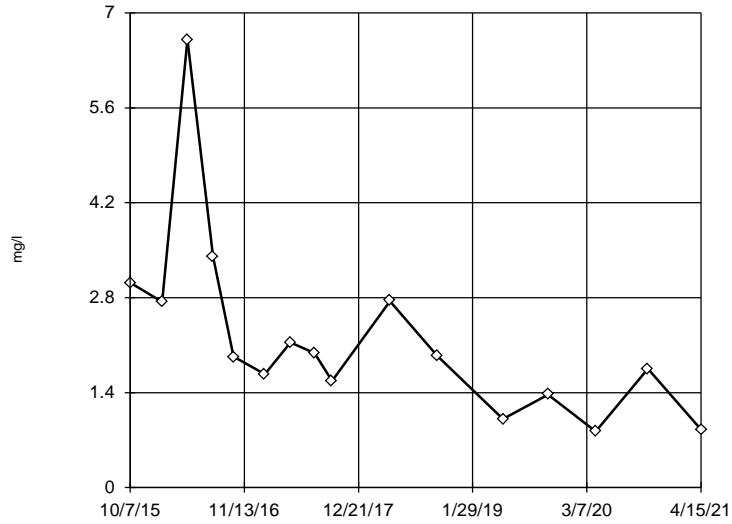
n = 15
 Statistical outlier is drawn as solid.
 Testing for 1 high outlier.
 Mean = 104.2,
 Std. Dev. = 11.4,
 135: c = 0.6098
 tab1 = 0.525,
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9806
 Critical = 0.895
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-101



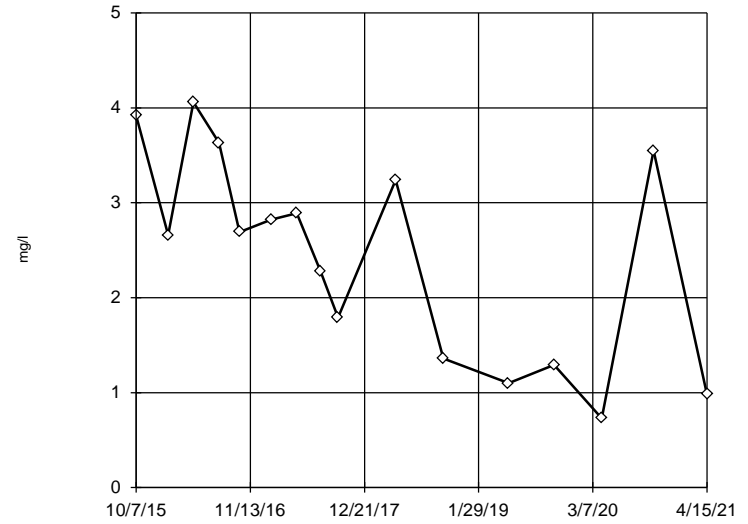
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 2.223, std. dev. 1.392, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9611
 Critical = 0.906 (after natural log transformation)
 The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



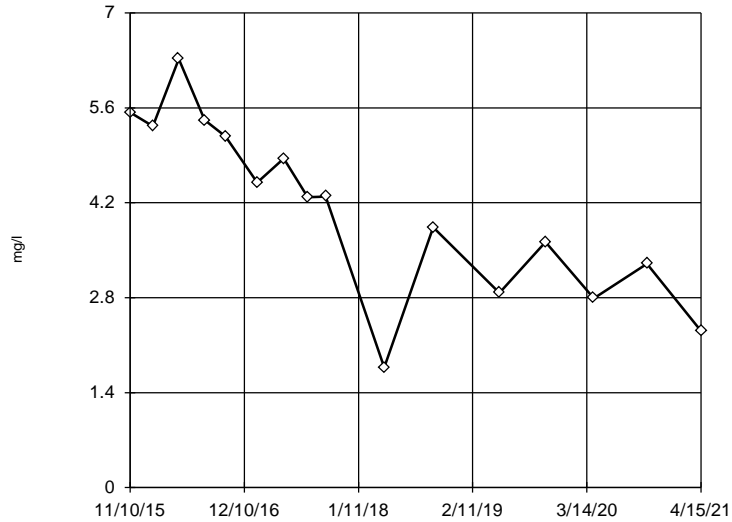
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 2.436, std. dev. 1.107, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9353
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



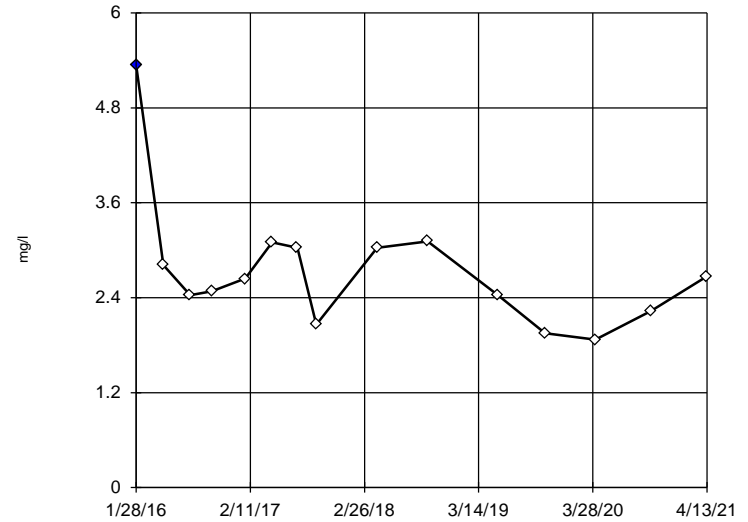
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 4.138, std. dev. 1.29, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9755
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-108 (bg)



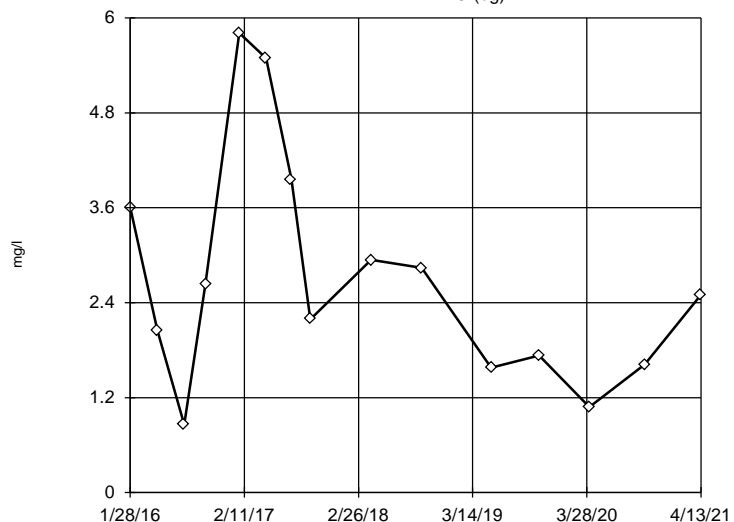
n = 15
 Statistical outlier is drawn as solid.
 Testing for 1 high outlier.
 Mean = 2.746.
 Std. Dev. = 0.8268.
 5.34: c = 0.6829
 tab1 = 0.525.
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9314
 Critical = 0.895
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



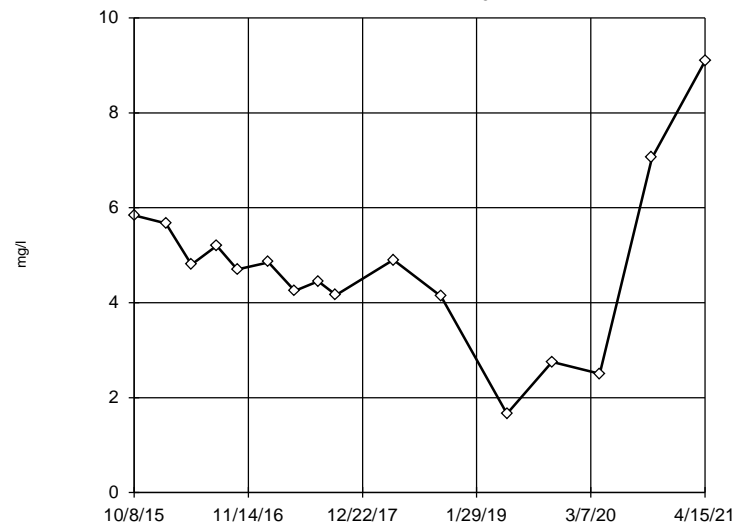
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 2.726, std. dev. 1.465, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9098
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



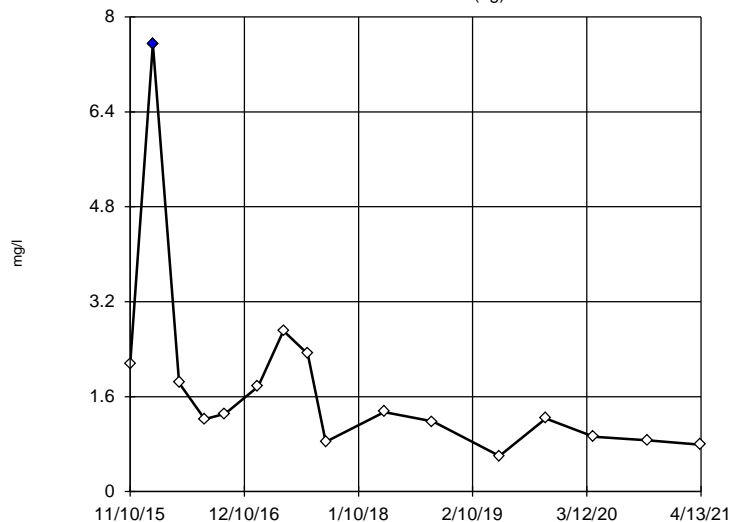
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 4.75, std. dev. 1.753, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9374
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-115 (bg)



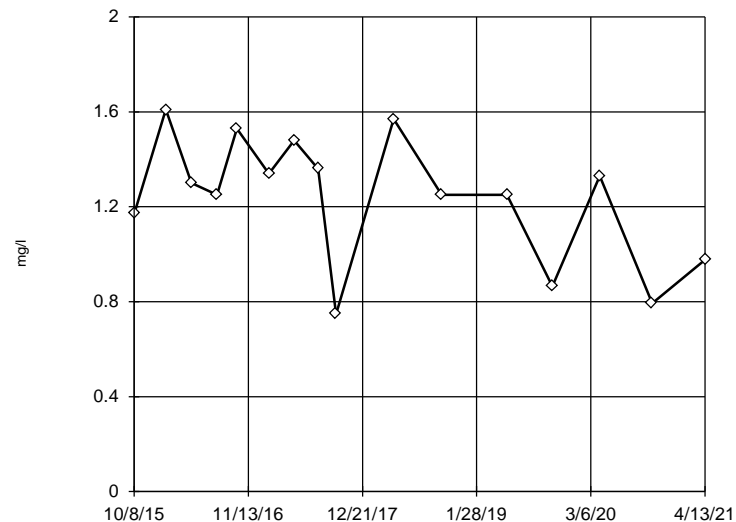
n = 16
 Statistical outlier is drawn as solid.
 Testing for 1 high outlier.
 Mean = 1.788,
 Std. Dev. = 1.65,
 7.55: c = 0.7789
 tab1 = 0.507,
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9231
 Critical = 0.901
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-117



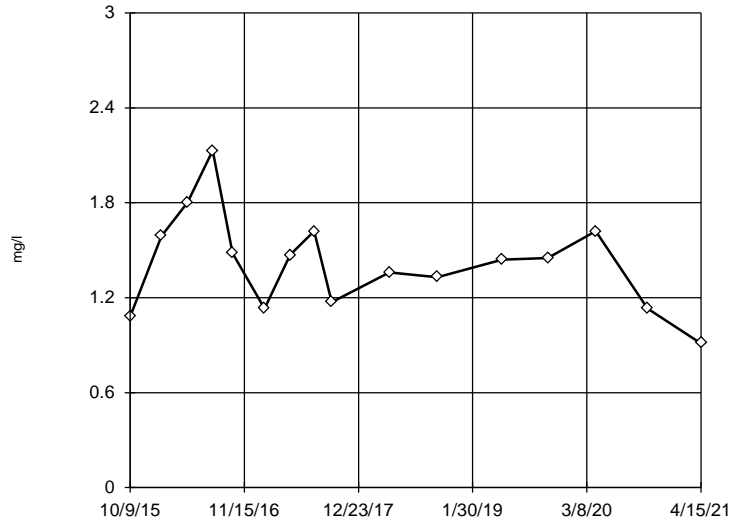
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 1.239, std. dev. 0.2687, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9233
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



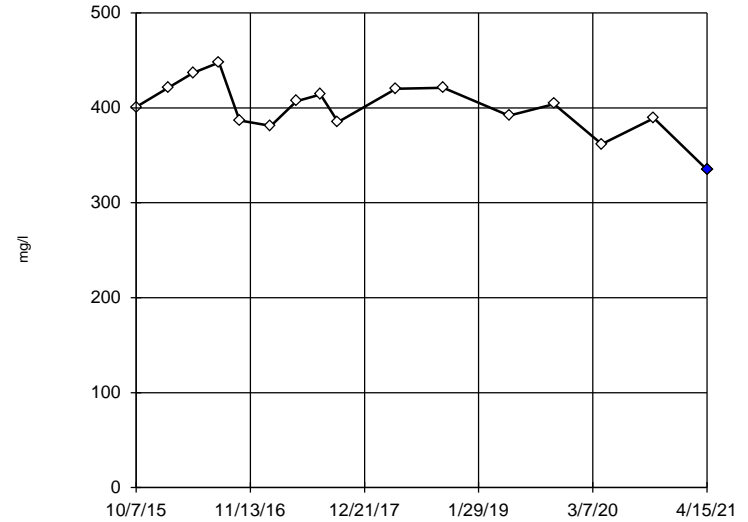
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 1.419, std. dev. 0.3035, critical Tn 2.443
 Normality test used:
 Shapiro Wilk @ alpha = 0.1
 Calculated = 0.9642
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-101



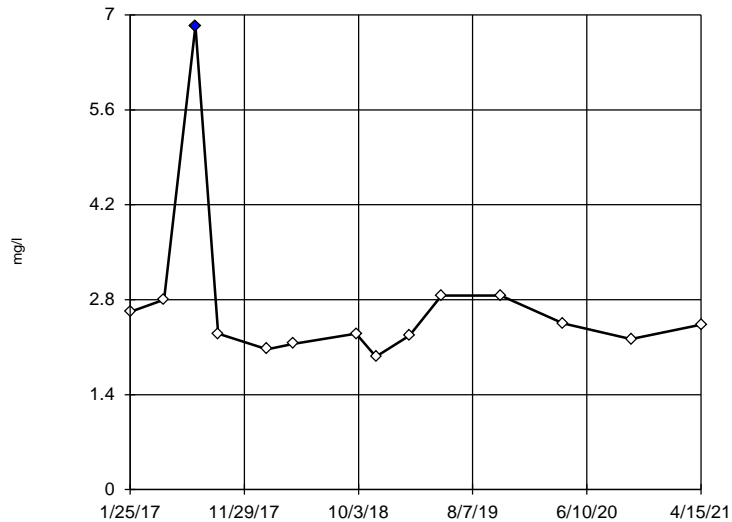
n = 16
 Statistical outlier is drawn as solid.
 Testing for 1 low outlier.
 Mean = 400.3
 Std. Dev. = 28.08
 335: c = 0.5349
 tab1 = 0.507
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk @ alpha = 0.1
 Calculated = 0.9817
 Critical = 0.901
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-119



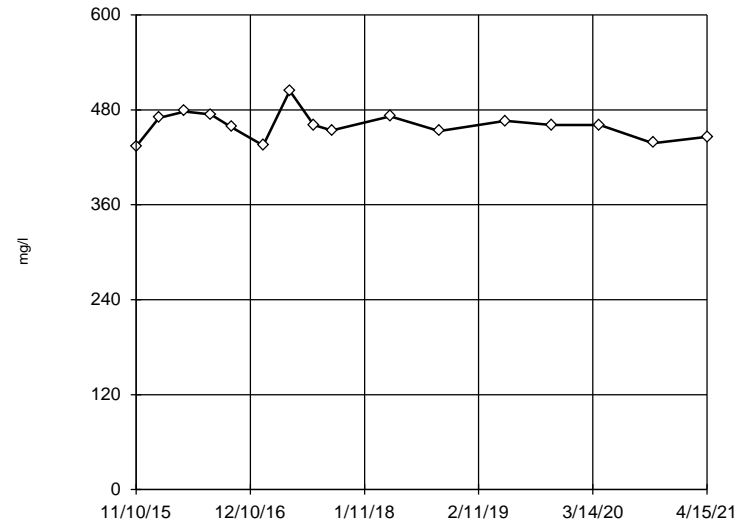
n = 14
 Statistical outlier is drawn as solid.
 Testing for 1 high outlier.
 Mean = 2.724
 Std. Dev. = 1.219
 6.84: c = 0.8486
 tab1 = 0.546
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk @ alpha = 0.1
 Calculated = 0.9298
 Critical = 0.889
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:04 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 460.3, std. dev. 17.9, critical Tn 2.443
 Normality test used:
 Shapiro Wilk @ alpha = 0.1
 Calculated = 0.9477
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



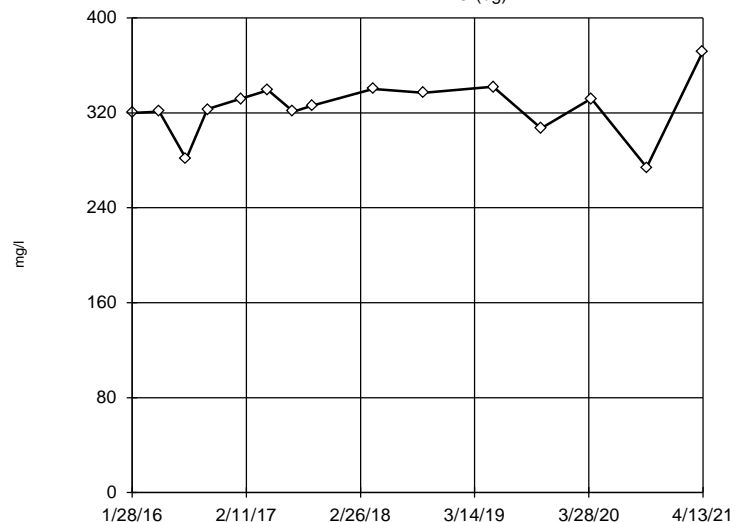
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 457.2, std. dev. 89.66, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.913
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



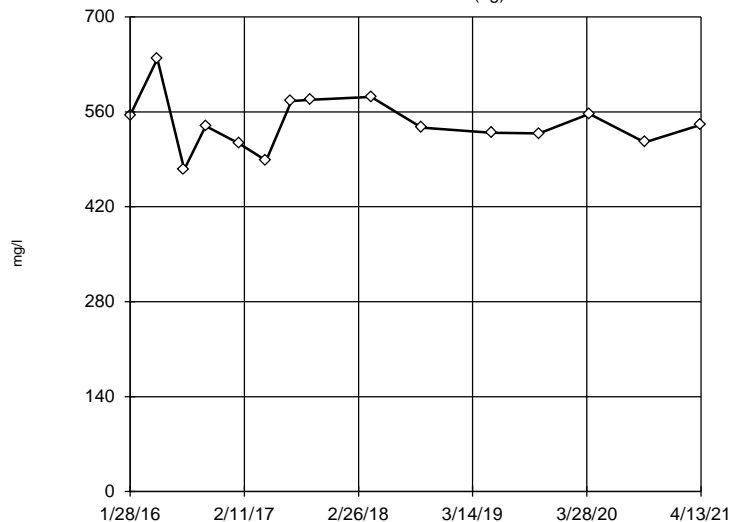
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 324.5, std. dev. 24.02, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9145
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

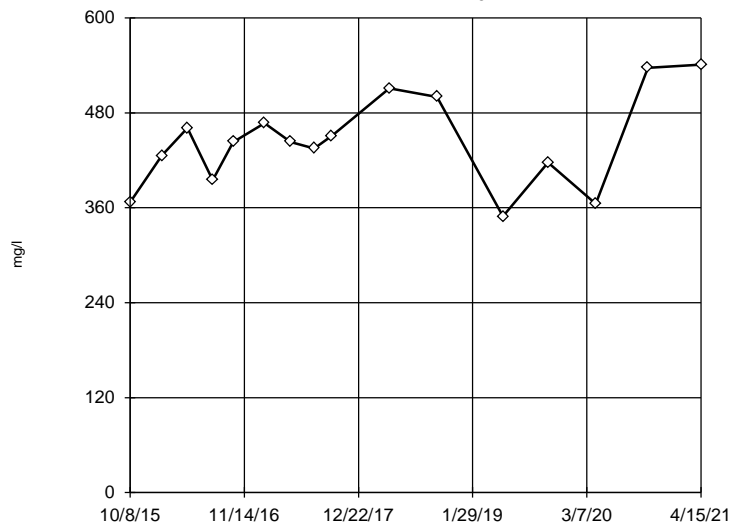
EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



EPA Screening (suspected outliers for Dixon's Test)

MW-116



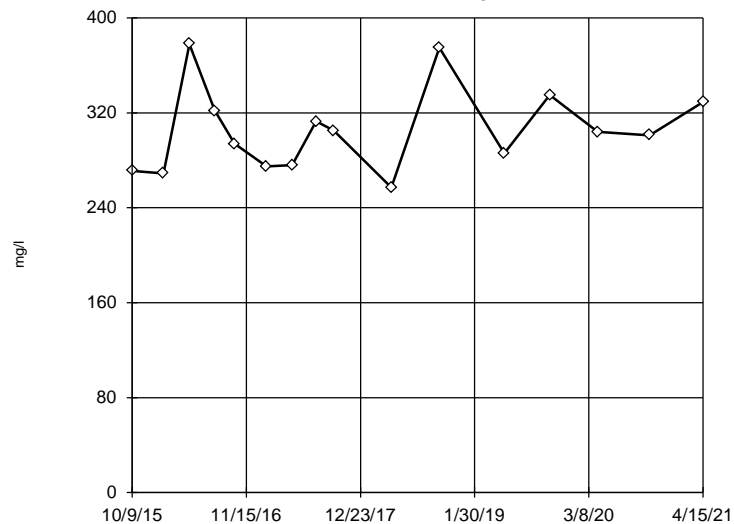
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 444.3, std. dev. 58.47, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9613
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



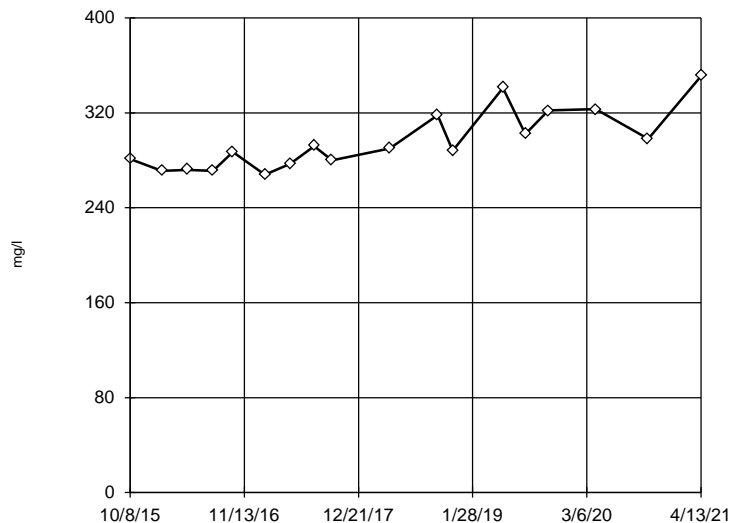
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 305.6, std. dev. 35.63, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.925
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-117



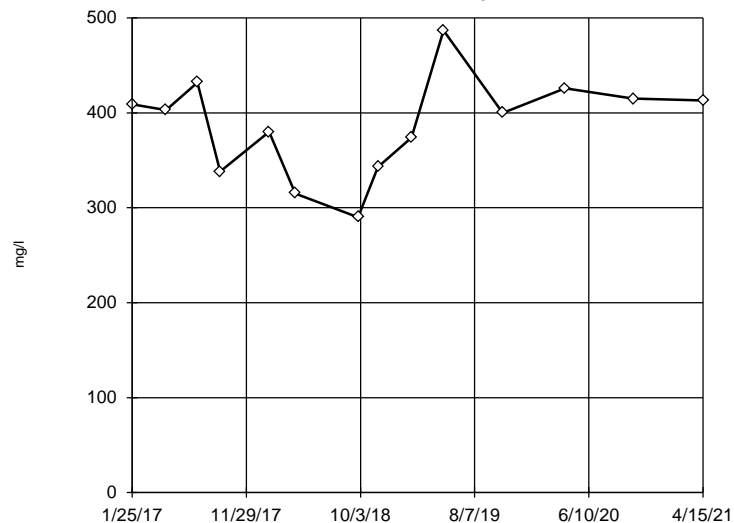
n = 18
 No outliers found.
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 507, low cutoff = 173.2, based on IQR multiplier of 3.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-119



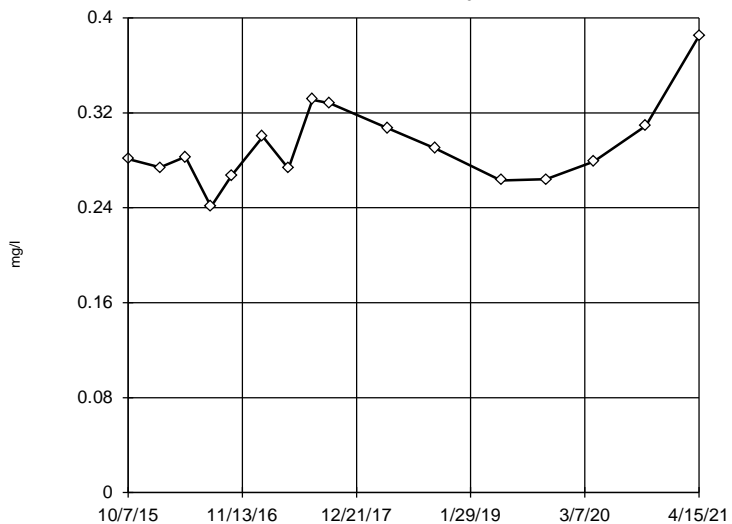
n = 14
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 387.5, std. dev. 51.93, critical Tn 2.371
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9647
 Critical = 0.895
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-101



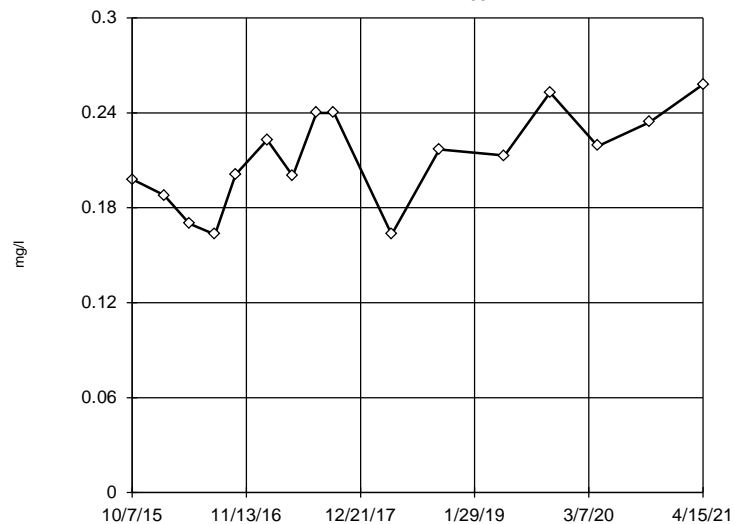
n = 16
 No statistical outliers.
 Testing for 1 high outlier.
 Mean = 0.2922.
 Std. Dev. = 0.0346.
 0.385; c = 0.4711
 tab1 = 0.507.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9616
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



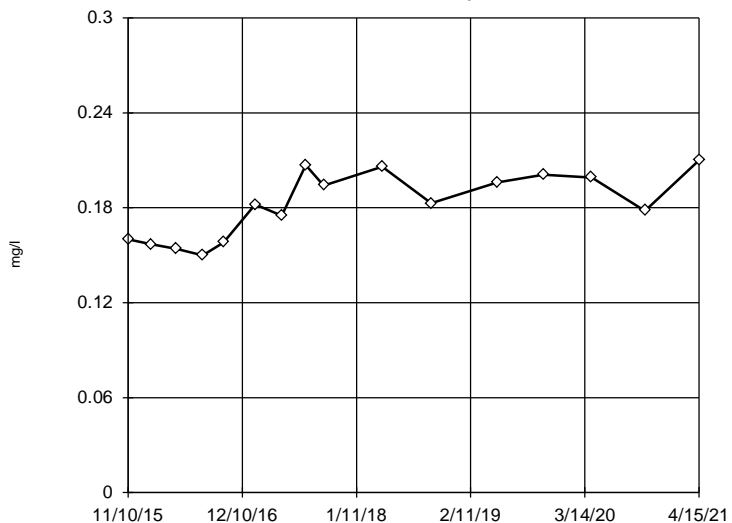
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.2113, std. dev. 0.03015, critical Tn 2.443
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9535
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



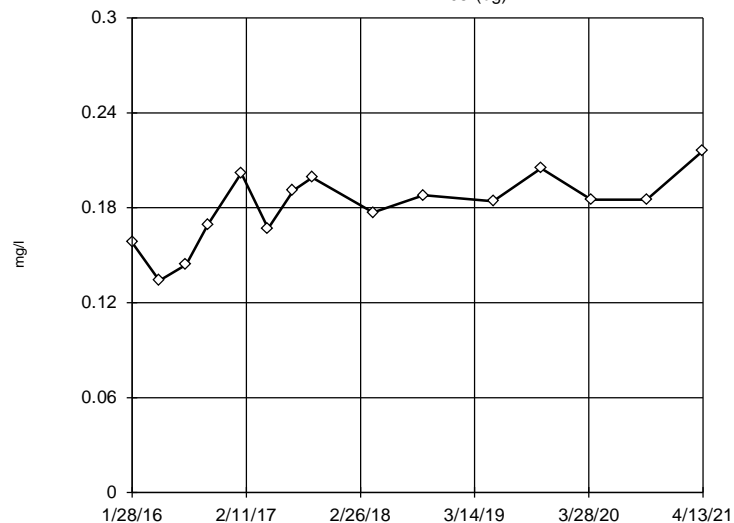
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1819, std. dev. 0.02087, critical Tn 2.443
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9118
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

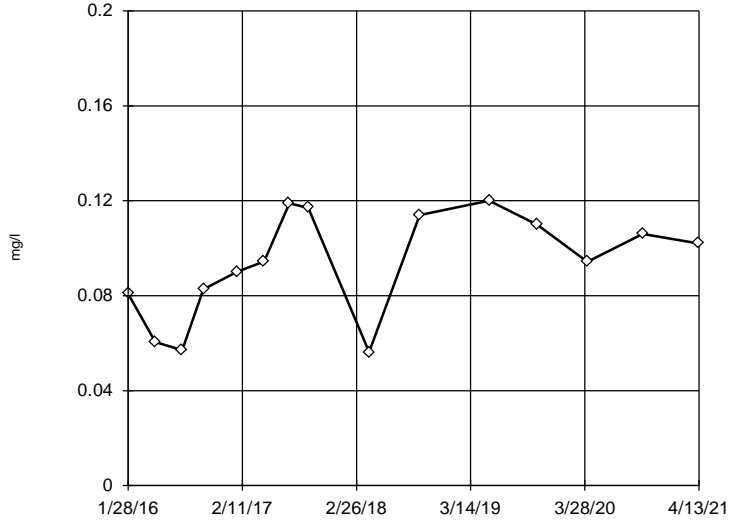
EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



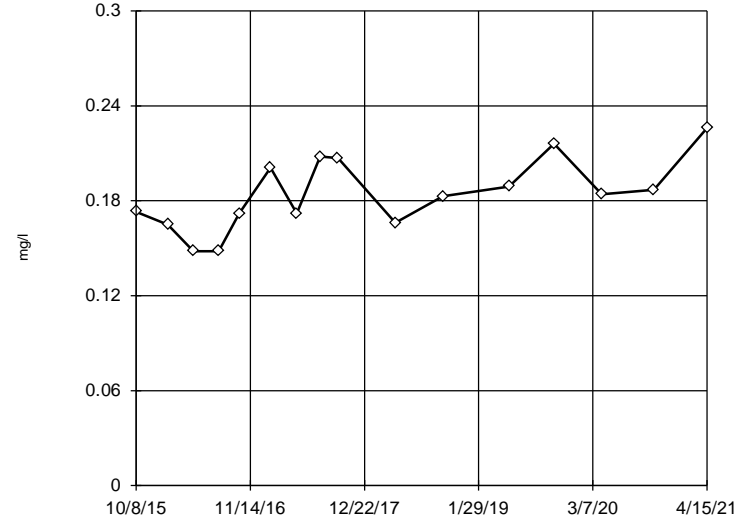
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.09359, std. dev. 0.02226, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.903
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



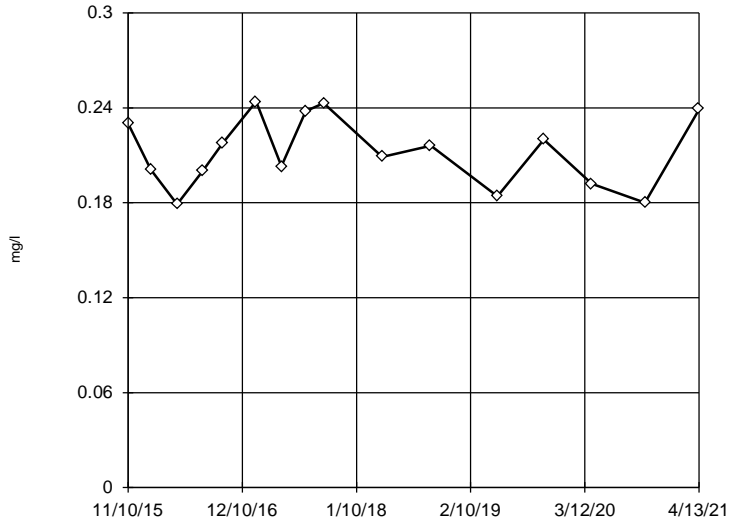
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1841, std. dev. 0.02295, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9655
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



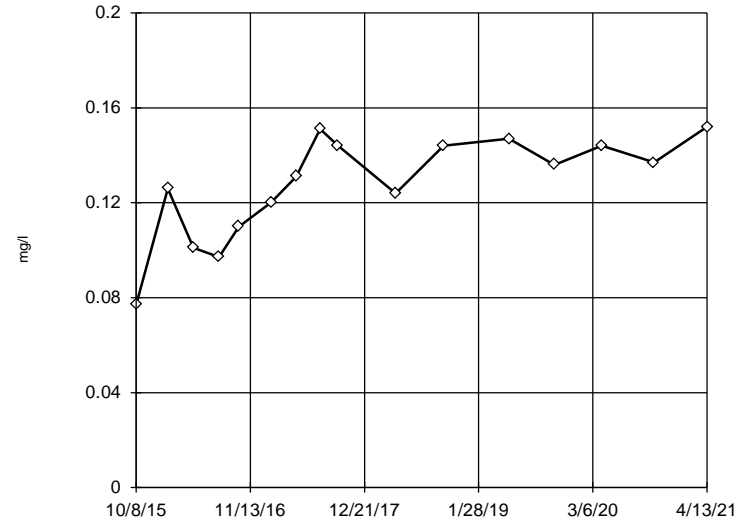
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.2123, std. dev. 0.02233, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9354
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-117



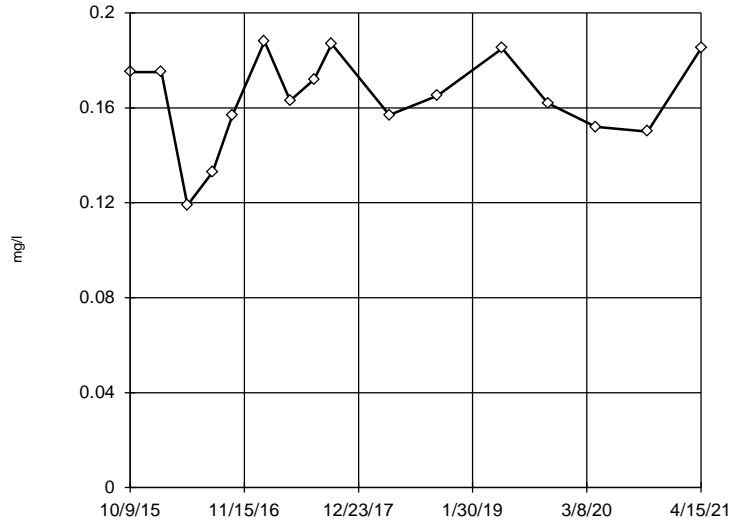
n = 16
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 0.1276.
 Std. Dev. = 0.02172.
 0.077 (J); c = 0.3429
 tab1 = 0.507.
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.915
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-118



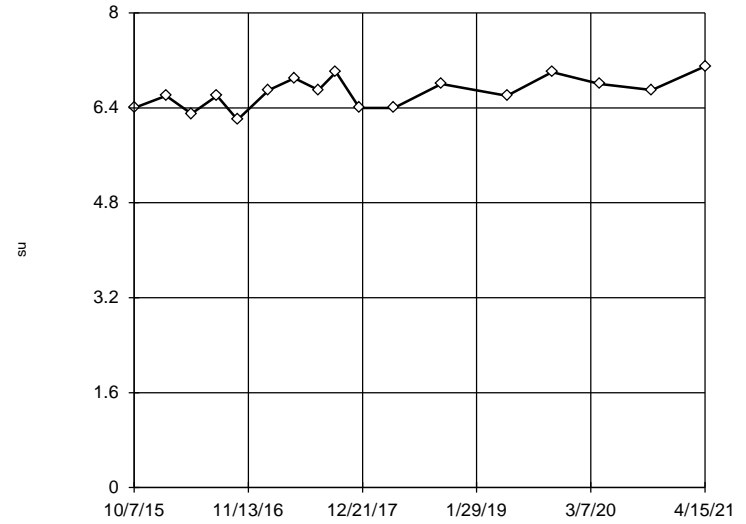
n = 16
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 0.1641.
 Std. Dev. = 0.01953.
 0.119: c = 0.4697
 tabl = 0.507.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9464
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-101



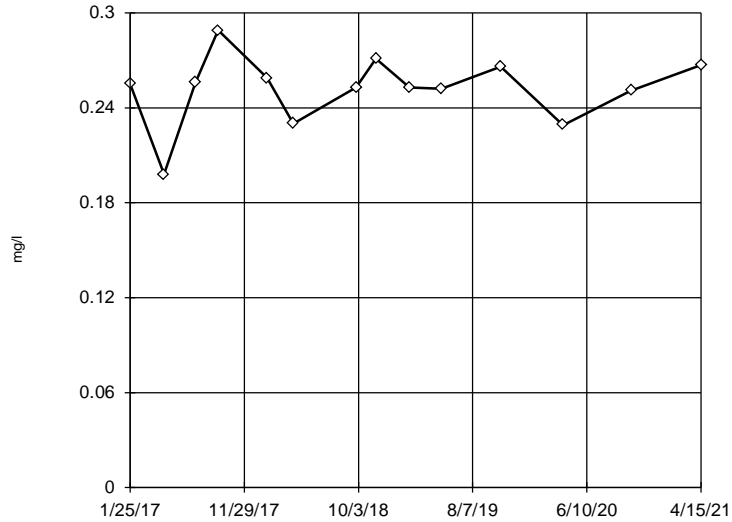
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 6.659, std. dev. 0.2599, critical Tn 2.475
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9661
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-119



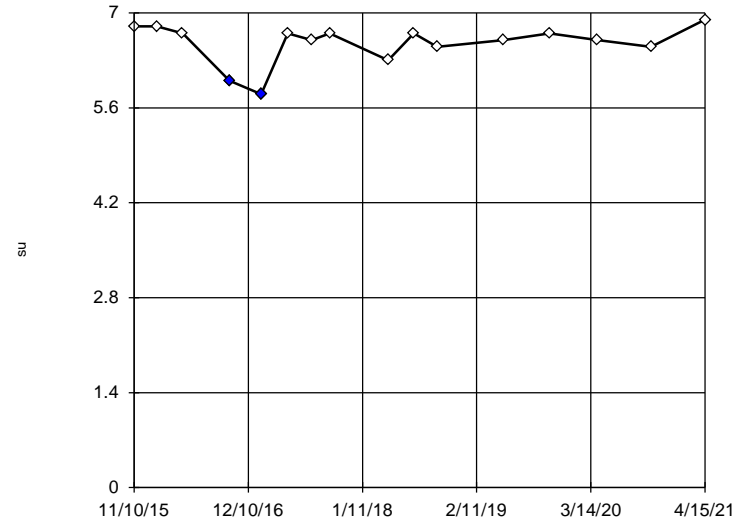
n = 14
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 0.2521.
 Std. Dev. = 0.02176.
 0.198: c = 0.4638
 tabl = 0.546.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9287
 Critical = 0.889
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

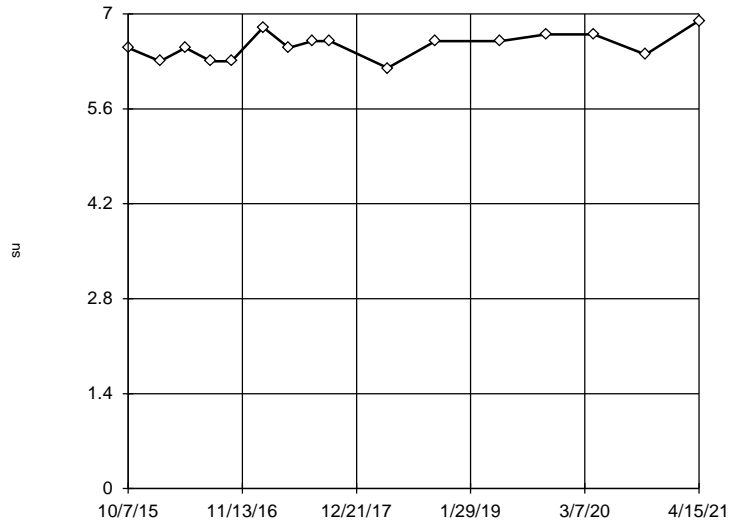
Dixon's Outlier Test

MW-102



EPA Screening (suspected outliers for Dixon's Test)

MW-103



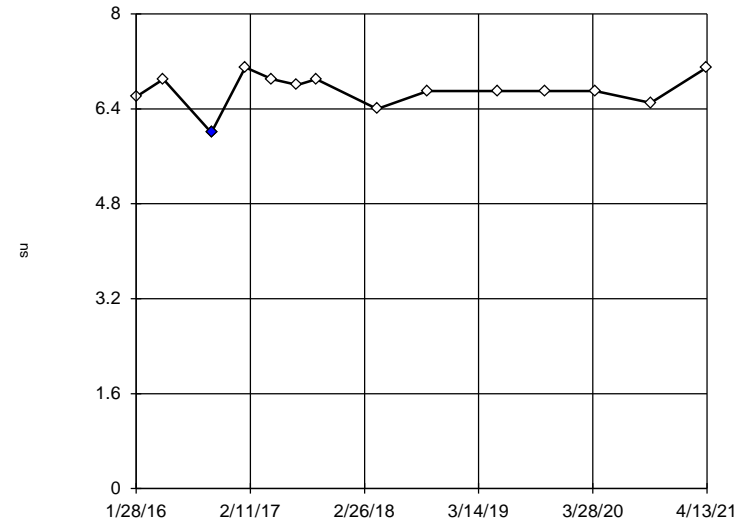
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 6.531, std. dev. 0.1957, critical Tn 2.443
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9629
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-113 (bg)



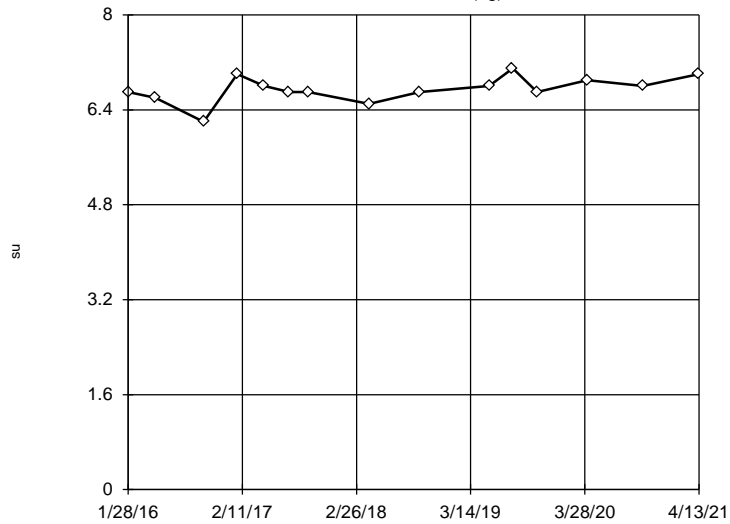
n = 14
 Statistical outlier is drawn as solid.
 Testing for 1 low outlier.
 Mean = 6.714.
 Std. Dev. = 0.2878.
 6: c = 0.5556
 tab1 = 0.546.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9513
 Critical = 0.889
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-108 (bg)



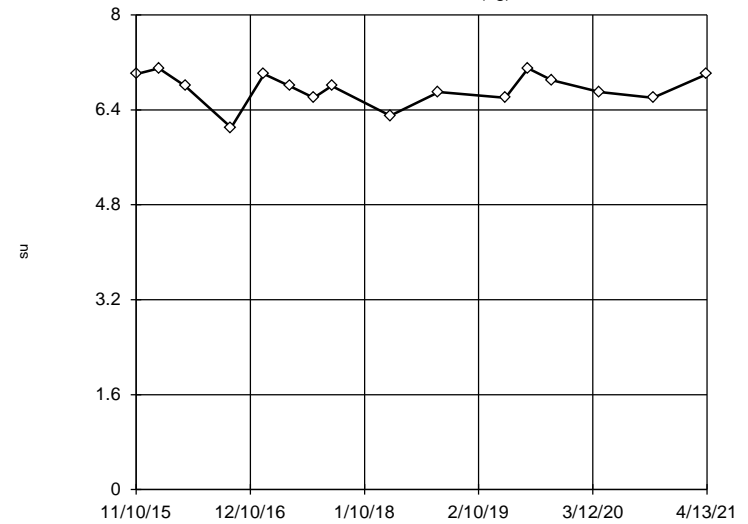
n = 15
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 6.747.
 Std. Dev. = 0.22.
 6.2: c = 0.5
 tab1 = 0.525.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9409
 Critical = 0.895
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

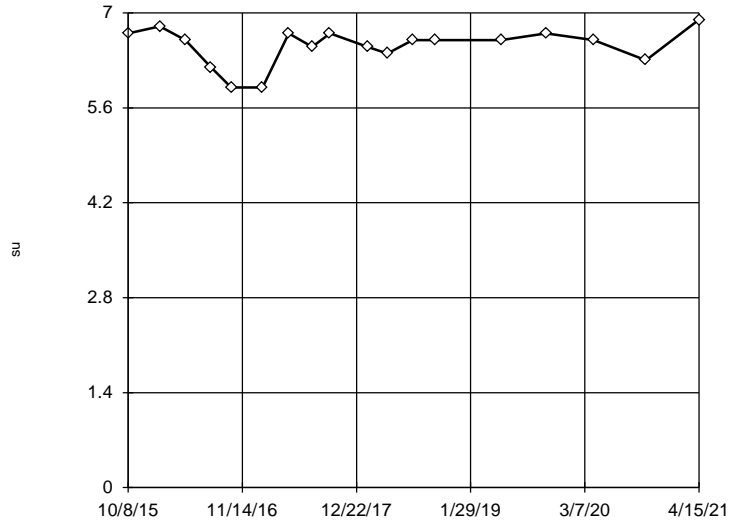
EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)

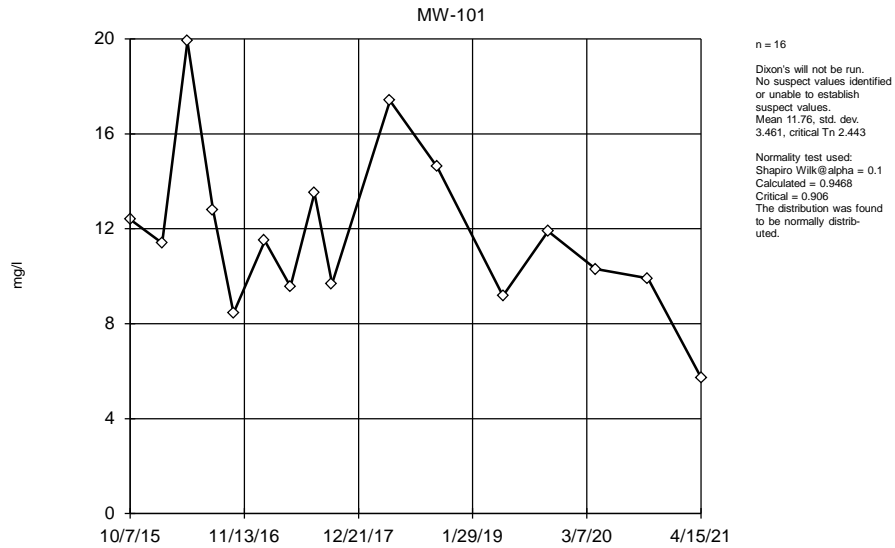


Tukey's Outlier Screening

MW-116



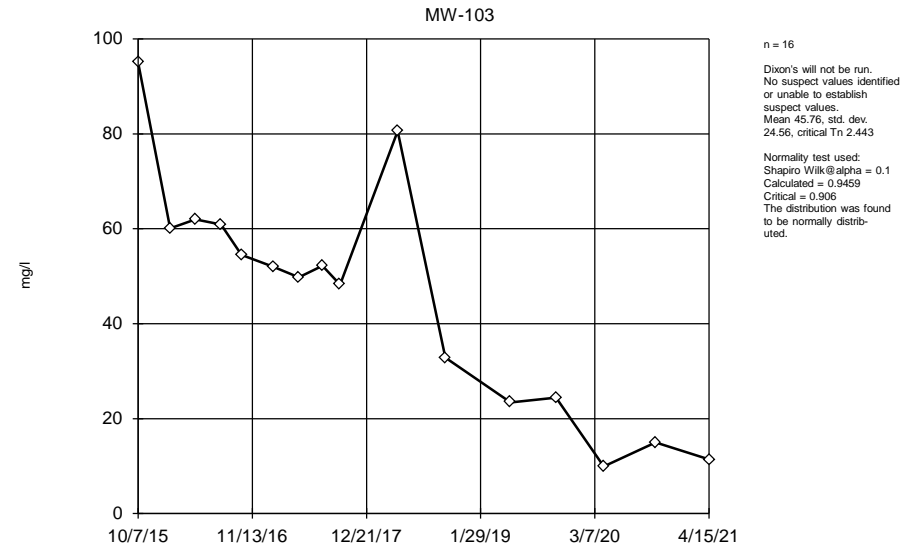
EPA Screening (suspected outliers for Dixon's Test)



Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

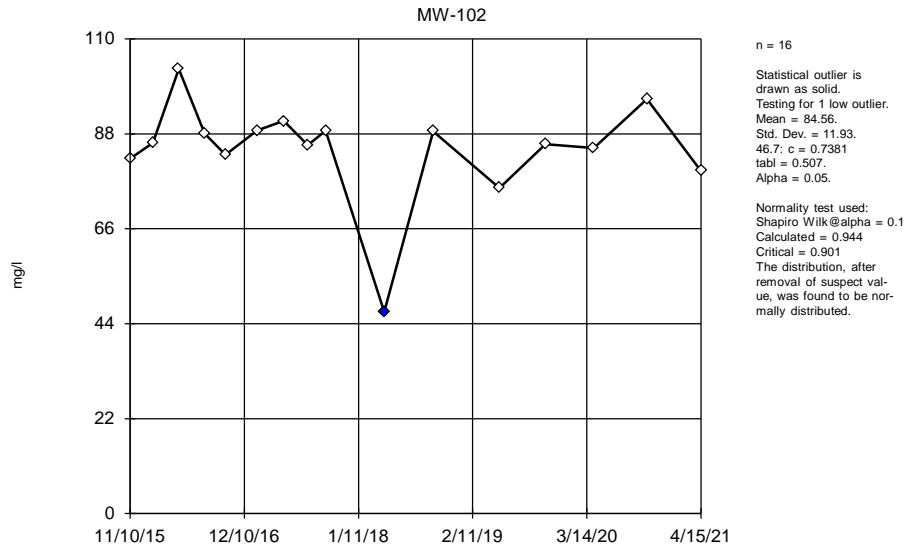
EPA Screening (suspected outliers for Dixon's Test)



Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

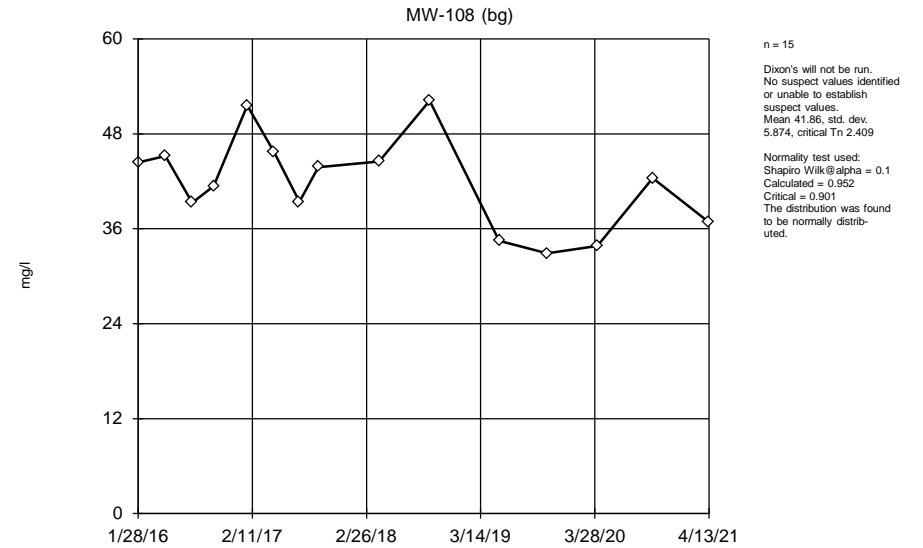
Dixon's Outlier Test



Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

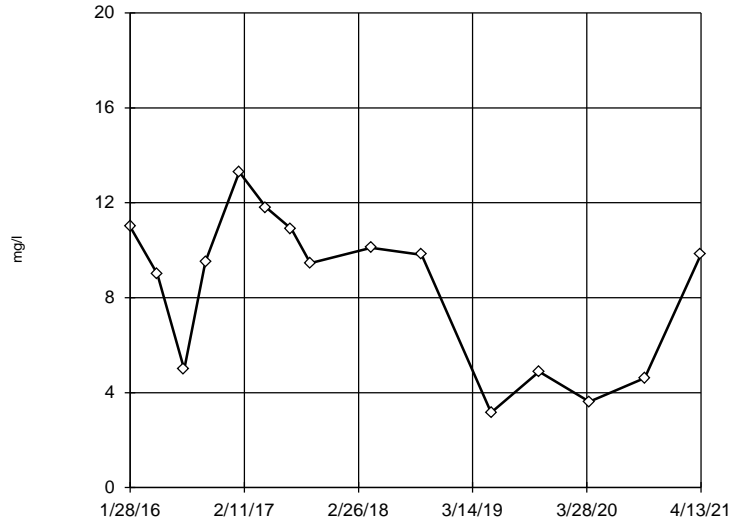


Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-113 (bg)



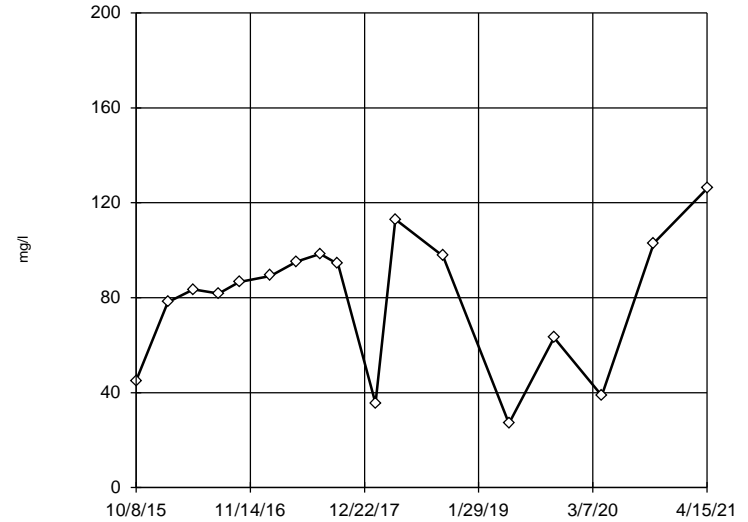
n = 15
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 20.09, low cutoff = -16.16, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



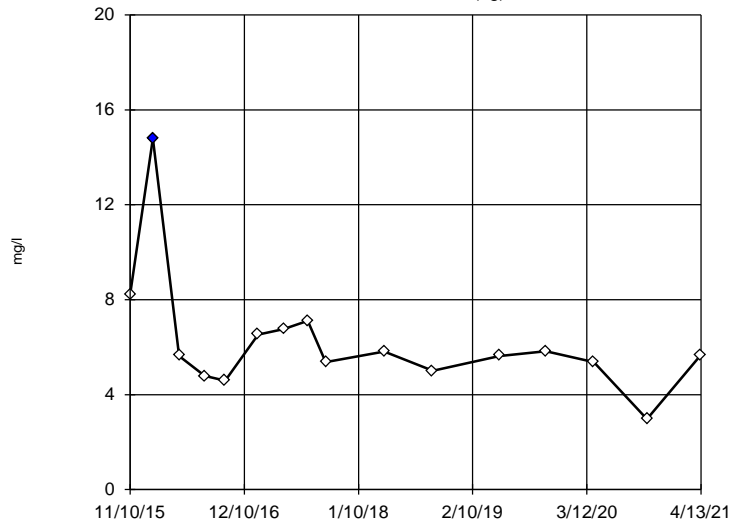
n = 17
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 79.75, std. dev. 28.46, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9294 Critical = 0.91 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-115 (bg)



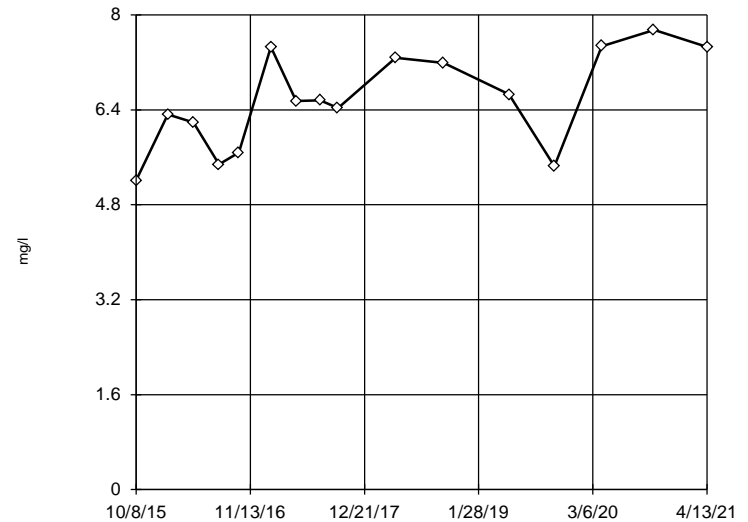
n = 16
 Statistical outlier is drawn as solid. Testing for 1 high and 1 low outliers. Mean = 6.254, Std. Dev. = 2.56, 14.8: c = 0.7692 tab1 = 0.507, 2.97 (J): c = 0.4407 tab1 = 0.507, Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9175 Critical = 0.895 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-117



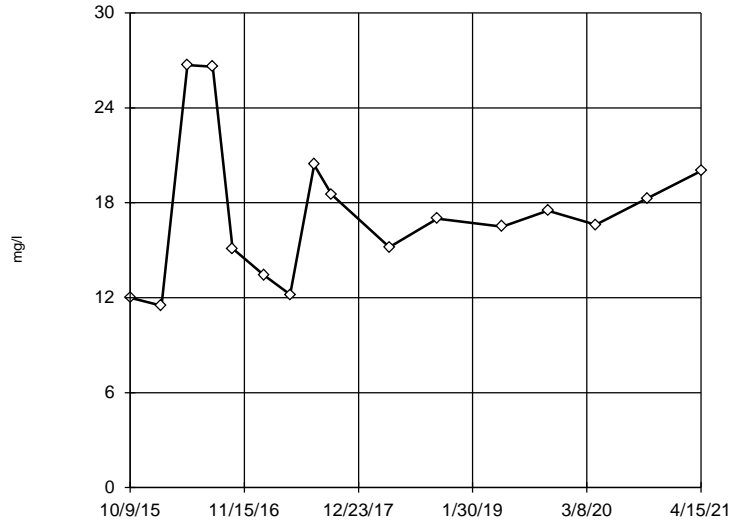
n = 16
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 6.571, std. dev. 0.8163, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9321 Critical = 0.906 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



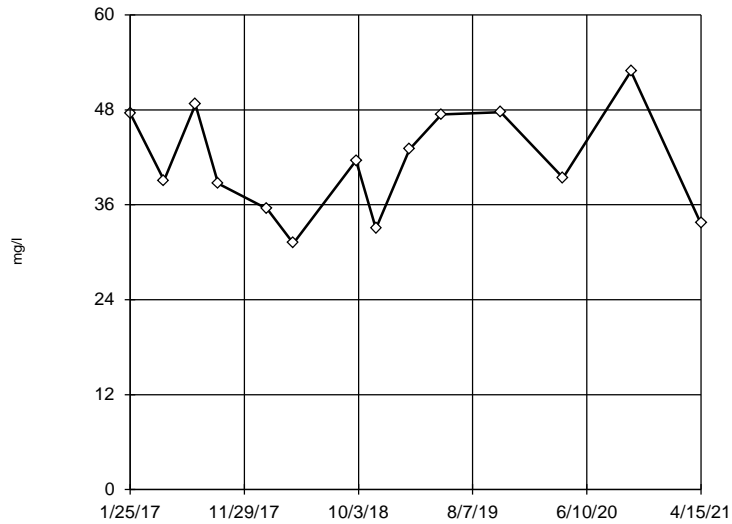
n = 16
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 17.34, std. dev. 4.529, critical Tn 2.443
Normality test used: Shapiro Wilk@alpha = 0.1
Calculated = 0.9073
Critical = 0.906
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:05 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

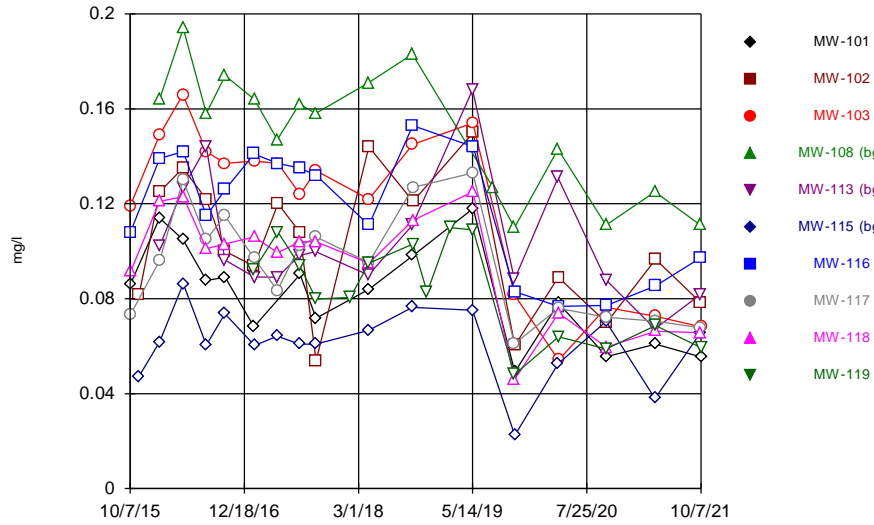
EPA Screening (suspected outliers for Dixon's Test)

MW-119



Time-Series Plots, Second Half of 2021 Data Set

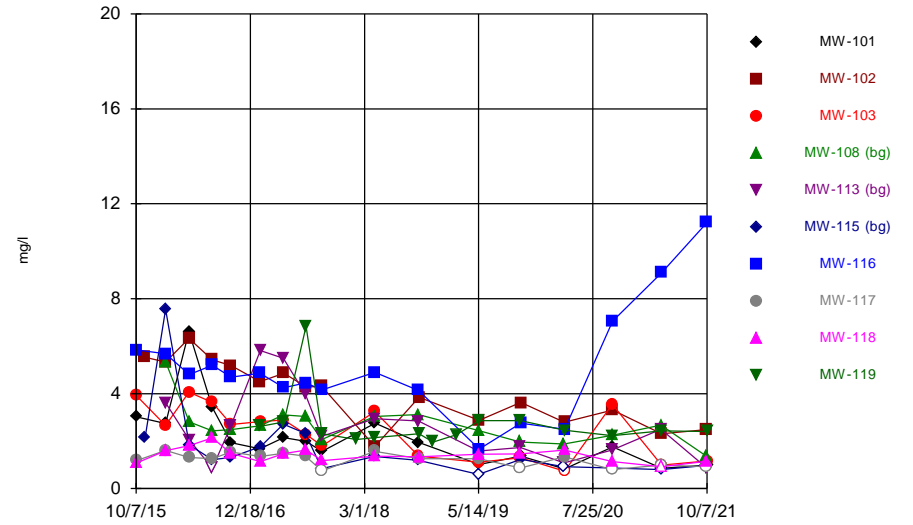
Time Series



Constituent: Boron Analysis Run 1/21/2022 1:49 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

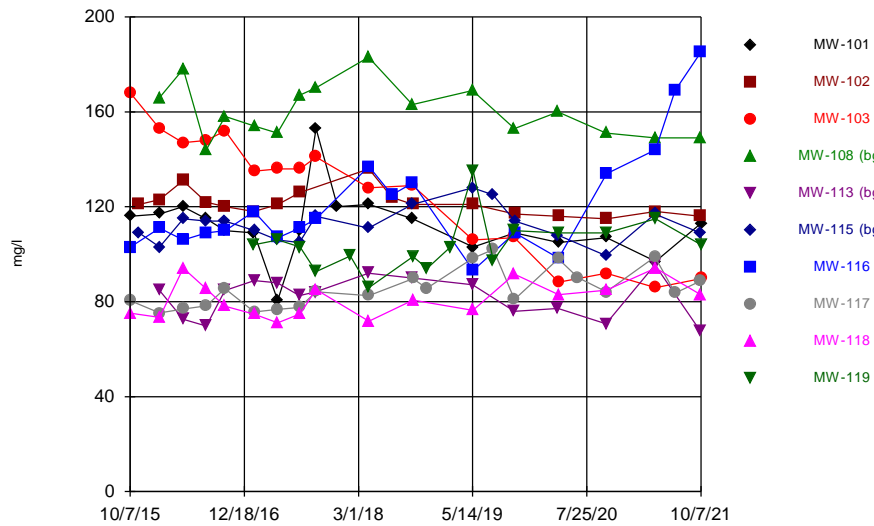
Time Series



Constituent: Chloride Analysis Run 11/2/2021 6:26 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

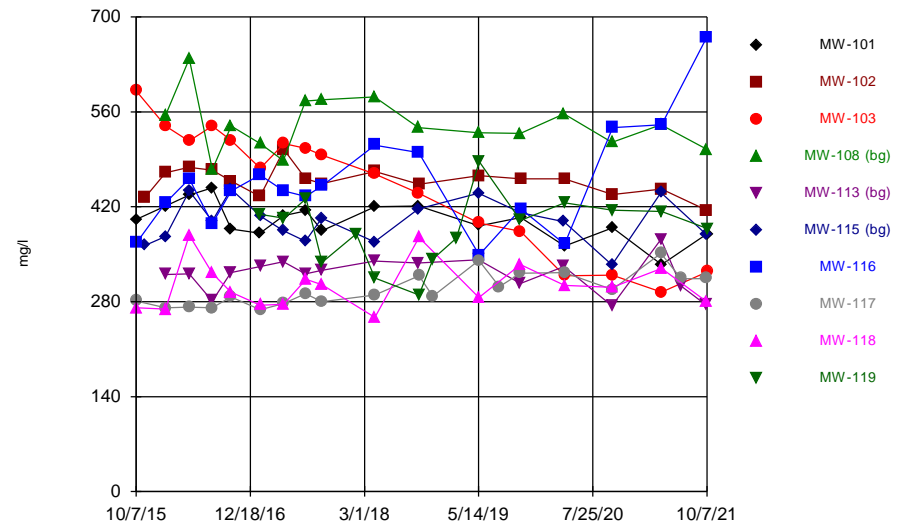
Time Series



Constituent: Calcium Analysis Run 11/2/2021 6:26 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

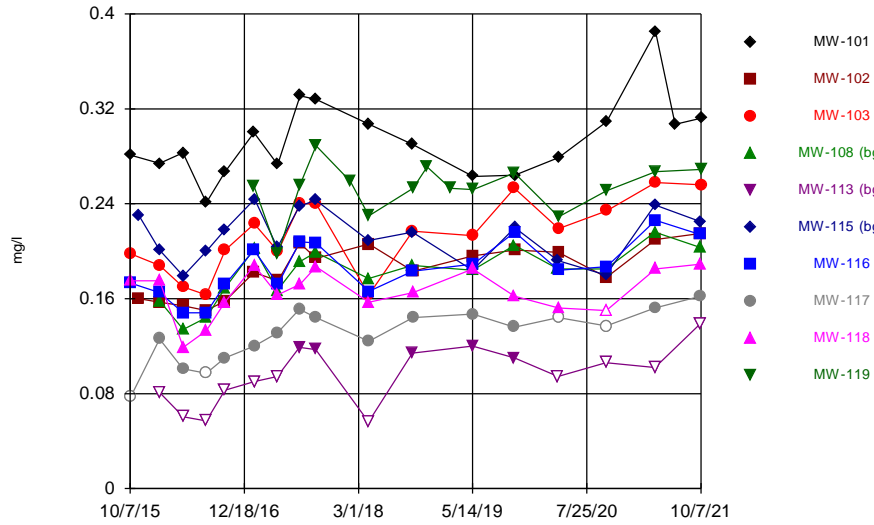
Time Series



Constituent: Dissolved Solids Analysis Run 11/2/2021 6:26 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

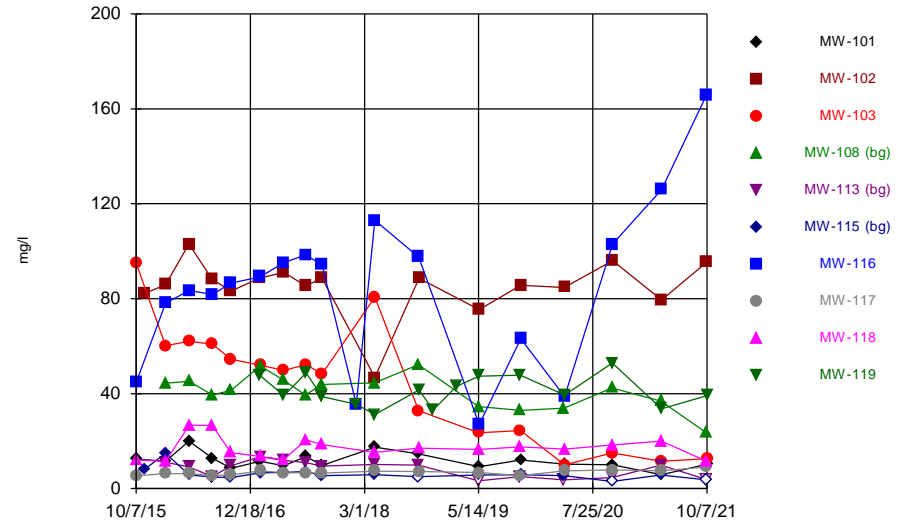
Time Series



Constituent: Fluoride Analysis Run 11/2/2021 6:26 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

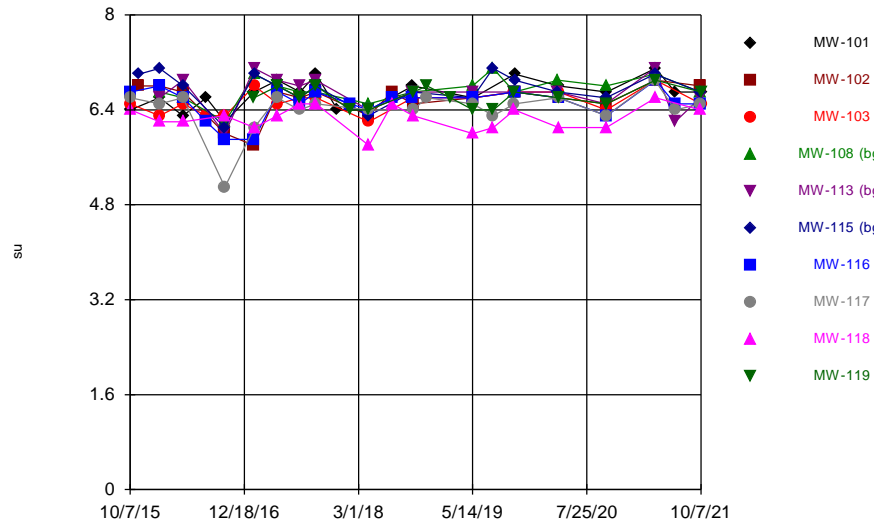
Time Series



Constituent: Sulfate Analysis Run 11/2/2021 6:26 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Time Series

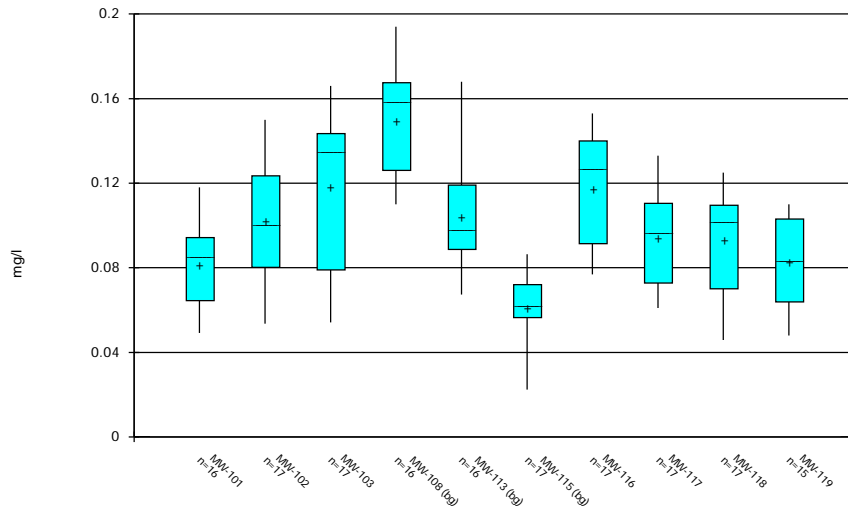


Constituent: pH Analysis Run 11/2/2021 6:26 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box-and-Whisker Plots, Second Half of 2021 Data Set

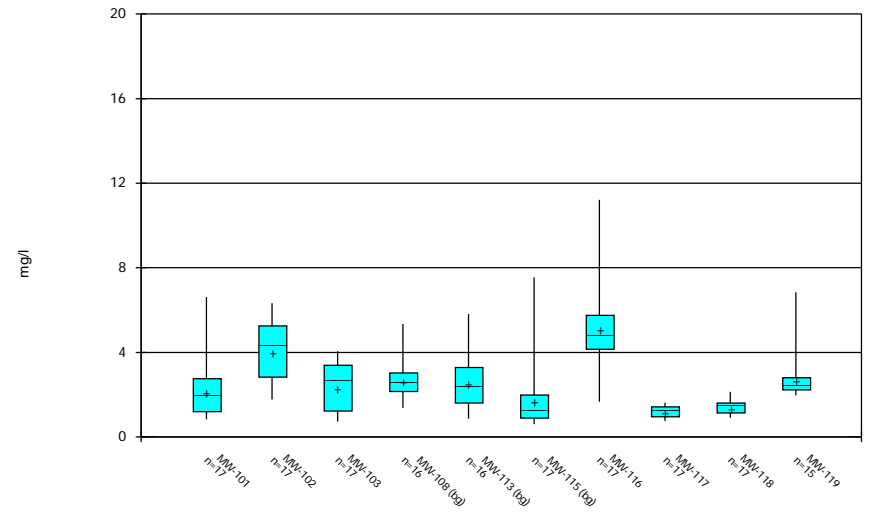
Box & Whiskers Plot



Constituent: Boron Analysis Run 1/21/2022 1:51 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

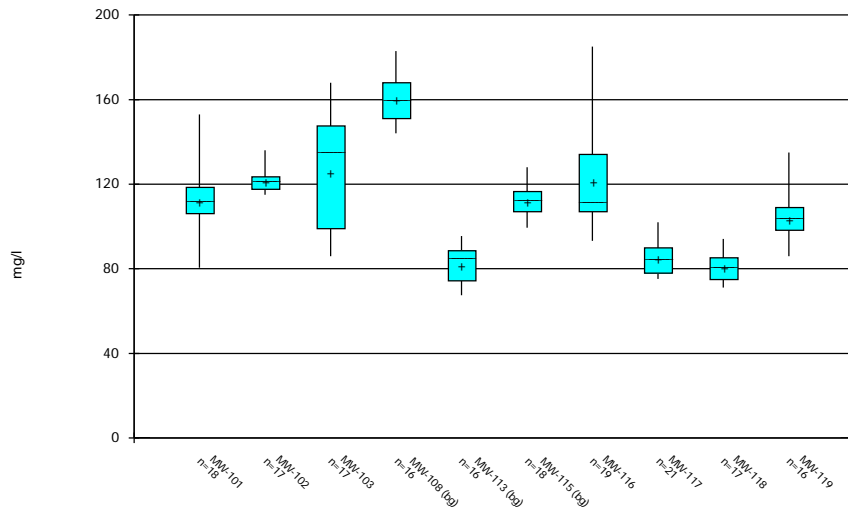
Box & Whiskers Plot



Constituent: Chloride Analysis Run 11/2/2021 6:32 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

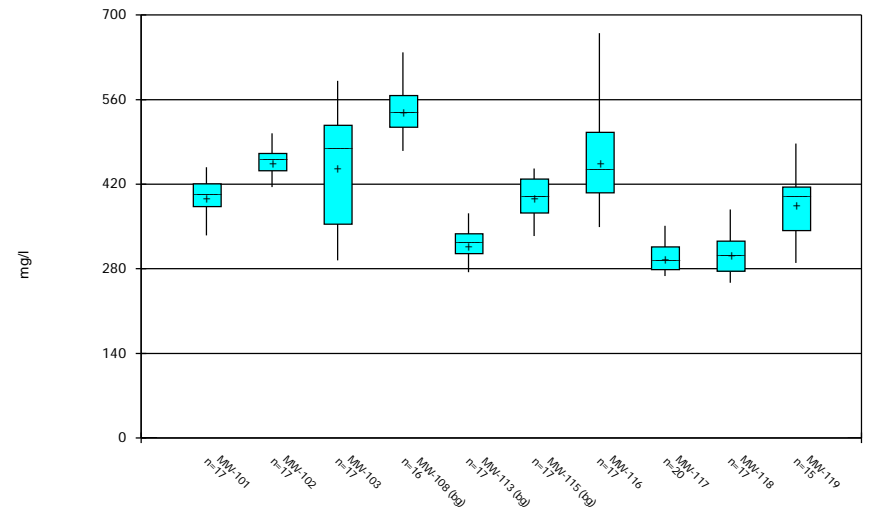
Box & Whiskers Plot



Constituent: Calcium Analysis Run 11/2/2021 6:32 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

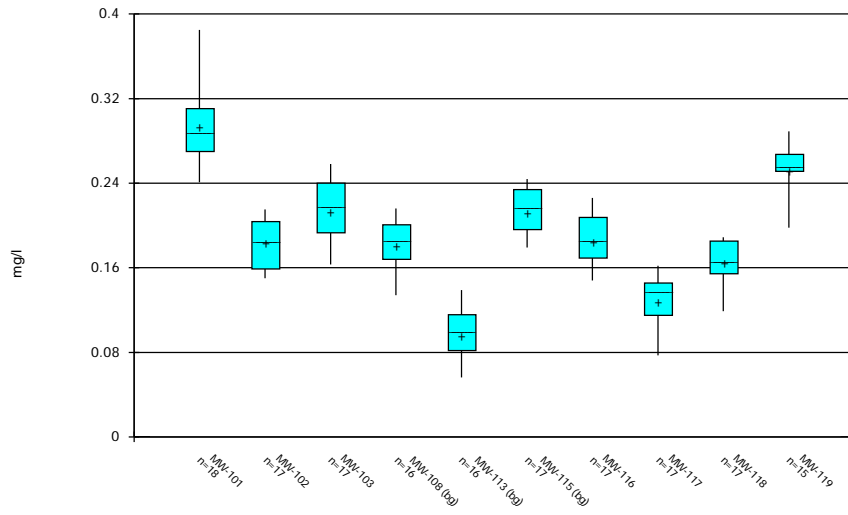
Box & Whiskers Plot



Constituent: Dissolved Solids Analysis Run 11/2/2021 6:32 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

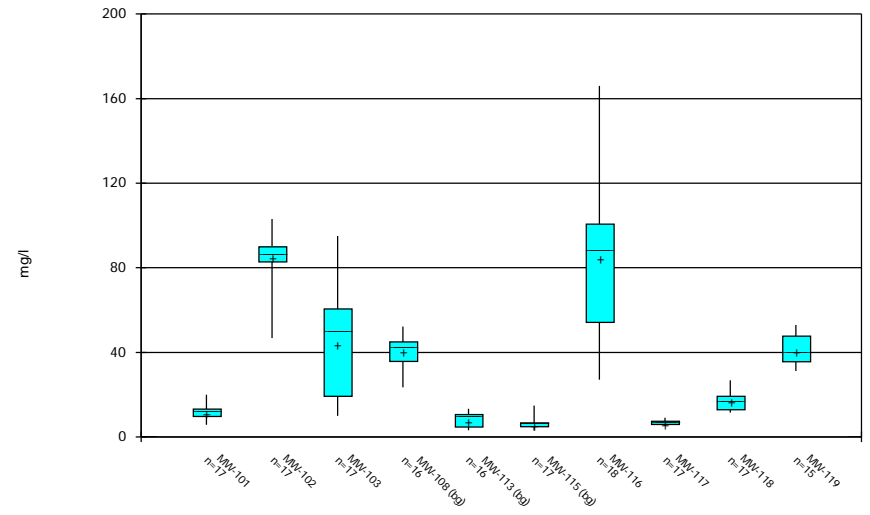
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 11/2/2021 6:32 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

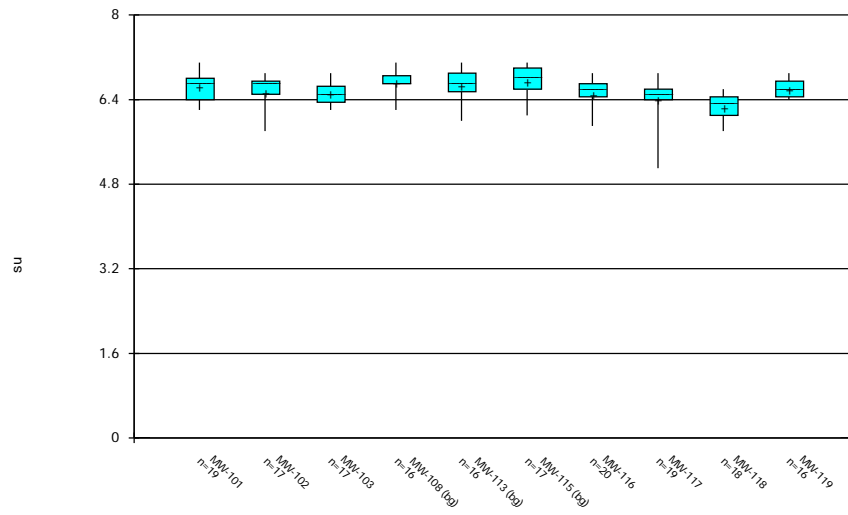
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 11/2/2021 6:32 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot



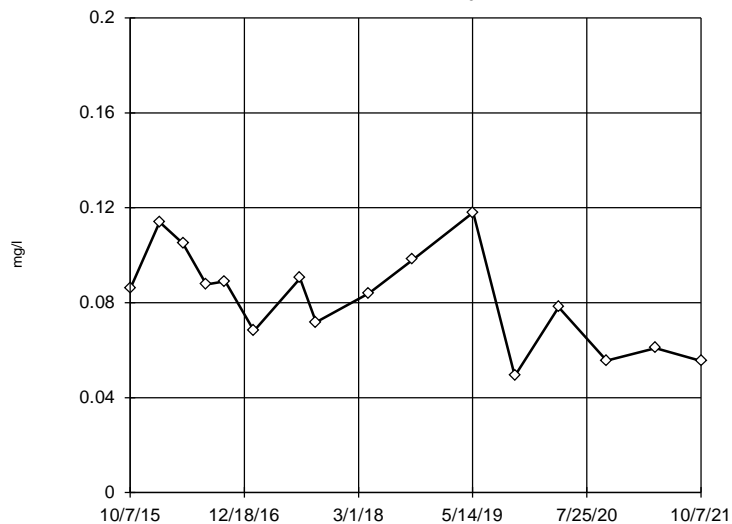
Constituent: pH Analysis Run 11/2/2021 6:32 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Outlier Plots, Period-of-Record Data through Second Half of 2021

EPA Screening (suspected outliers for Dixon's Test)

MW-101



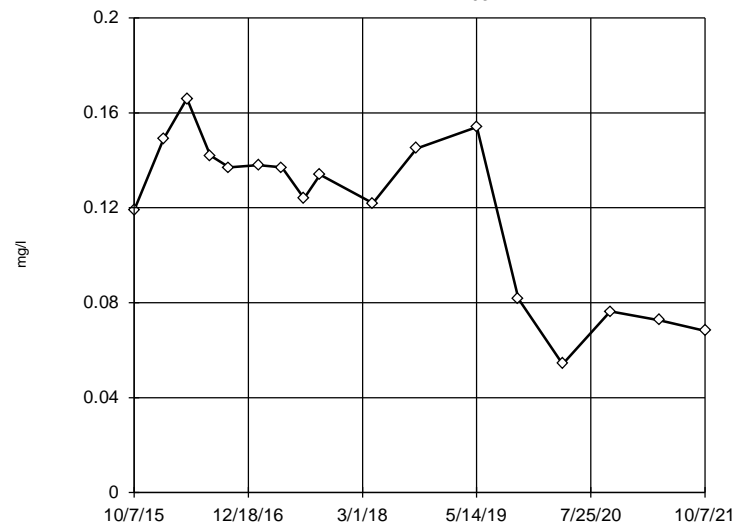
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.08193, std. dev. 0.02085, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9648
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-103



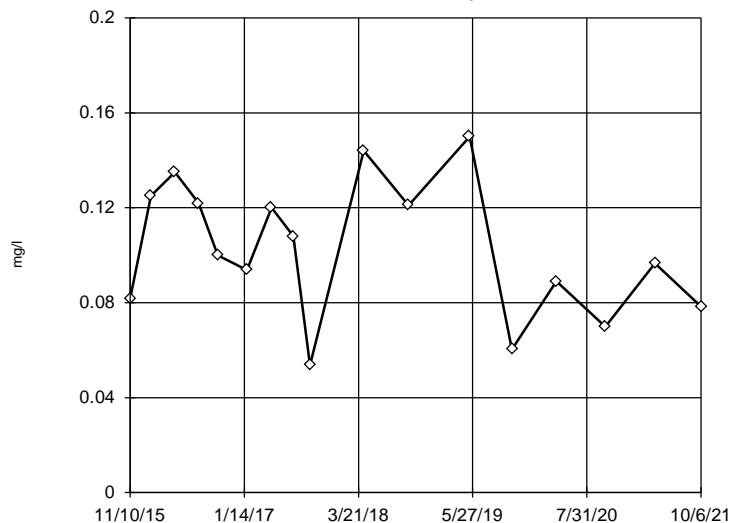
n = 17
 No outliers found.
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were cube transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.2179, low cutoff = -0.1903, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



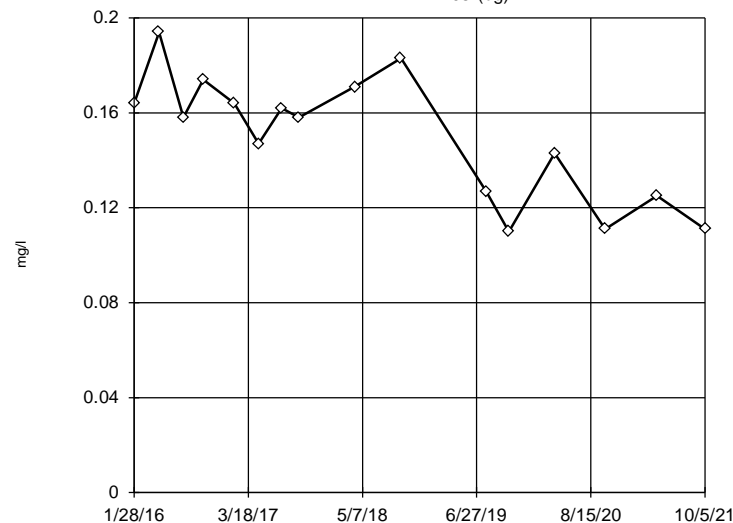
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1028, std. dev. 0.02867, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9728
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



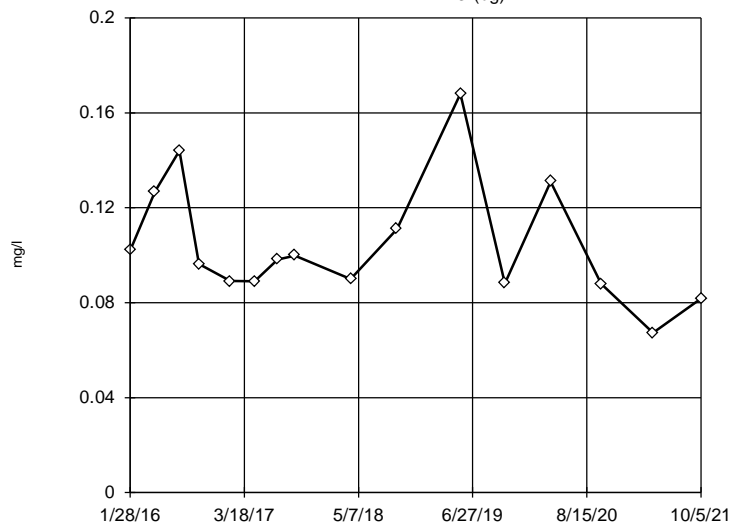
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1501, std. dev. 0.02653, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.934
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



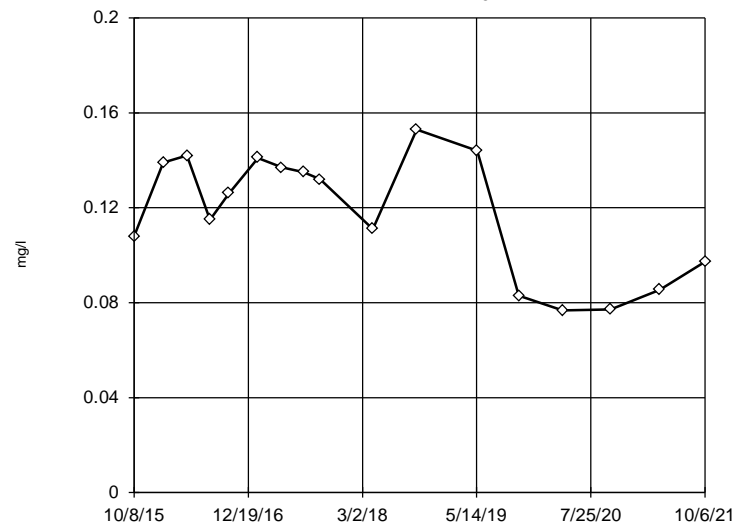
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1044, std. dev. 0.02597, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9408
 Critical = 0.906 (after natural log transformation)
 The distribution was found to be log-normal.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-116



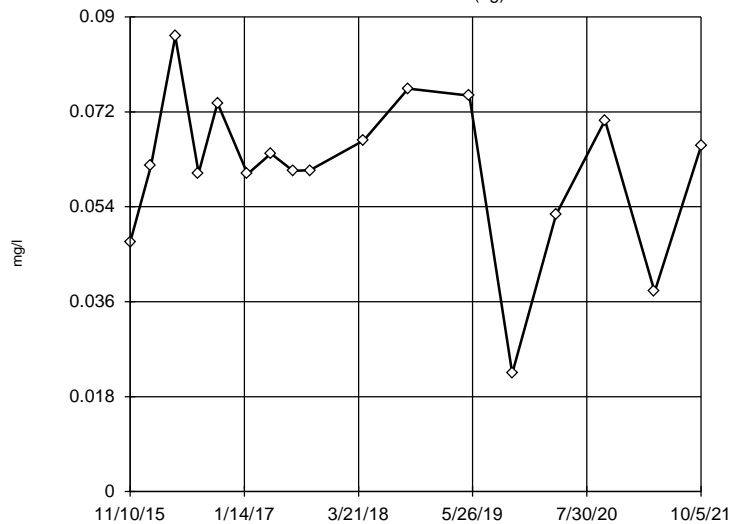
n = 17
 No outliers found.
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were x^4 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.1907, low cutoff = -0.1716, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-115 (bg)



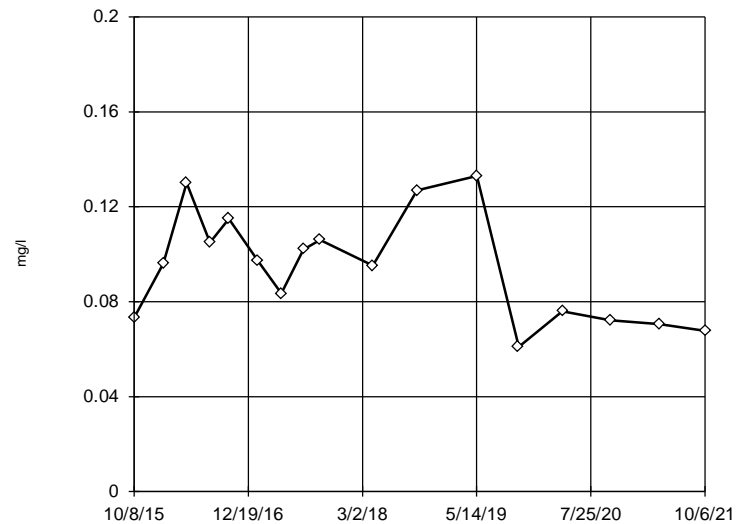
n = 17
 No statistical outliers.
 Testing for 2 low outliers.
 Mean = 0.06131.
 Std. Dev. = 0.01515.
 0.0379 (J); c = 0.3925
 tabl = 0.49.
 Alpha = 0.05.
 0.0224 (J); c = 0.4725
 tabl = 0.49.
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9694
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-117



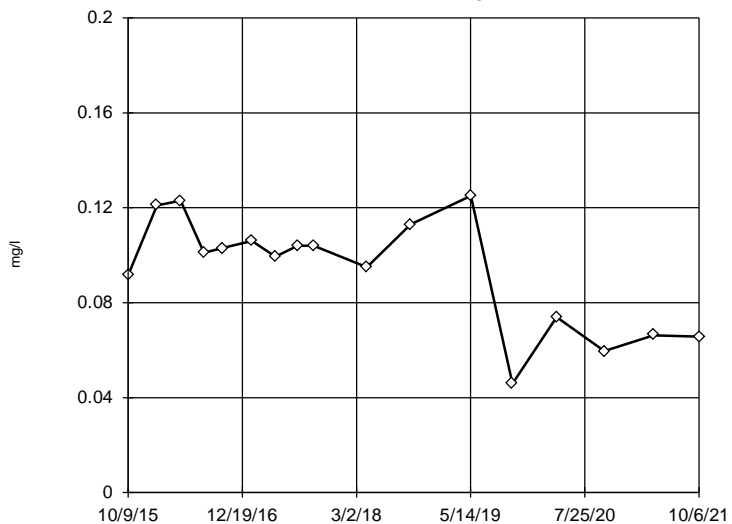
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.09472, std. dev. 0.02286, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9401
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



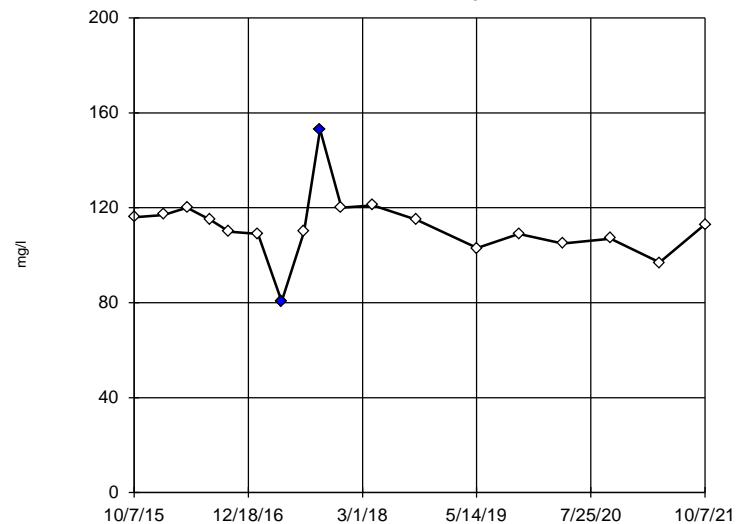
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.09395, std. dev. 0.02355, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9219
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-101



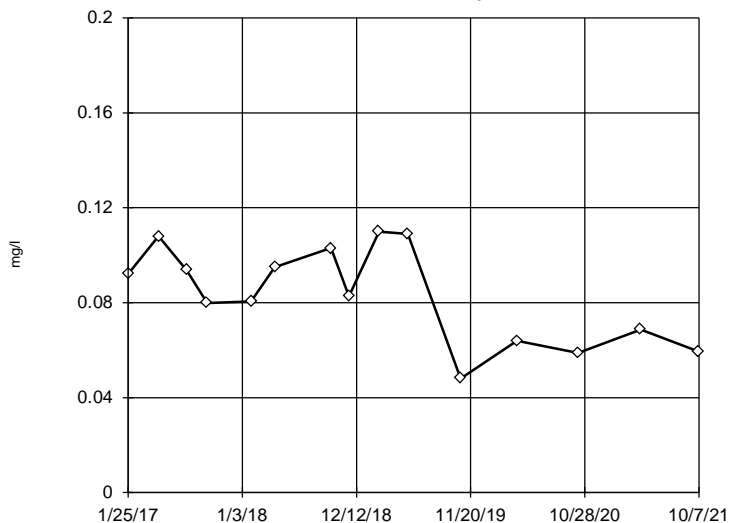
n = 18
 Statistical outliers are drawn as solid.
 Testing for 1 high and 1 low outliers.
 Mean = 112.2
 Std. Dev. = 14.04
 153: c = 0.66
 tab1 = 0.475
 80.5: c = 0.5696
 tab1 = 0.475
 Alpha = 0.05
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9591
 Critical = 0.906
 The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-119



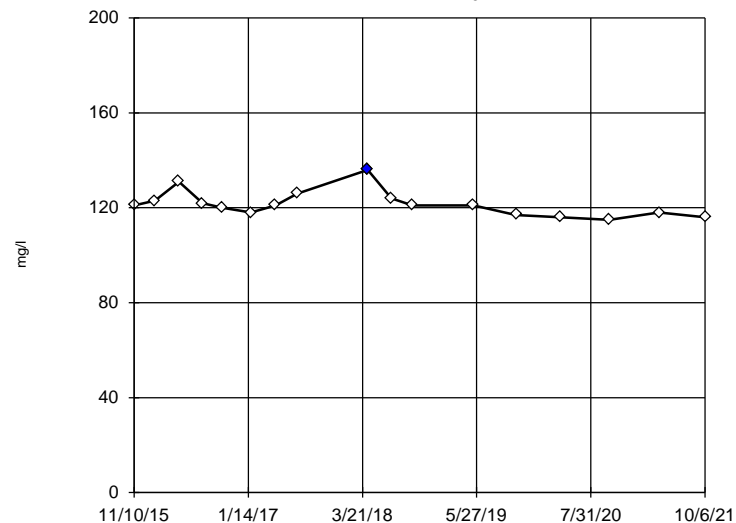
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.0835, std. dev. 0.02021, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9385
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-102



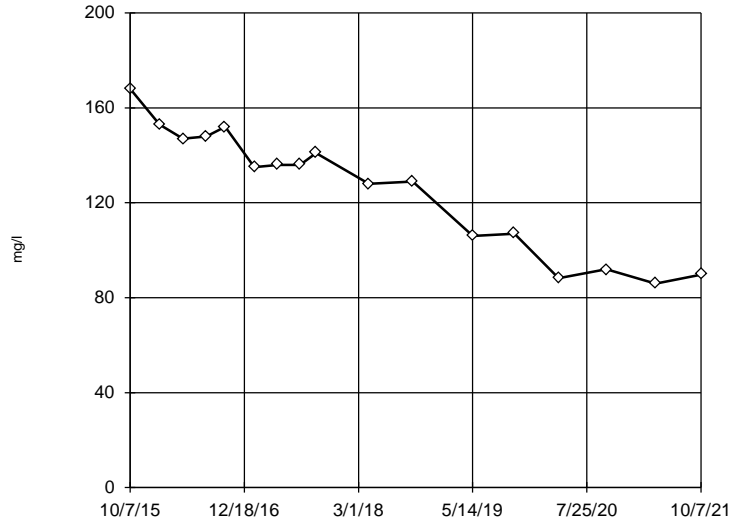
n = 17
 Statistical outlier is drawn as solid.
 Testing for 2 high outliers.
 Mean = 121.5
 Std. Dev. = 5.479
 131: c = 0.4667
 tab1 = 0.49
 Alpha = 0.05
 136: c = 0.5
 tab1 = 0.49
 Alpha = 0.05
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.932
 Critical = 0.906
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



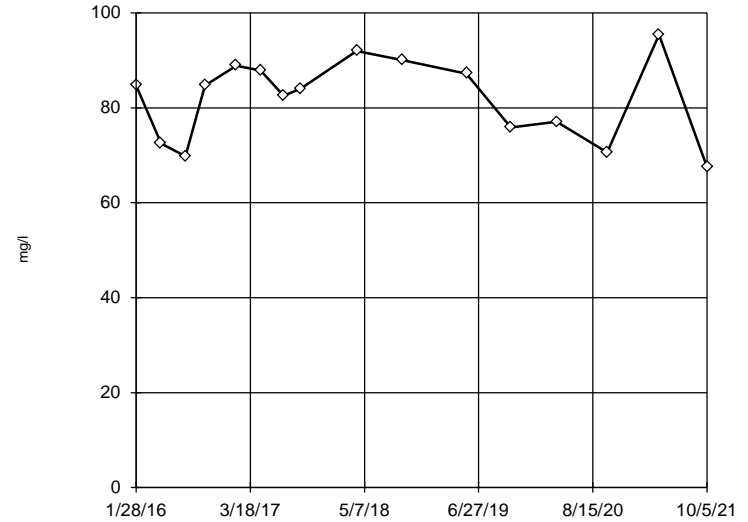
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 126, std. dev. 26.09, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9149
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



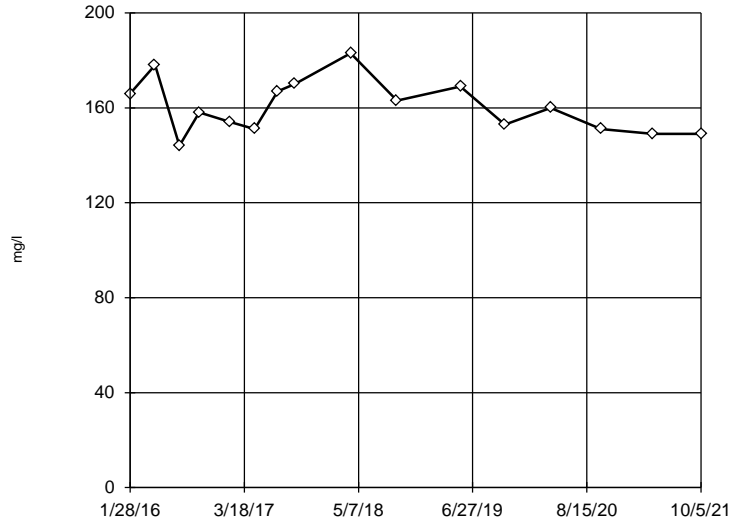
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 81.93, std. dev. 8.613, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.942
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



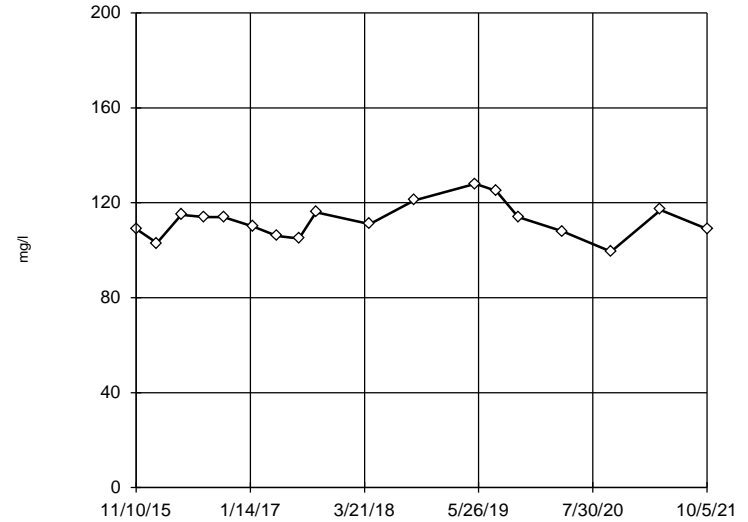
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 160.3, std. dev. 11.18, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9513
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



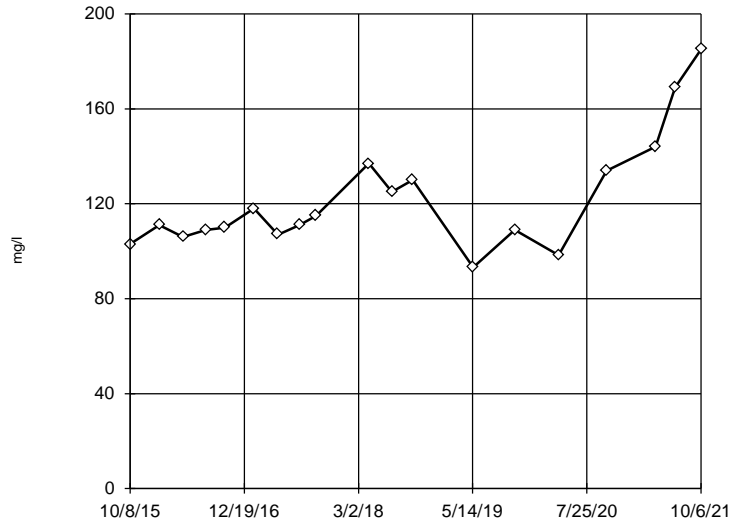
n = 18
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 112.5, std. dev. 7.388, critical Tn 2.504
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9764
 Critical = 0.914
 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-116



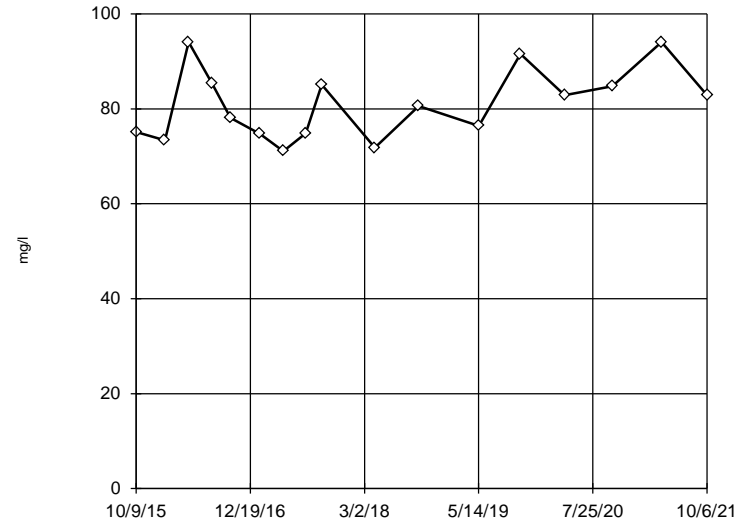
n = 19
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 263.2, low cutoff = 54.48, based on IQR multiplier of 3.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



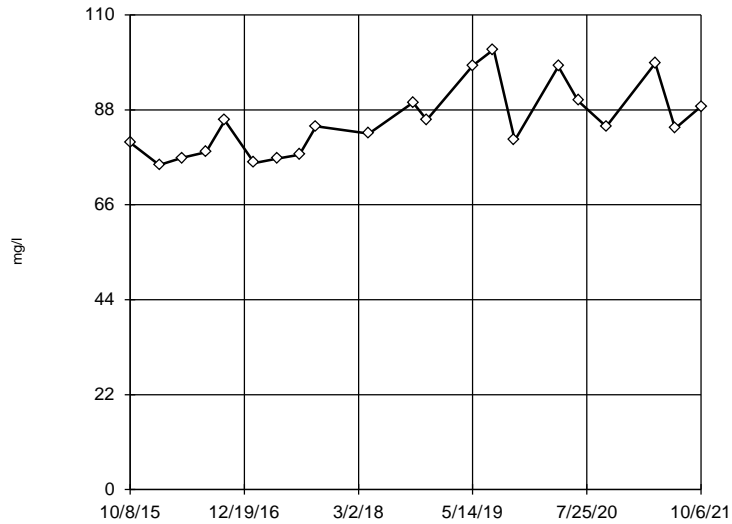
n = 17
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 81, std. dev. 7.48, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9232 Critical = 0.91 The distribution was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-117



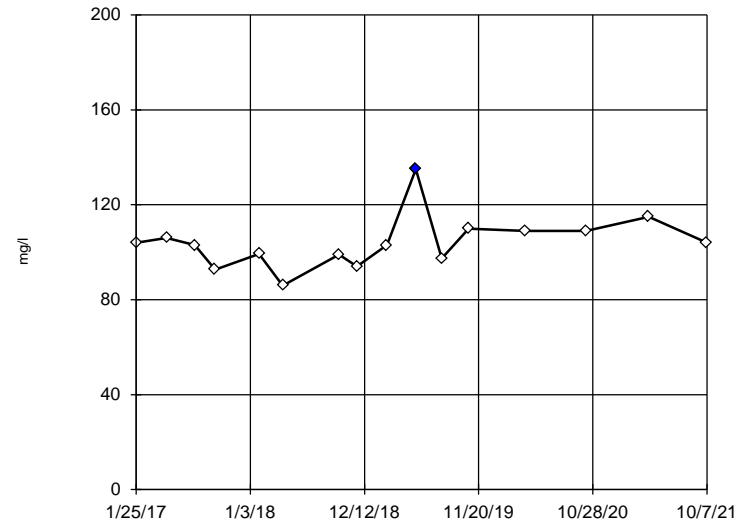
n = 21
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 85.39, std. dev. 8.226, critical Tn 2.58
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9247 Critical = 0.923 (after natural log transformation) The distribution was found to be log-normal.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-119



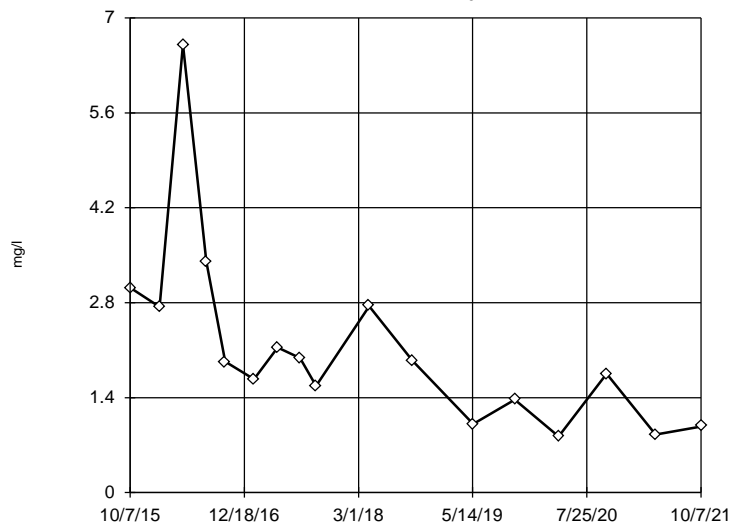
n = 16
 Statistical outlier is drawn as solid. Testing for 1 high outlier. Mean = 104.1, Std. Dev. = 11.01, 135: c = 0.6098 tab1 = 0.507, Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1 Calculated = 0.9772 Critical = 0.901 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Calcium Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-101



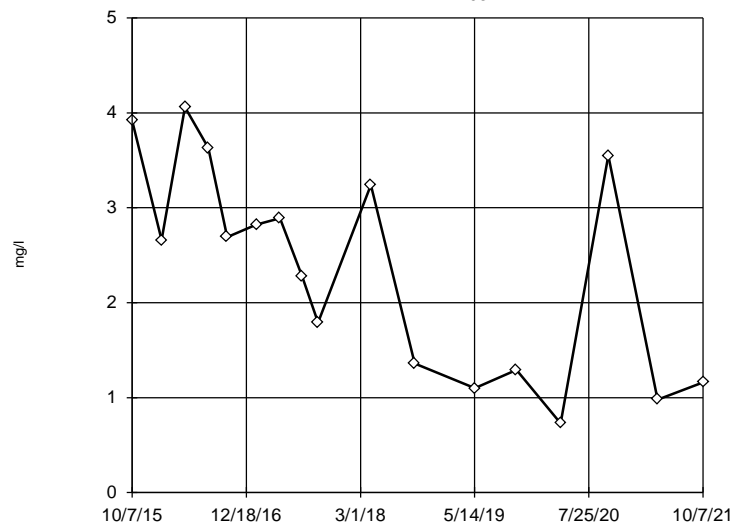
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 2.15, std. dev. 1.381, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9581
 Critical = 0.91 (after natural log transformation)
 The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



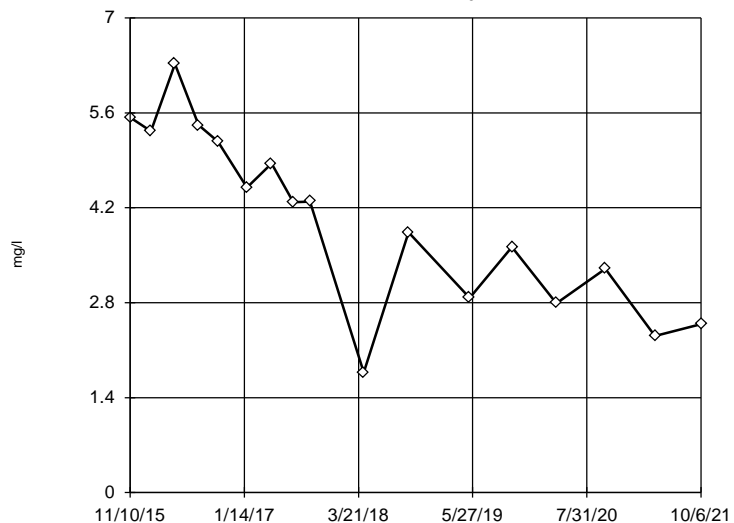
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 2.361, std. dev. 1.115, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9262
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



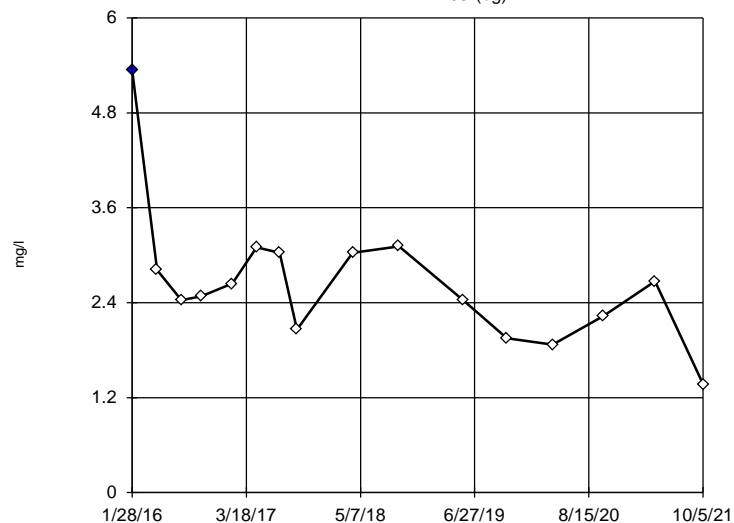
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 4.04, std. dev. 1.312, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9702
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-108 (bg)



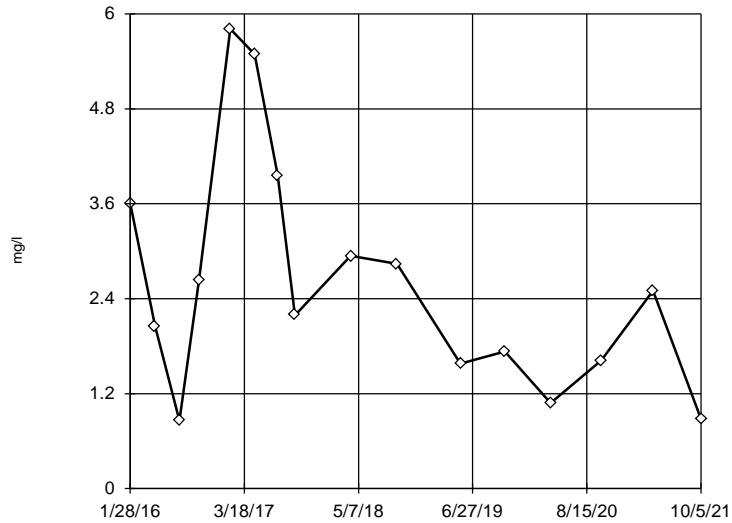
n = 16
 Statistical outlier is drawn as solid.
 Testing for 1 high and 1 low outliers.
 Mean = 2.66,
 Std. Dev. = 0.8697,
 5.34: c = 0.6608
 tab1 = 0.507,
 1.37: c = 0.3353
 tab1 = 0.507,
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9314
 Critical = 0.895
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



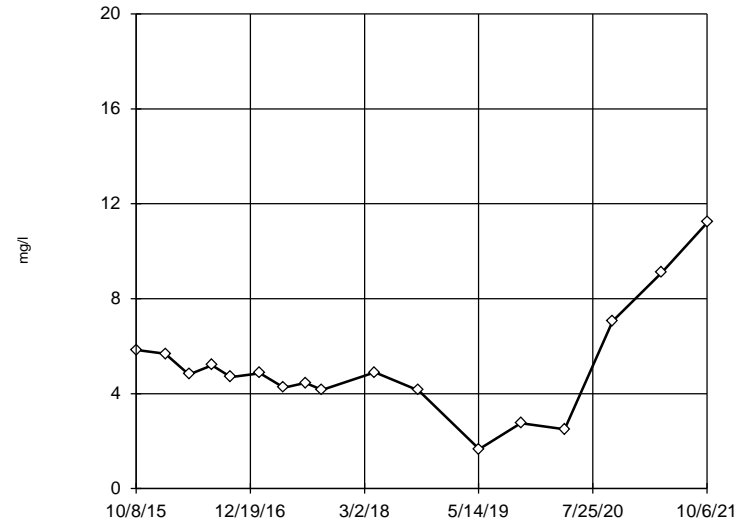
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 2.61, std. dev. 1.489, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9656
 Critical = 0.906 (after natural log transformation)
 The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



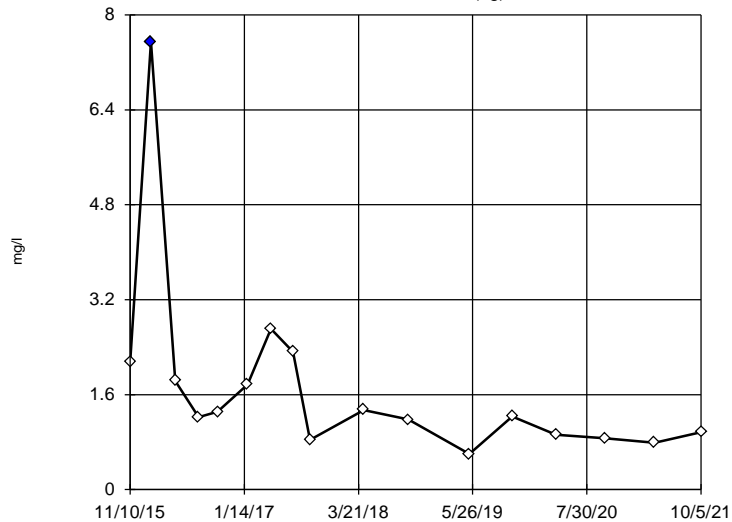
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 5.129, std. dev. 2.308, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9458
 Critical = 0.91 (after natural log transformation)
 The distribution was found to be log-normal.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-115 (bg)



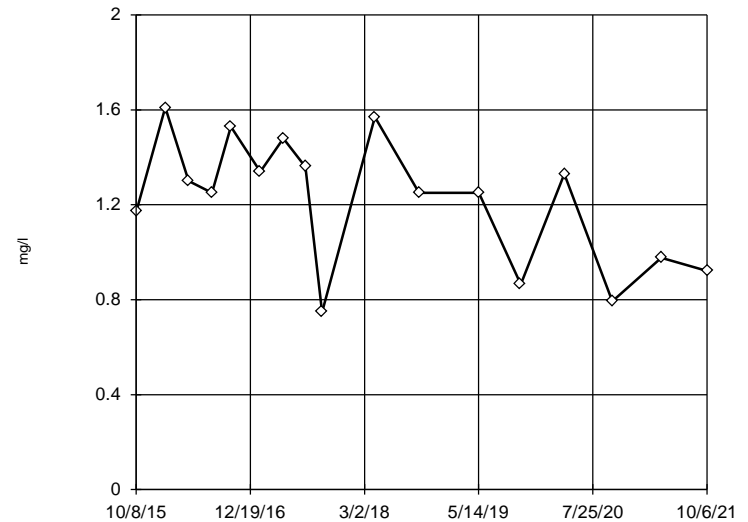
n = 17
 Statistical outlier is drawn as solid.
 Testing for 1 high outlier.
 Mean = 1.74.
 Std. Dev. = 1.61.
 7.55: c = 0.7789
 tab1 = 0.49.
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9113
 Critical = 0.906
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-117



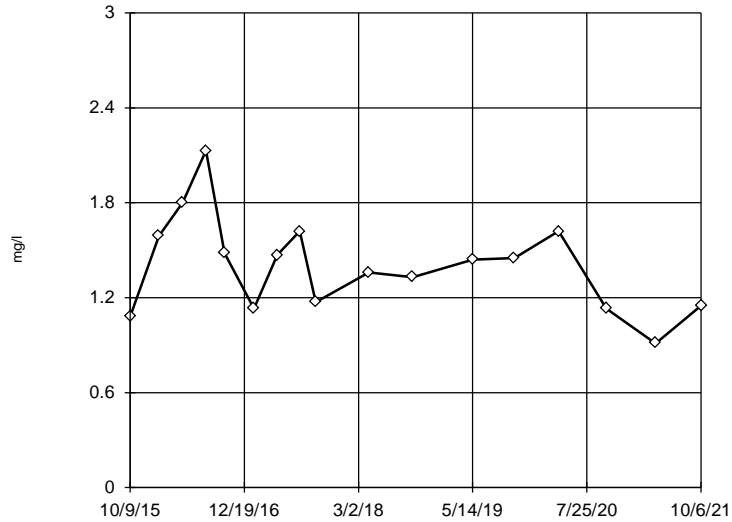
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 1.22, std. dev. 0.2713, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9331
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



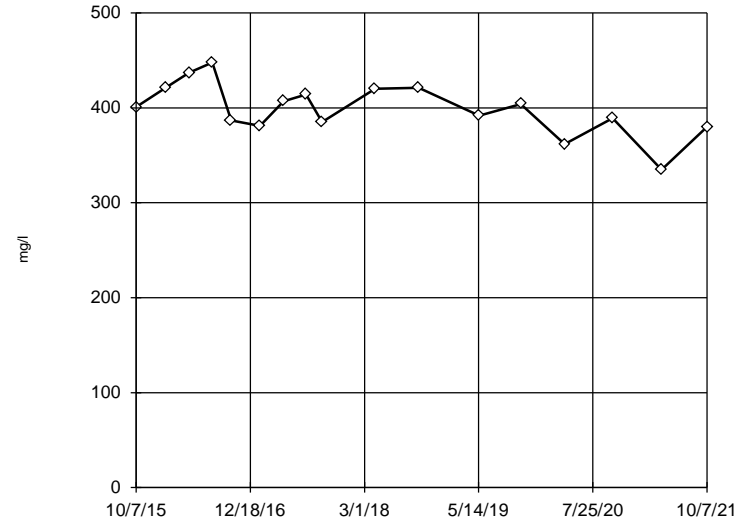
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 1.404, std. dev. 0.3011, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9568
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-101



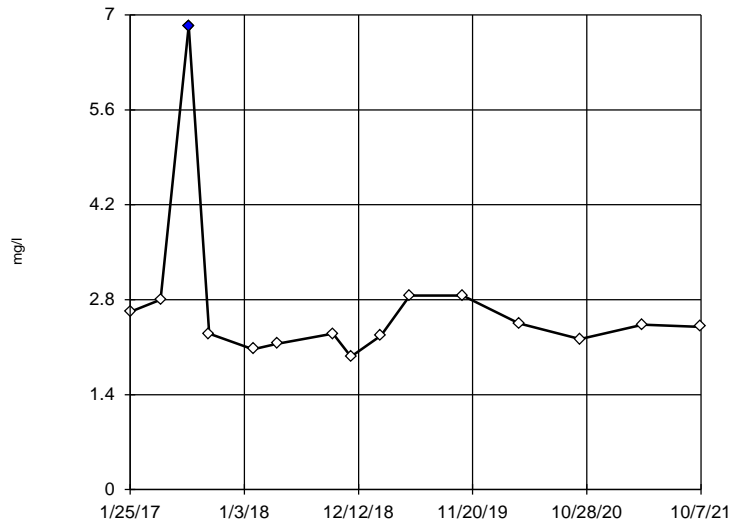
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 399.1, std. dev. 27.63, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9751
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-119



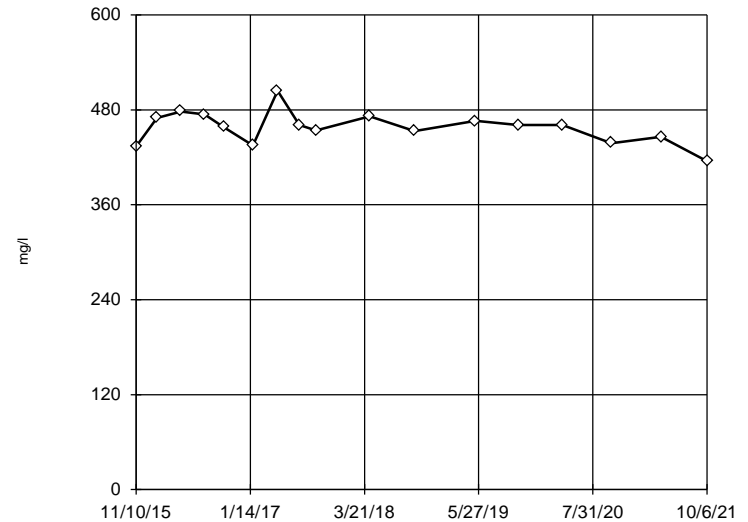
n = 15
 Statistical outlier is drawn as solid.
 Testing for 1 high outlier.
 Mean = 2.702.
 Std. Dev. = 1.178.
 6.84: c = 0.8486
 tab1 = 0.525.
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9373
 Critical = 0.895
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Chloride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



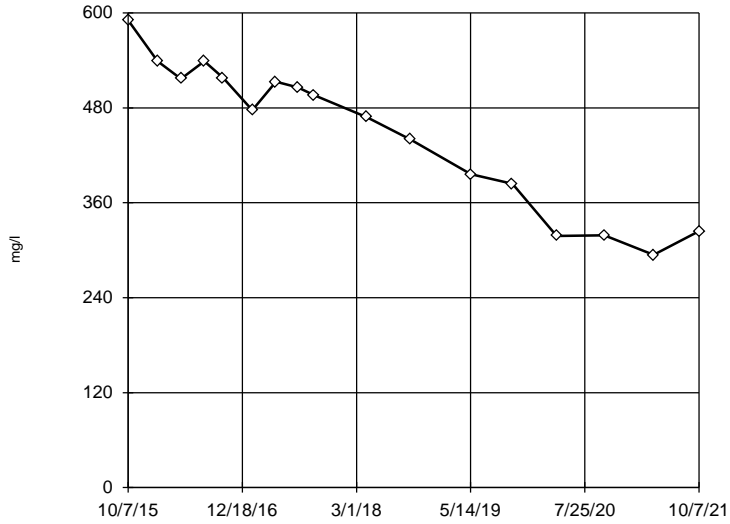
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 457.6, std. dev. 20.52, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9734
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-103



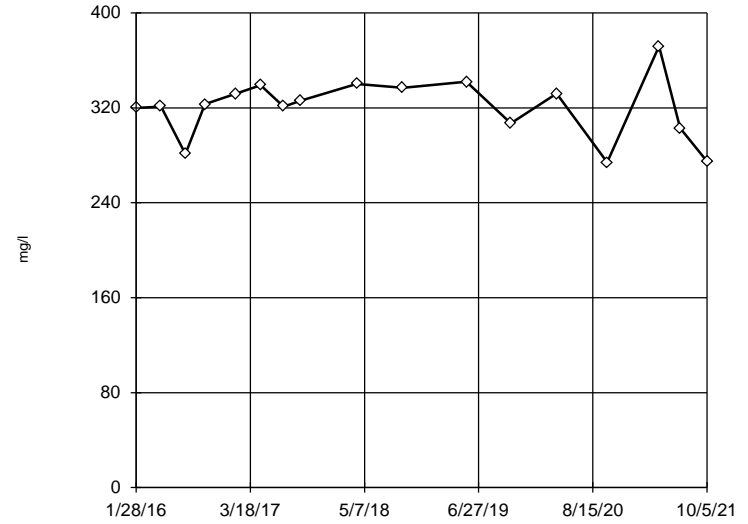
n = 17
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were cube transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 747.9, low cutoff = -816.7, based on IQR multiplier of 3.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



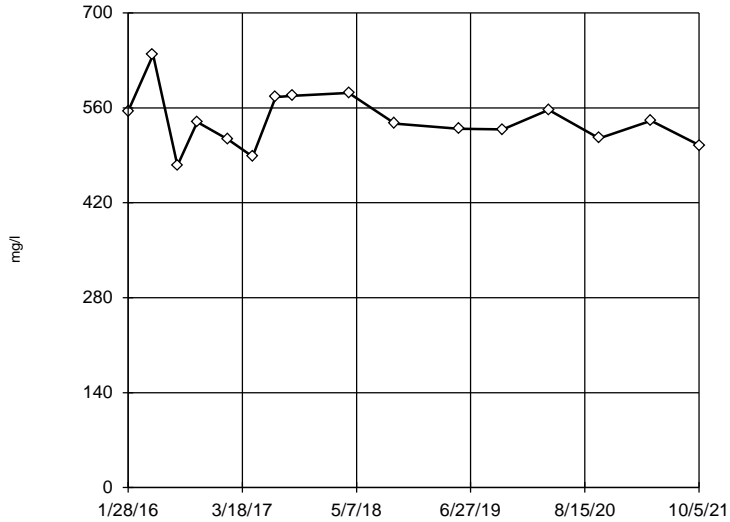
n = 17
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 320.3, std. dev. 25.85, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9286
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



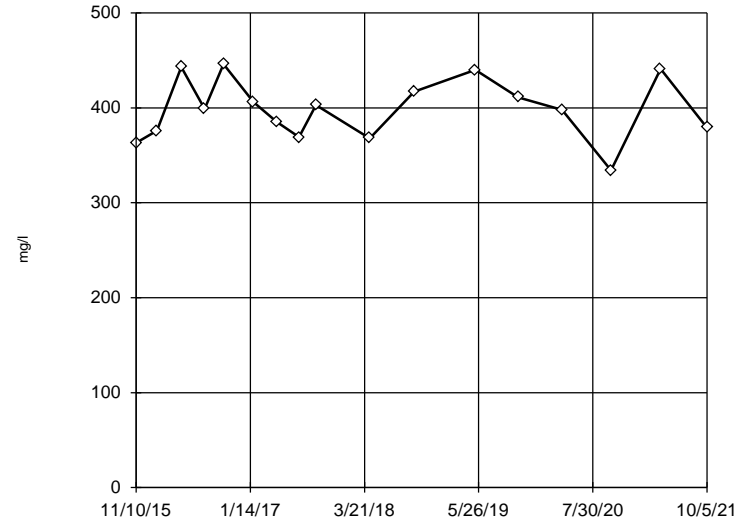
n = 16
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 541, std. dev. 40.32, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9661
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



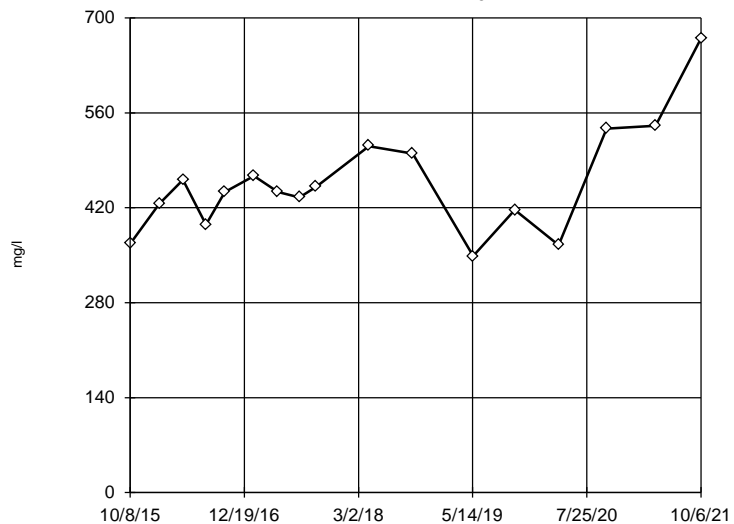
n = 17
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 398.7, std. dev. 32.24, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9544
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



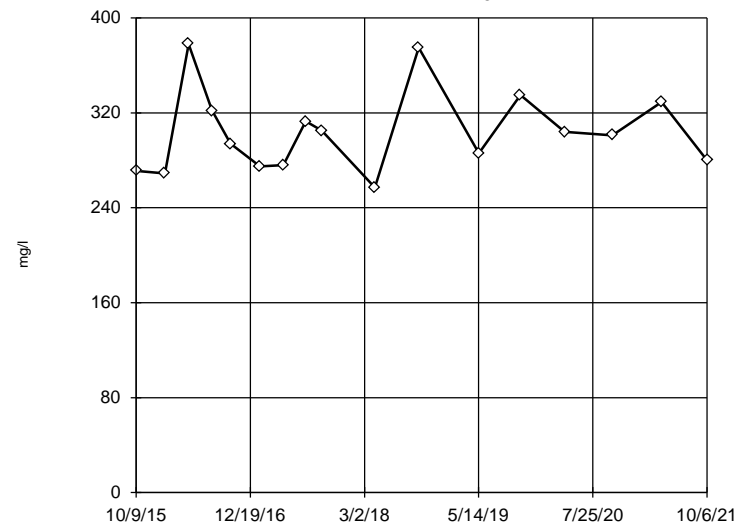
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 457.5, std. dev. 78.76, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9232
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



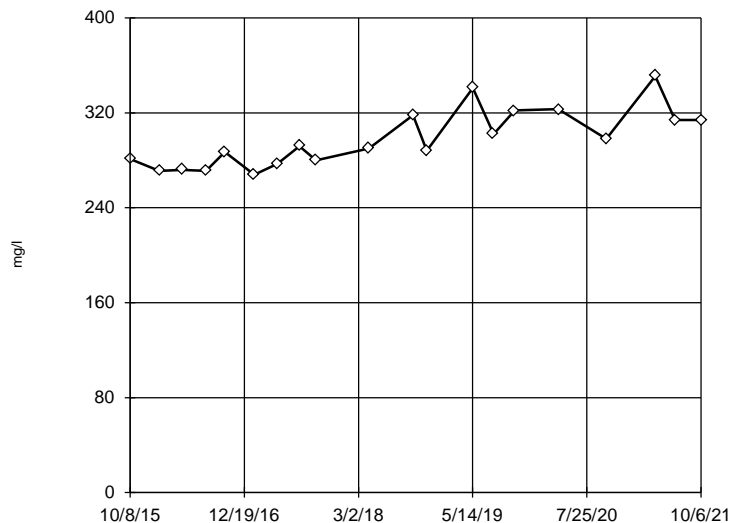
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 304.1, std. dev. 35.06, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9158
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-117



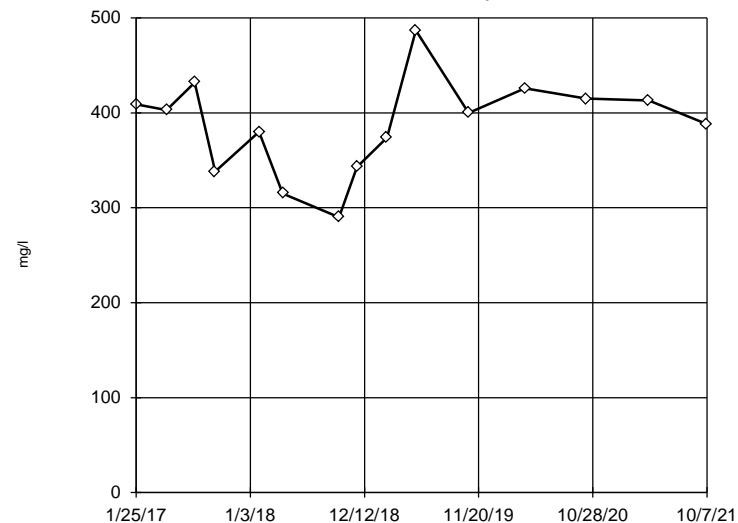
n = 20
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 298, std. dev. 24.27, critical Tn 2.557
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9263
 Critical = 0.92
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-119



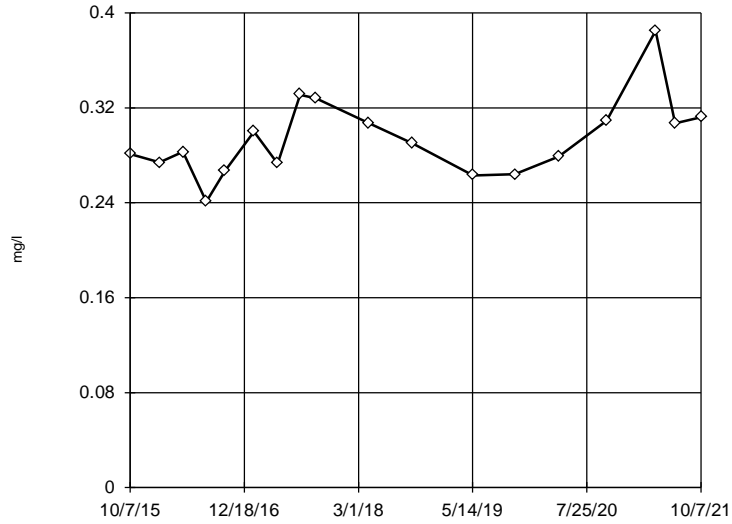
n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 387.5, std. dev. 50.04, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9666
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Dissolved Solids Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-101



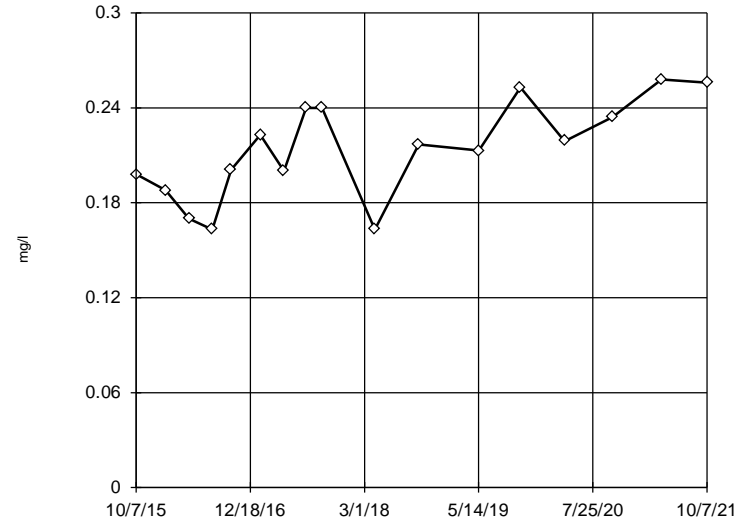
n = 18
 No statistical outliers.
 Testing for 1 high outlier.
 Mean = 0.2941.
 Std. Dev. = 0.03299.
 0.385; c = 0.4711
 tab1 = 0.475.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.969
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



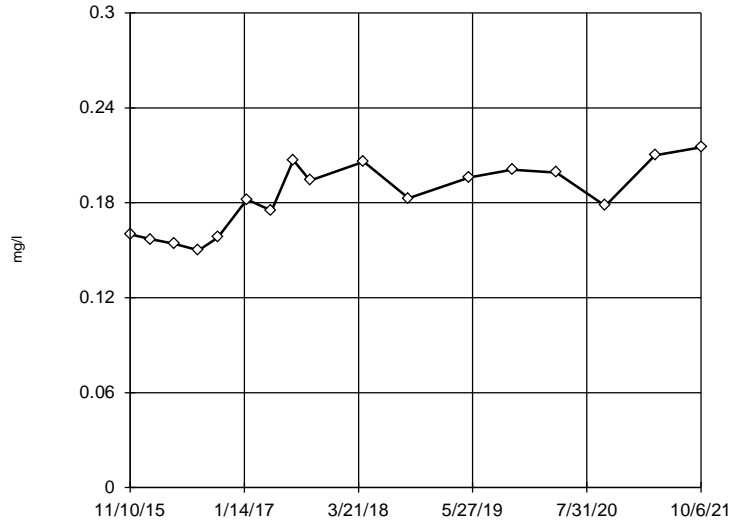
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.2139, std. dev. 0.03115, critical Tn 2.475
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9437
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-102



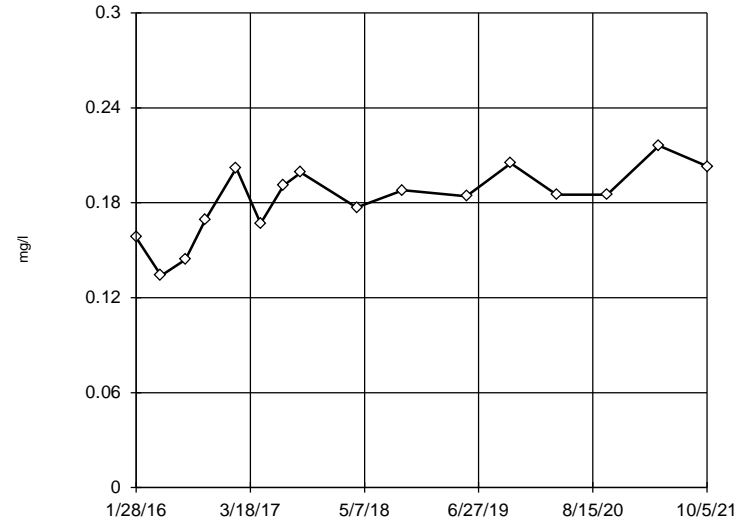
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1838, std. dev. 0.02175, critical Tn 2.475
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9217
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-108 (bg)



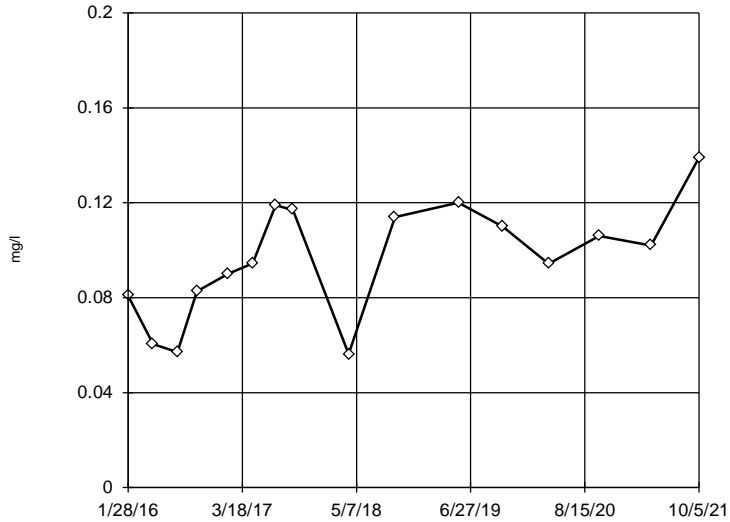
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1817, std. dev. 0.02265, critical Tn 2.443
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9532
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



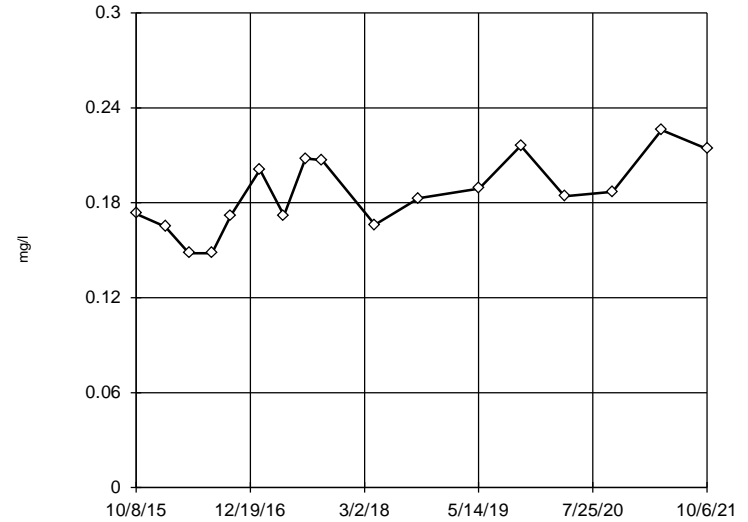
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.09643, std. dev. 0.02432, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9493
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



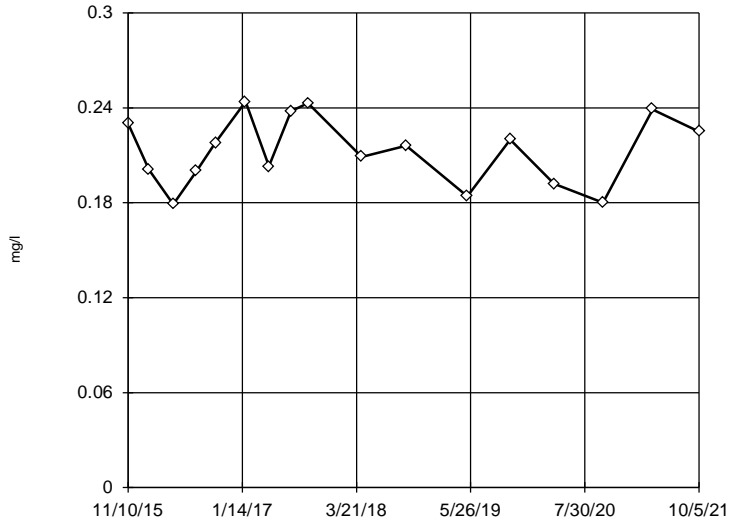
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.1858, std. dev. 0.02338, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9605
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-115 (bg)



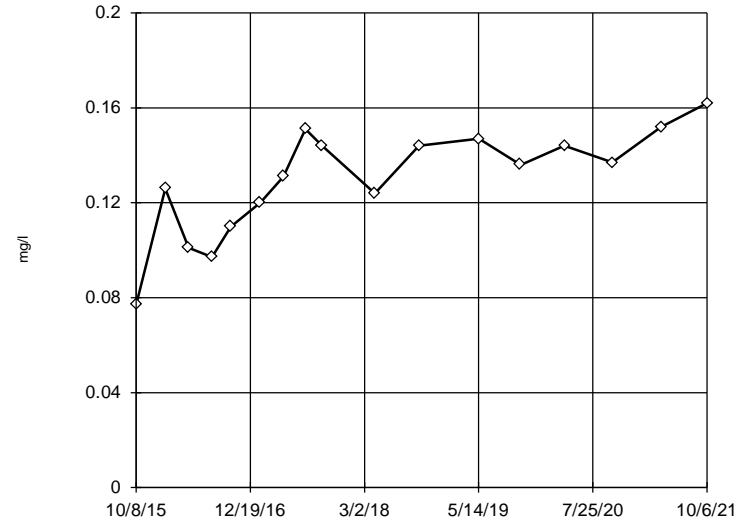
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 0.213, std. dev. 0.02184, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9423
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:09 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

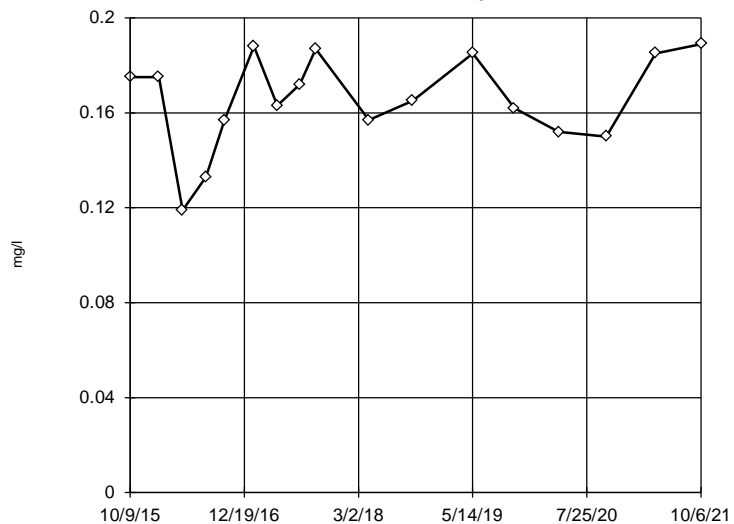
Dixon's Outlier Test

MW-117



Dixon's Outlier Test

MW-118



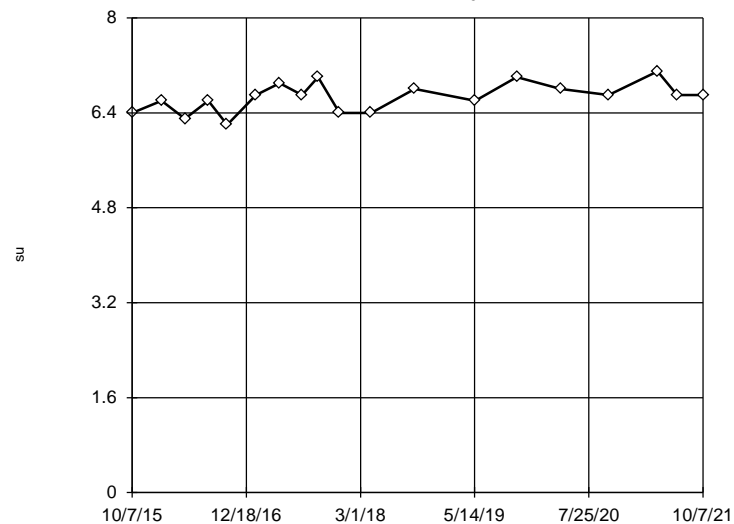
n = 17
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 0.1655.
 Std. Dev. = 0.01986.
 0.119: c = 0.4559
 tab1 = 0.49.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk @alpha = 0.1
 Calculated = 0.9368
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-101



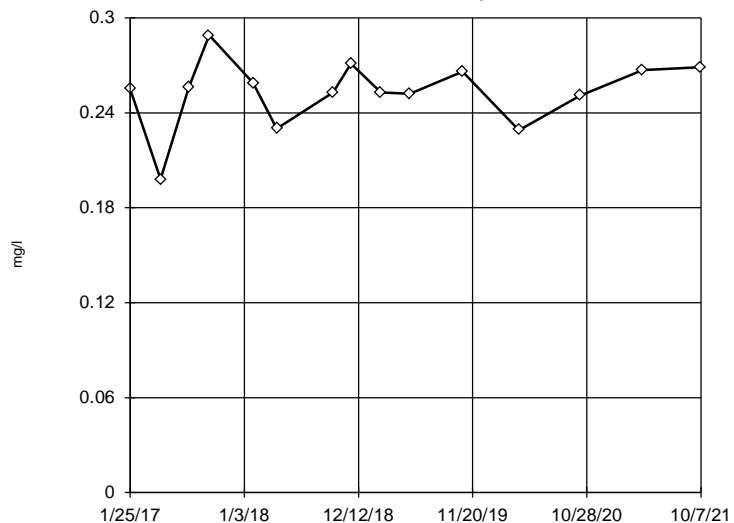
n = 19
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 6.663, std. dev. 0.2454, critical Tn 2.532
 Normality test used:
 Shapiro Wilk @alpha = 0.1
 Calculated = 0.9635
 Critical = 0.917
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-119



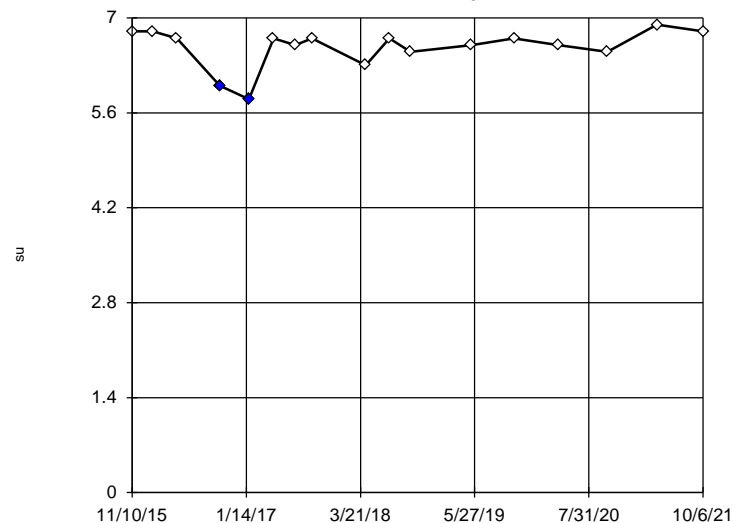
n = 15
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 0.2532.
 Std. Dev. = 0.02142.
 0.198: c = 0.4507
 tab1 = 0.525.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk @alpha = 0.1
 Calculated = 0.9336
 Critical = 0.895
 The distribution was found to be normally distributed.

Constituent: Fluoride Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-102



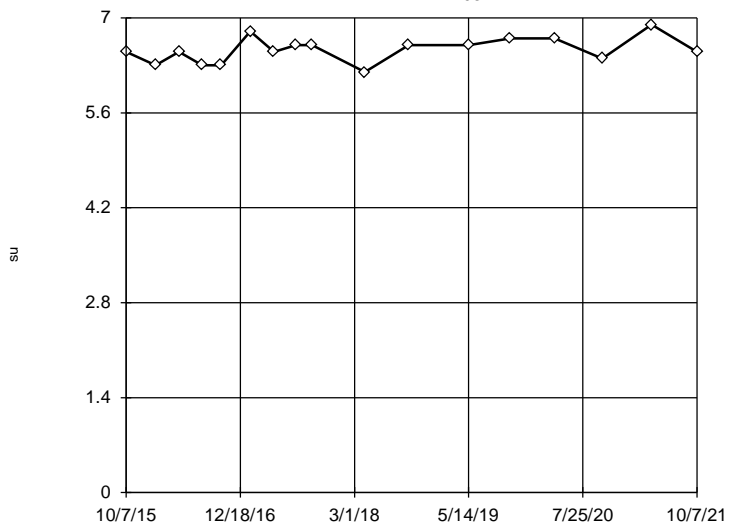
n = 17
 Statistical outliers are drawn as solid.
 Testing for 3 low outliers.
 Mean = 6.571.
 Std. Dev. = 0.291.
 6.3: c = 0.4
 tab1 = 0.49.
 Alpha = 0.05.
 6: c = 0.625
 tab1 = 0.49.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk @alpha = 0.1
 Calculated = 0.9328
 Critical = 0.901
 The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



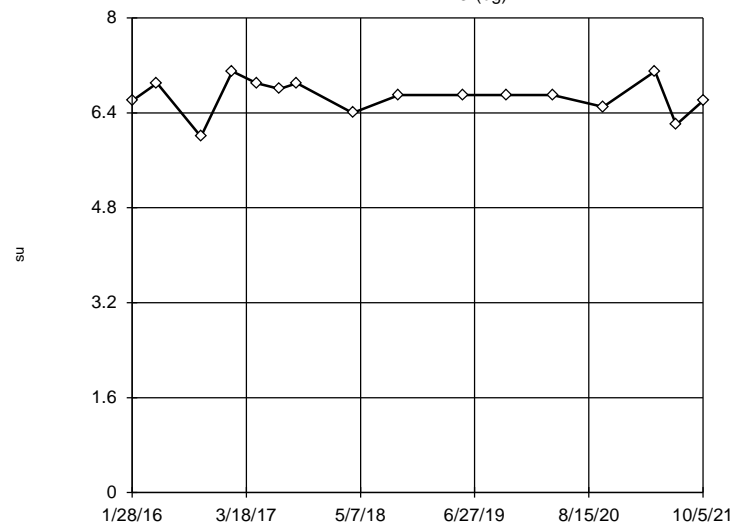
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 6.529, std. dev. 0.1896, critical Tn 2.475
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9646
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-113 (bg)



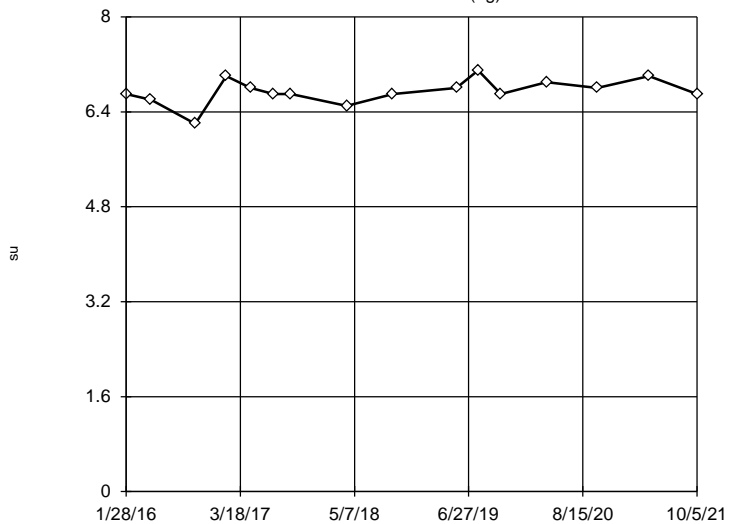
n = 16
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 6.675, std. dev. 0.2978, critical Tn 2.443
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9421
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-108 (bg)



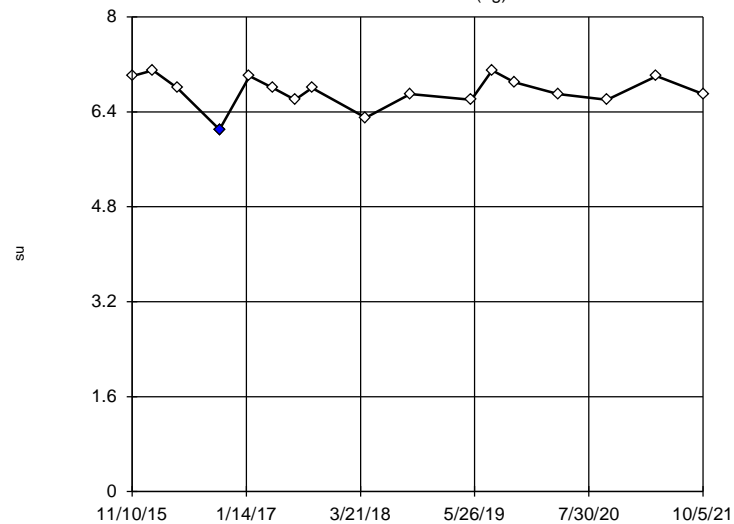
n = 16
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 6.744.
 Std. Dev. = 0.2128.
 6.2: c = 0.5
 tabl = 0.507.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9252
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-115 (bg)



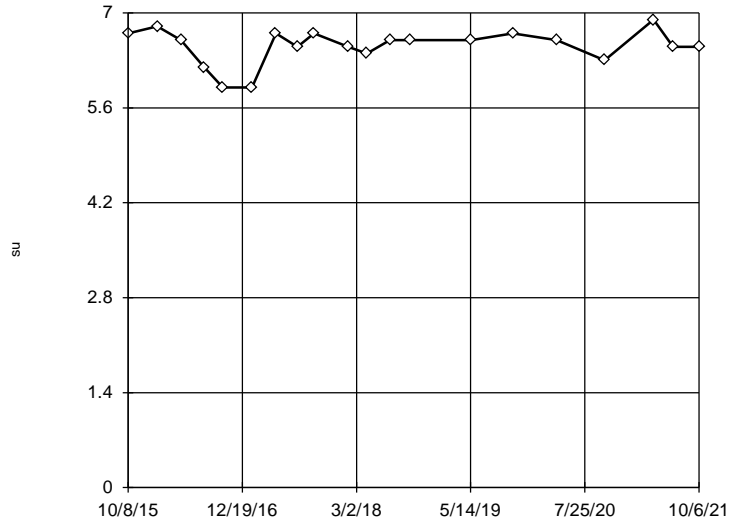
n = 17
 Statistical outlier is drawn as solid.
 Testing for 1 low outlier.
 Mean = 6.753.
 Std. Dev. = 0.2695.
 6.1: c = 0.5556
 tabl = 0.49.
 Alpha = 0.05.
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9405
 Critical = 0.906
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-116



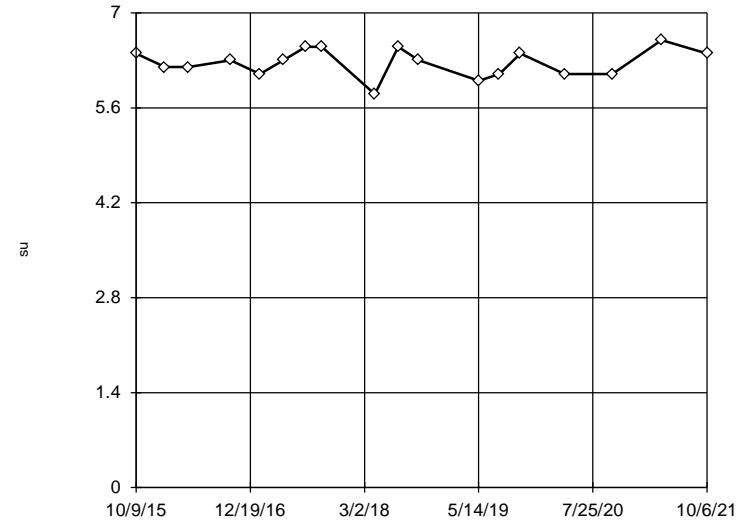
n = 20
 No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were x*6 transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 7.253, low cutoff = 5.066, based on IQR multiplier of 3.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



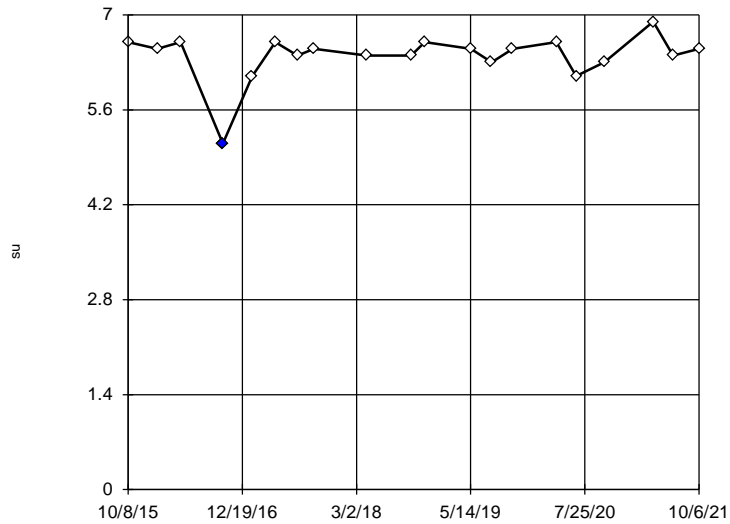
n = 18
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 6.267, std. dev. 0.2086, critical Tn 2.504
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9579
 Critical = 0.914
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-117



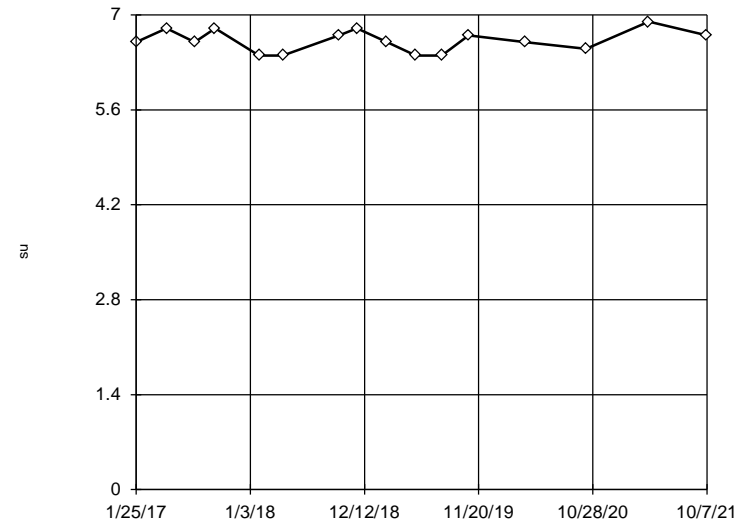
n = 20
 Statistical outlier is drawn as solid. Testing for 1 low outlier. Mean = 6.395. Std. Dev. = 0.3546. 5.1: c = 0.6667 tab1 = 0.45. Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9217
 Critical = 0.917
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-119



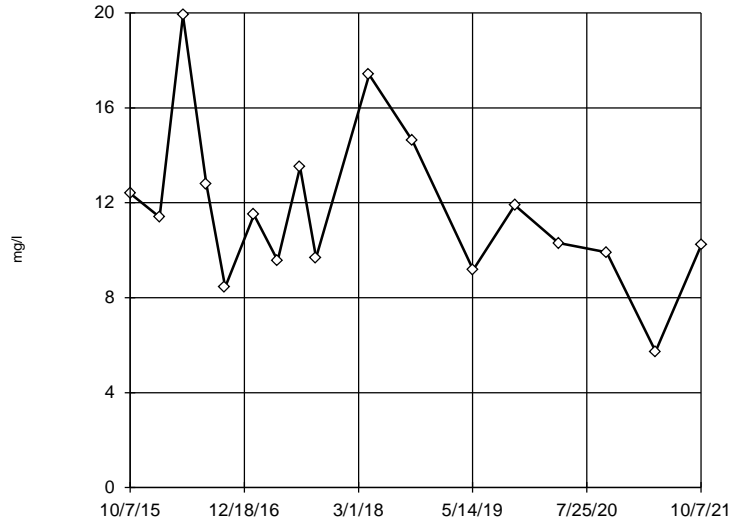
n = 16
 Dixon's will not be run. No suspect values identified or unable to establish suspect values. Mean 6.619, std. dev. 0.1642, critical Tn 2.443
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9133
 Critical = 0.906
 The distribution was found to be normally distributed.

Constituent: pH Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-101



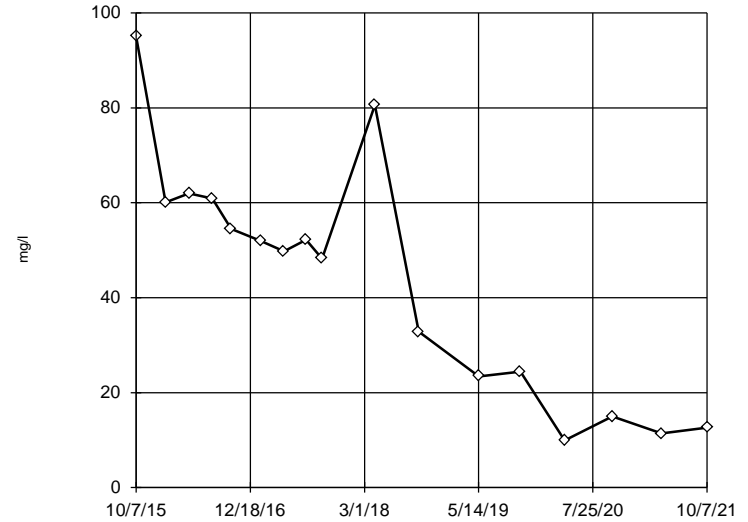
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 11.67, std. dev. 3.372, critical Tn 2.475
 Normality test used: Shapiro Wilk @alpha = 0.1
 Calculated = 0.9362
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-103



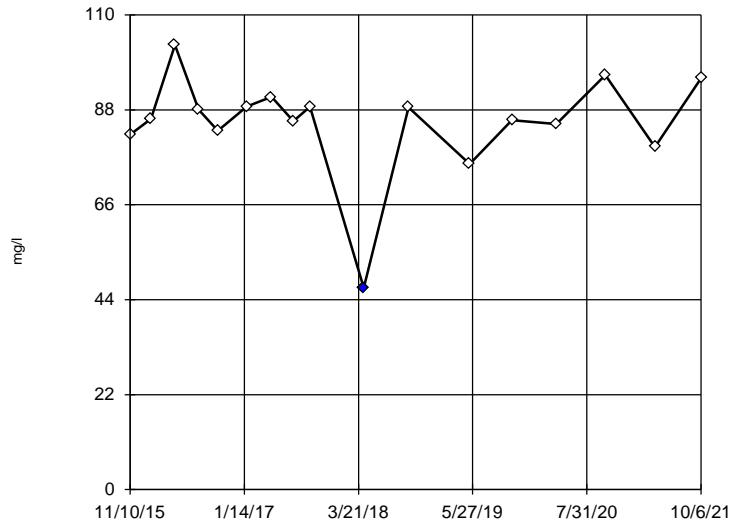
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 43.81, std. dev. 25.11, critical Tn 2.475
 Normality test used: Shapiro Wilk @alpha = 0.1
 Calculated = 0.934
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-102



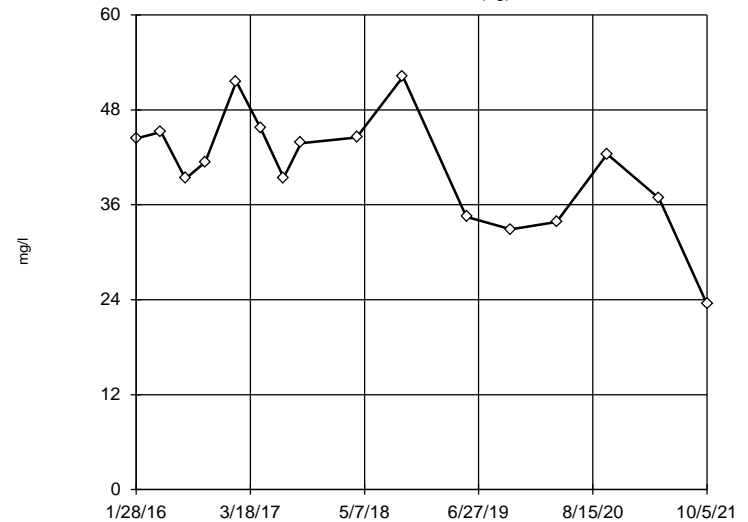
n = 17
 Statistical outlier is drawn as solid.
 Testing for 1 low outlier.
 Mean = 85.19,
 Std. Dev. = 11.84,
 46.7: c = 0.6728
 tabl = 0.49,
 Alpha = 0.05.
 Normality test used: Shapiro Wilk @alpha = 0.1
 Calculated = 0.9649
 Critical = 0.906
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-108 (bg)



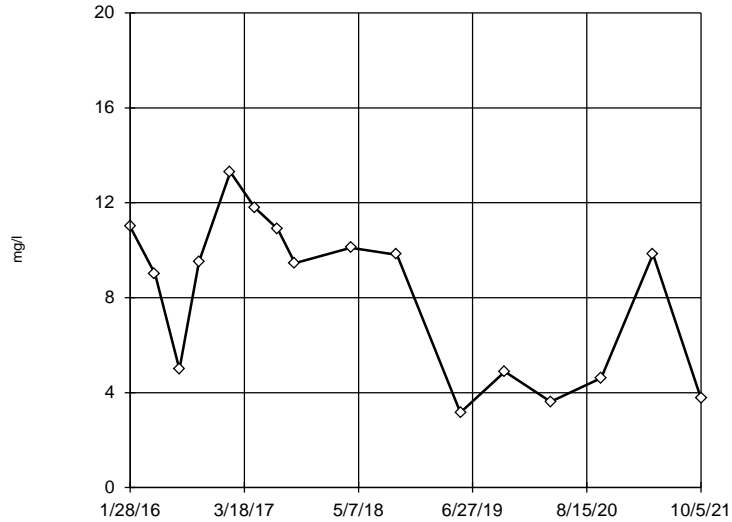
n = 16
 No statistical outliers.
 Testing for 1 low outlier.
 Mean = 40.71,
 Std. Dev. = 7.314,
 23.4: c = 0.4664
 tabl = 0.507,
 Alpha = 0.05.
 Normality test used: Shapiro Wilk @alpha = 0.1
 Calculated = 0.952
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Tukey's Outlier Screening

MW-113 (bg)



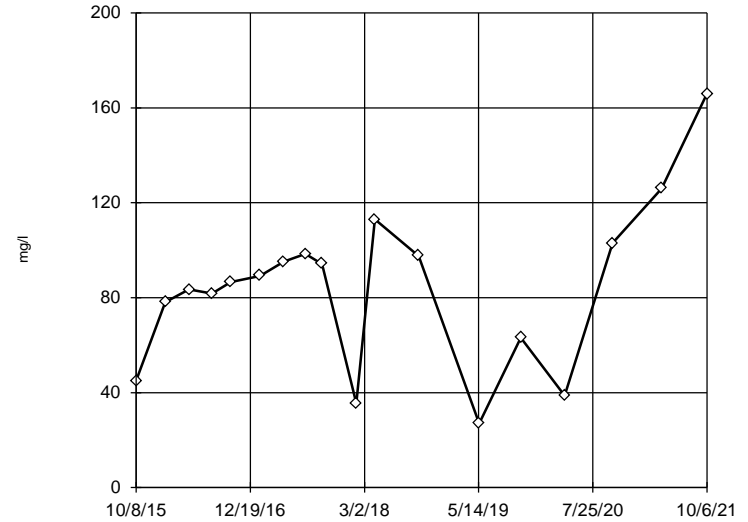
n = 16
 No outliers found.
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were square transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 19.34, low cutoff = -15.53, based on IQR multiplier of 3.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-116



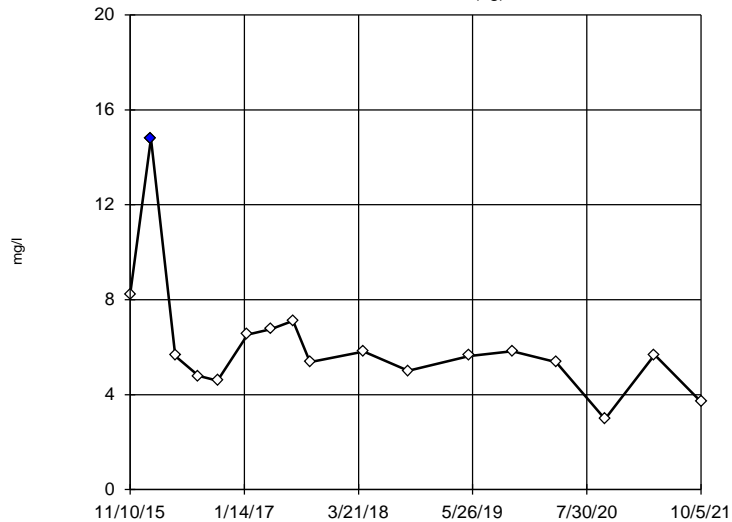
n = 18
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 84.54, std. dev. 34.28, critical Tn 2.504
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9488
 Critical = 0.914
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Dixon's Outlier Test

MW-115 (bg)



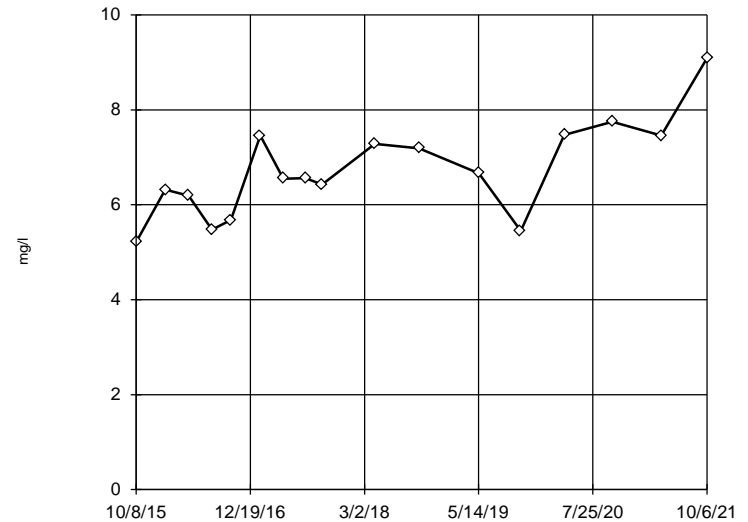
n = 17
 Statistical outlier is drawn as solid.
 Testing for 1 high and 1 low outliers.
 Mean = 6.104,
 Std. Dev. = 2.555,
 14.8: c = 0.7542
 tab1 = 0.49,
 2.97 (J): c = 0.3923
 tab1 = 0.49,
 Alpha = 0.05.
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9642
 Critical = 0.901
 The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-117



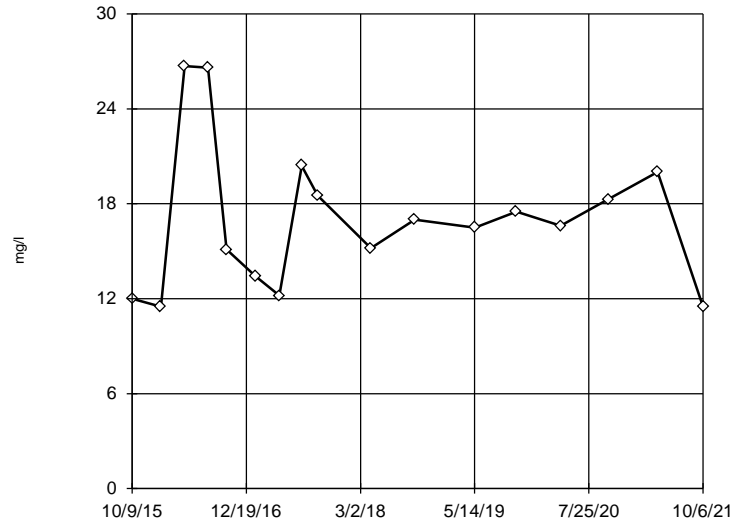
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 6.719, std. dev. 0.9989, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9521
 Critical = 0.91
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-118



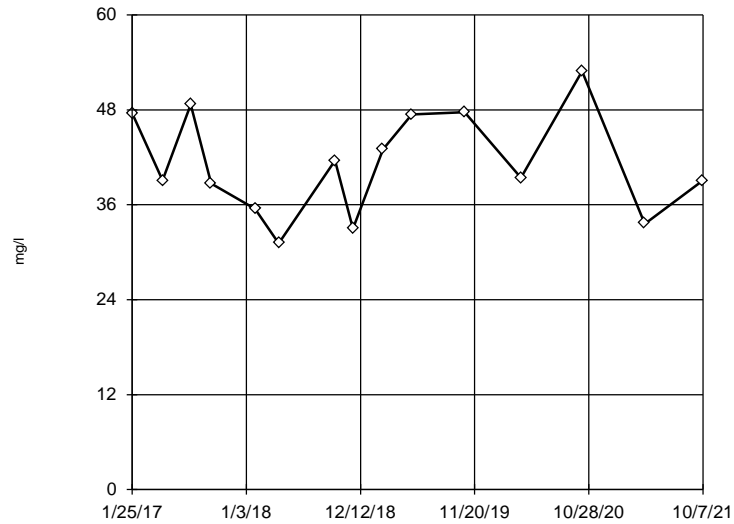
n = 17
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 17, std. dev. 4.608, critical Tn 2.475
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9395
 Critical = 0.91 (after natural log transformation)
 The distribution was found to be log-normal.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

EPA Screening (suspected outliers for Dixon's Test)

MW-119



n = 15
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Mean 41.23, std. dev. 6.525, critical Tn 2.409
 Normality test used: Shapiro Wilk@alpha = 0.1
 Calculated = 0.9533
 Critical = 0.901
 The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 1/24/2022 3:10 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

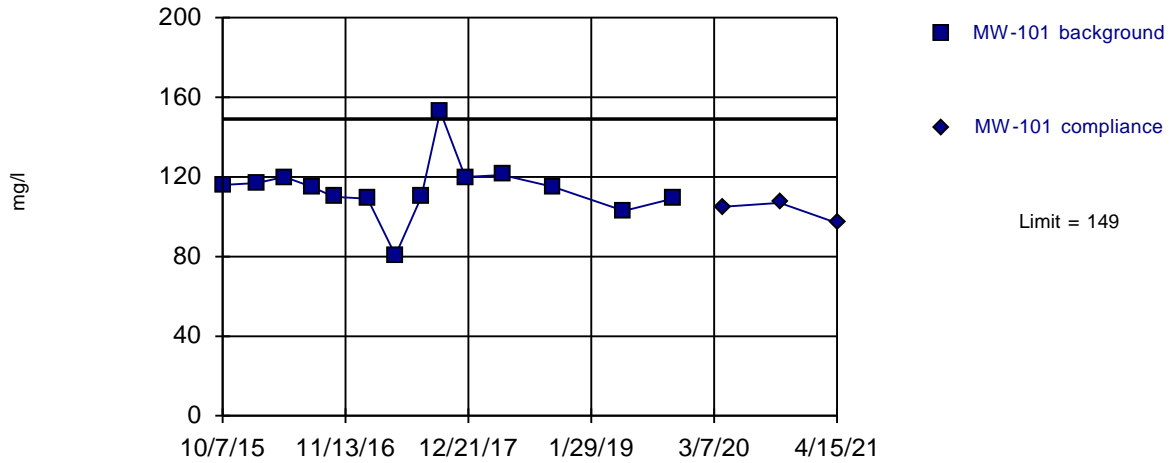
APPENDIX G

Statistical Evaluation Results

Prediction Limits, First Half 2021 Monitoring Event

Within Limit

Prediction Limit Intrawell Parametric



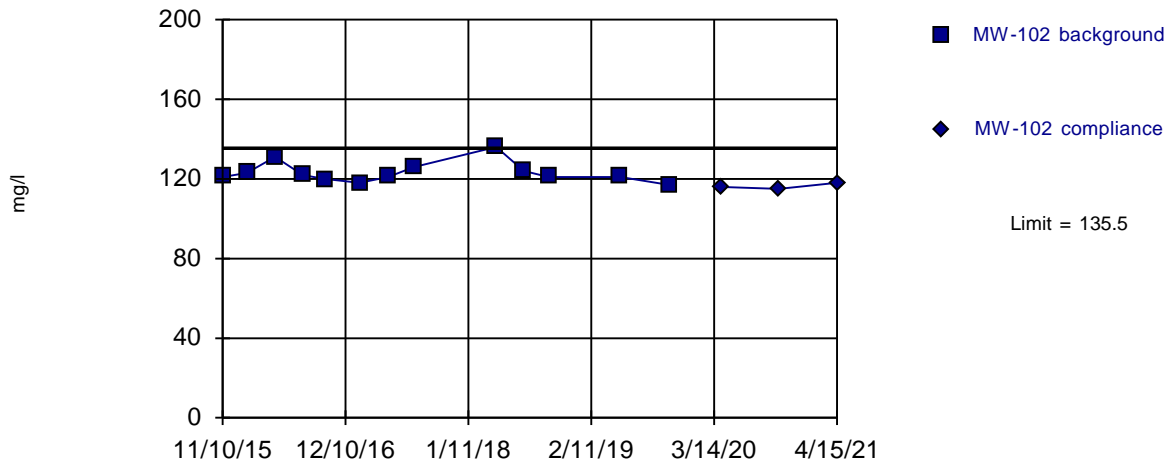
Background Data Summary: Mean=114.2, Std. Dev.=15.14, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8396, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/12/2021 8:34 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



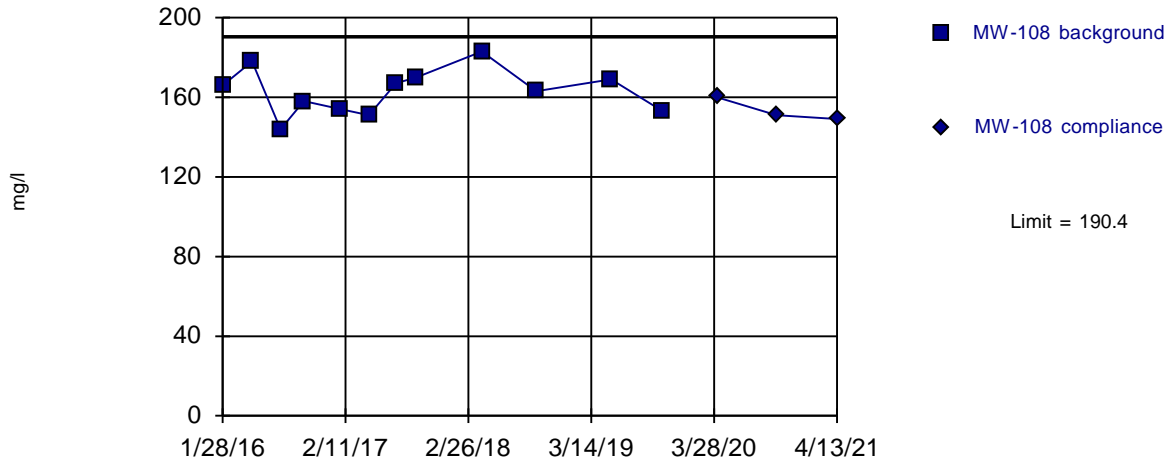
Background Data Summary: Mean=123.2, Std. Dev.=5.242, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8497, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/12/2021 8:34 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



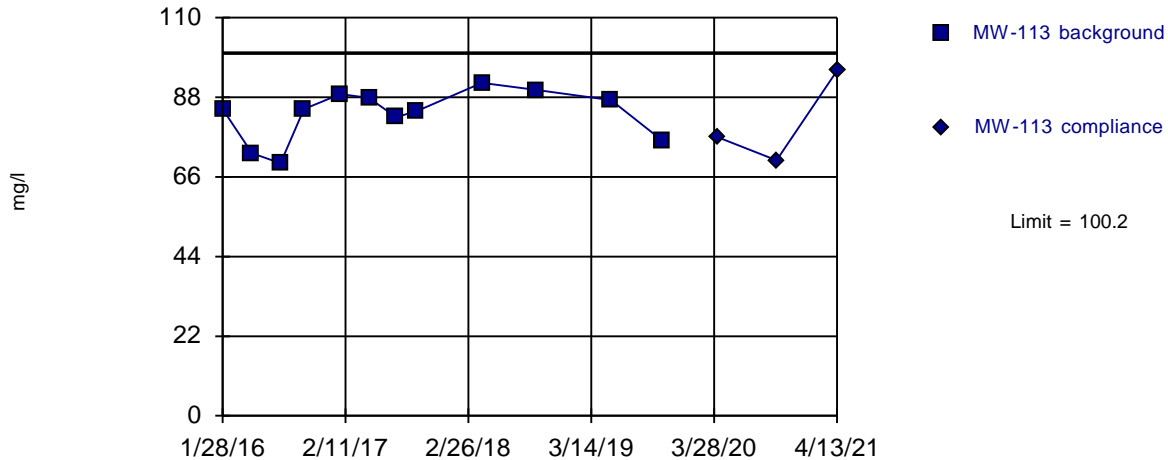
Background Data Summary: Mean=163, Std. Dev.=11.47, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9787, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/12/2021 8:34 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



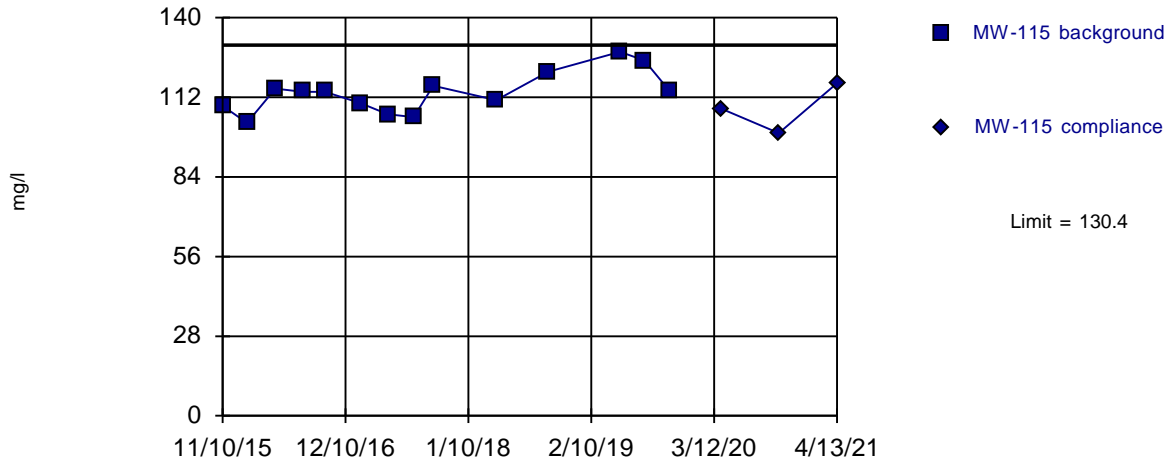
Background Data Summary: Mean=83.35, Std. Dev.=7.053, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8981, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/12/2021 8:34 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

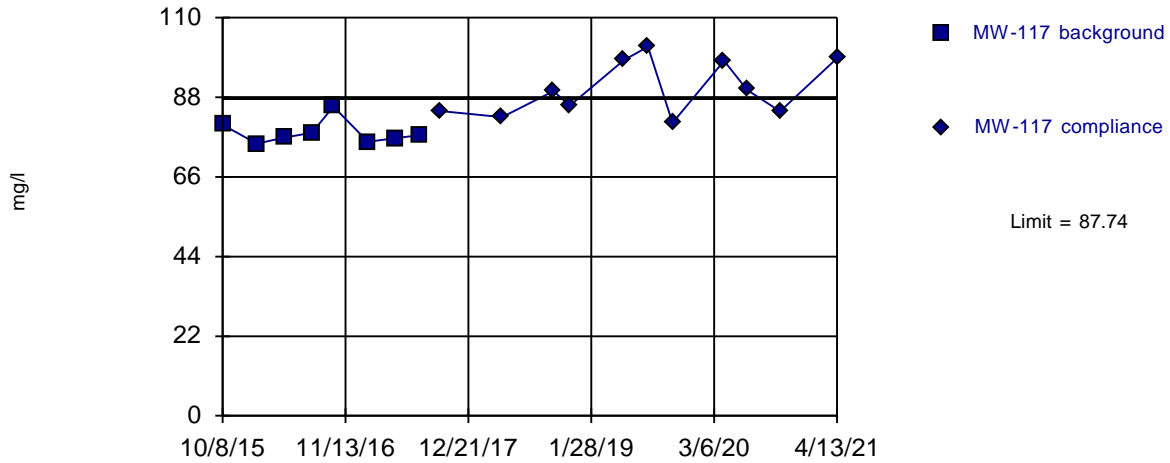
Within Limit

Prediction Limit Intrawell Parametric



Exceeds Limit

Prediction Limit Intrawell Parametric



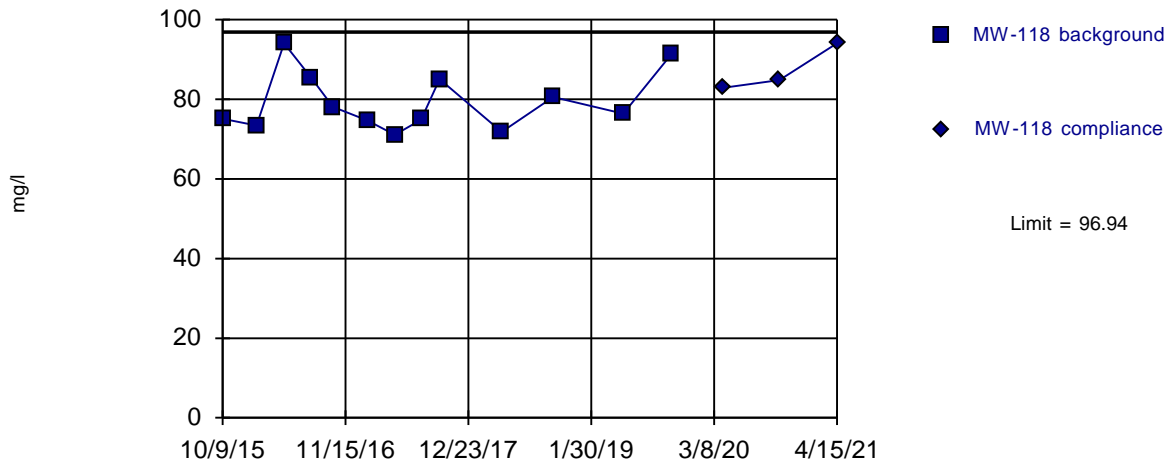
Background Data Summary: Mean=78.28, Std. Dev.=3.33, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8288, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/12/2021 8:34 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



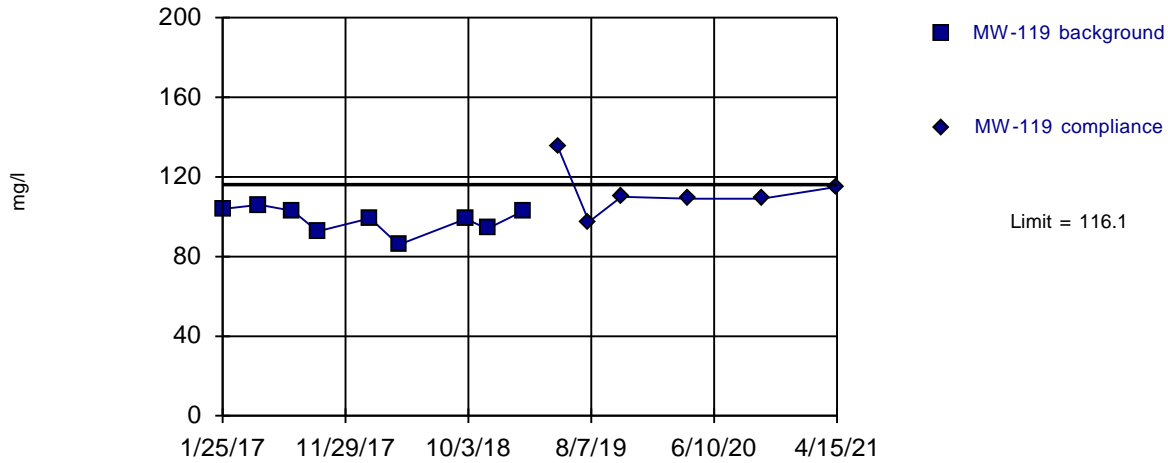
Background Data Summary: Mean=79.41, Std. Dev.=7.467, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8875, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/12/2021 8:34 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



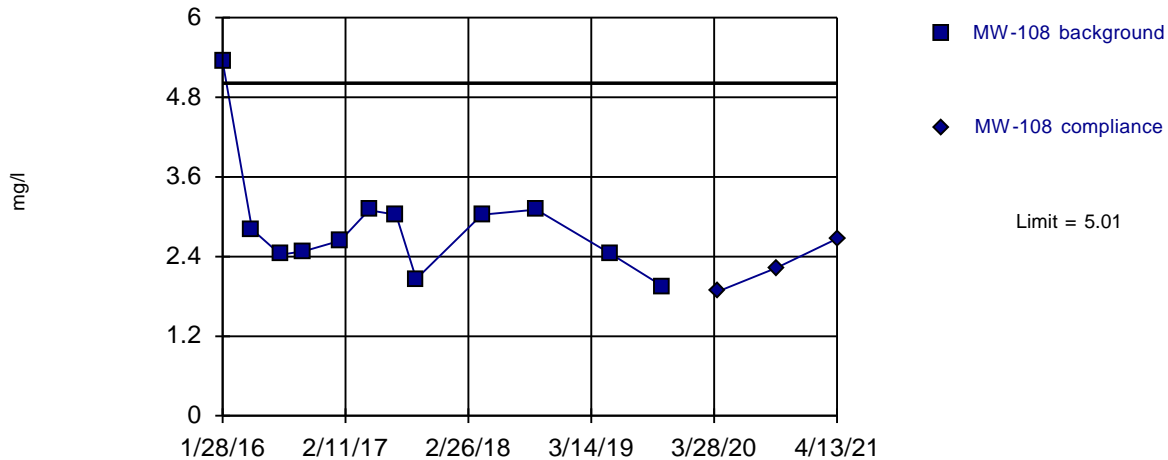
Background Data Summary: Mean=98.54, Std. Dev.=6.524, n=9. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9156, critical = 0.764. Kappa = 2.698 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 5/12/2021 8:34 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



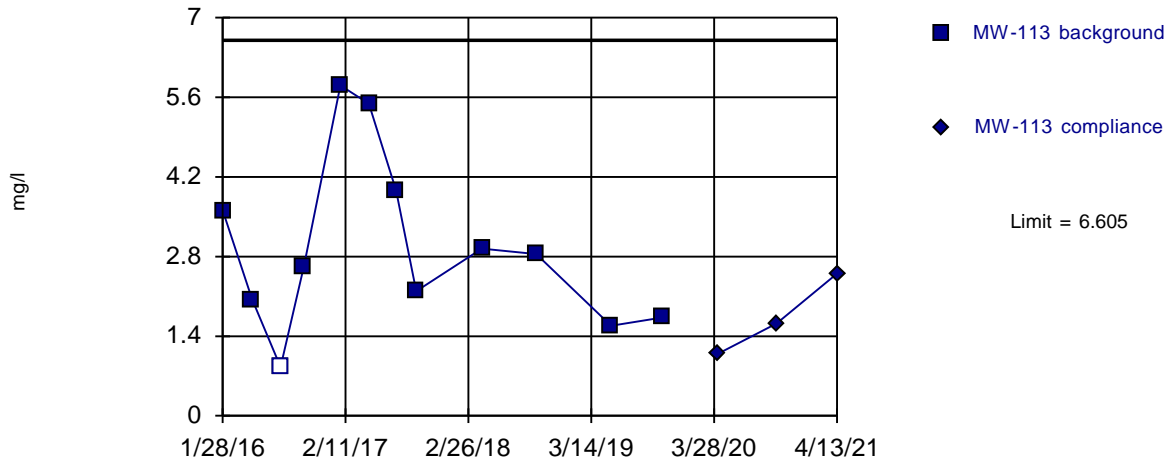
Background Data Summary (based on square root transformation): Mean=1.679, Std. Dev.=0.2339, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8197, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



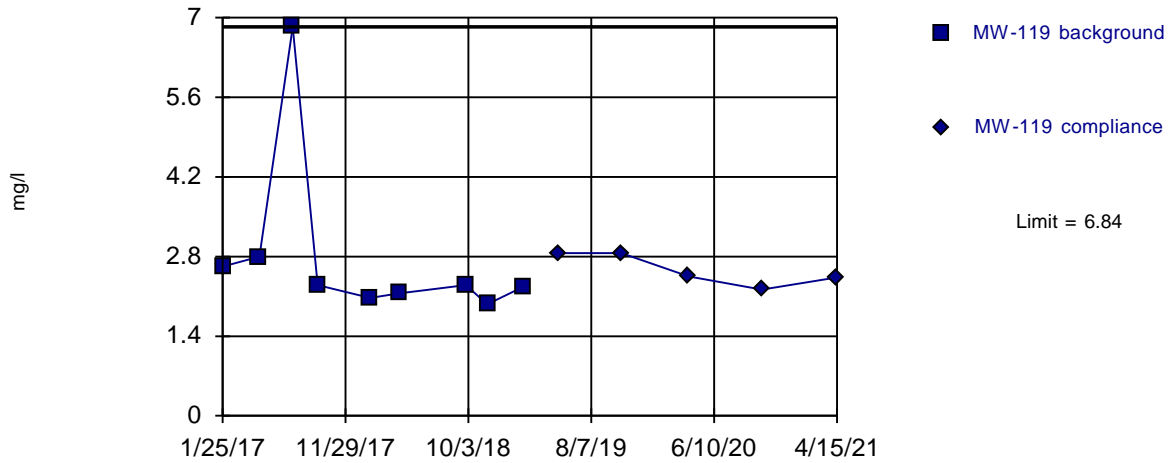
Background Data Summary: Mean=2.974, Std. Dev.=1.518, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9319, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Non-parametric



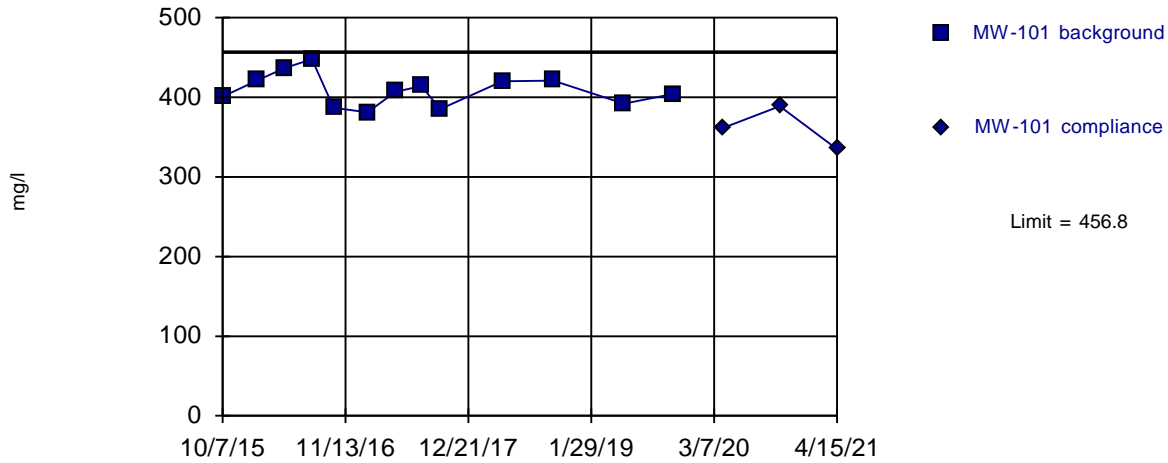
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 9 background values. Well-constituent pair annual alpha = 0.03586. Individual comparison alpha = 0.01809 (1 of 2). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Chloride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



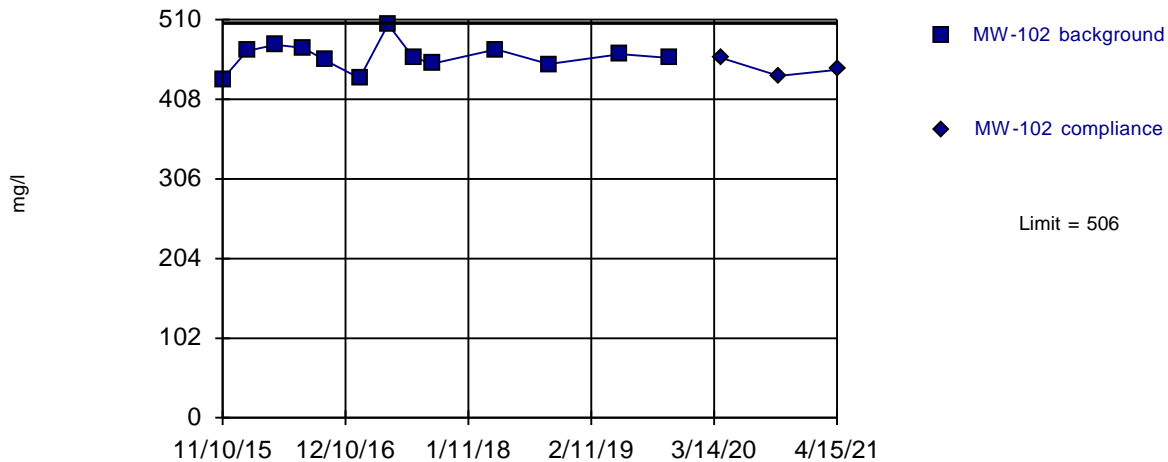
Background Data Summary: Mean=409.1, Std. Dev.=20.34, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9582, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



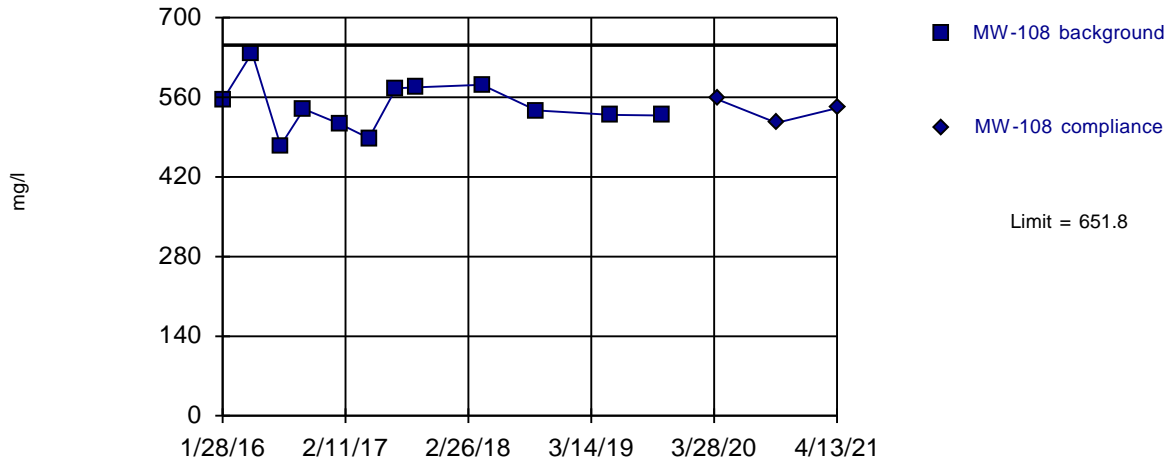
Background Data Summary: Mean=463.1, Std. Dev.=18.27, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9455, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



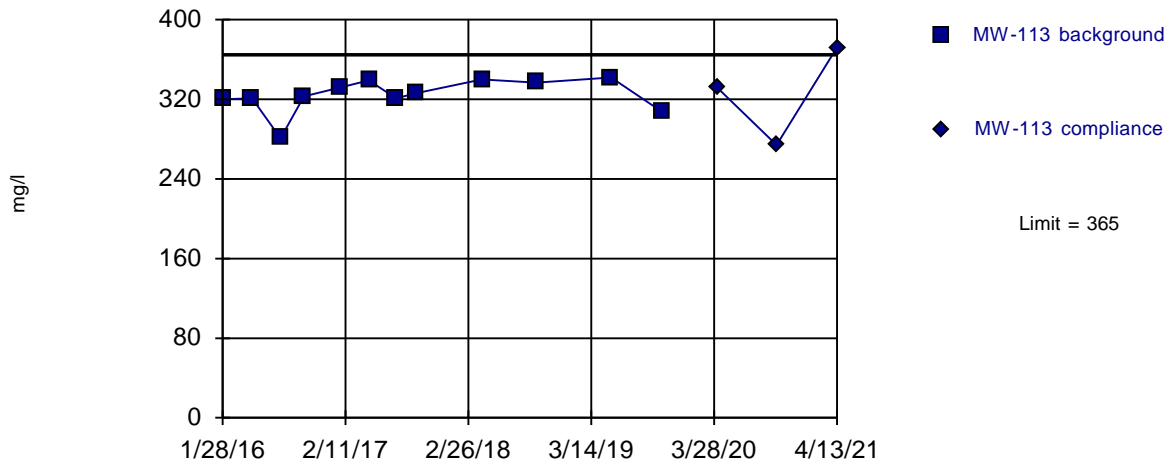
Background Data Summary: Mean=544.8, Std. Dev.=44.71, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9672, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric



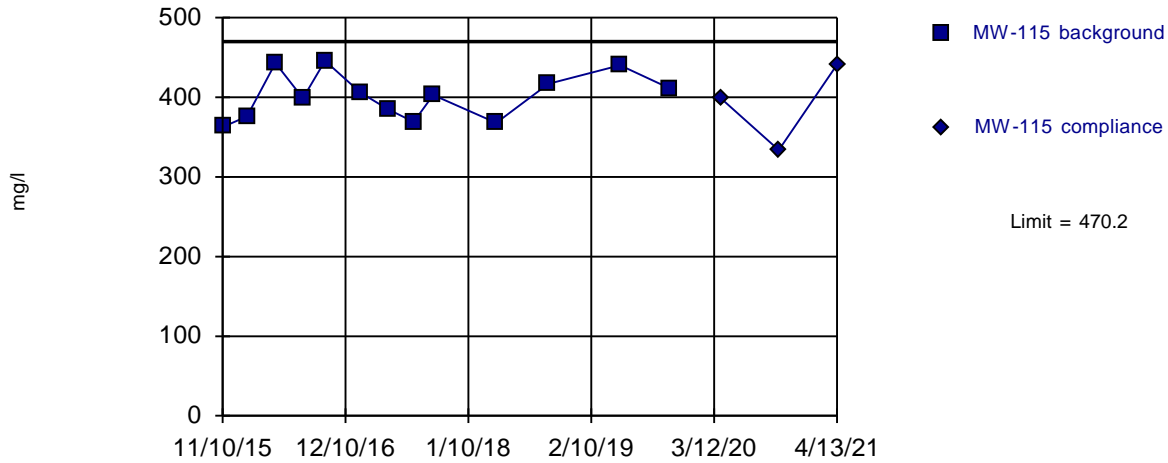
Background Data Summary: Mean=324.1, Std. Dev.=17.1, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8564, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



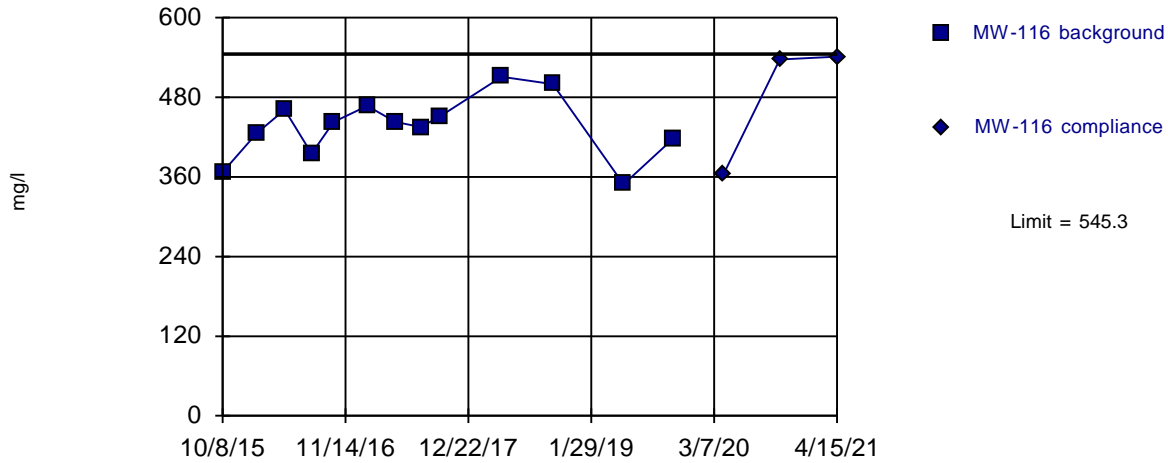
Background Data Summary: Mean=402, Std. Dev.=29.05, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9251, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



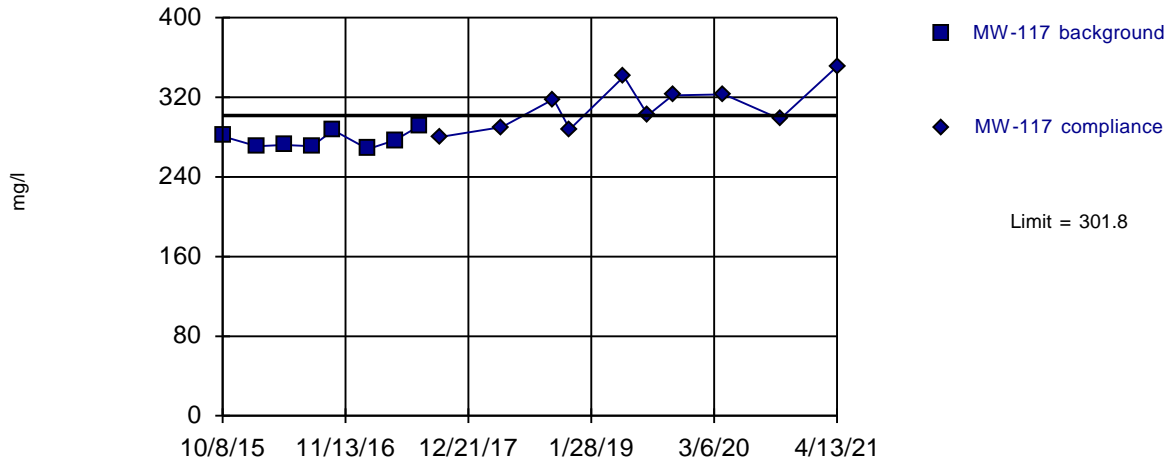
Background Data Summary: Mean=435.8, Std. Dev.=46.64, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9697, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric



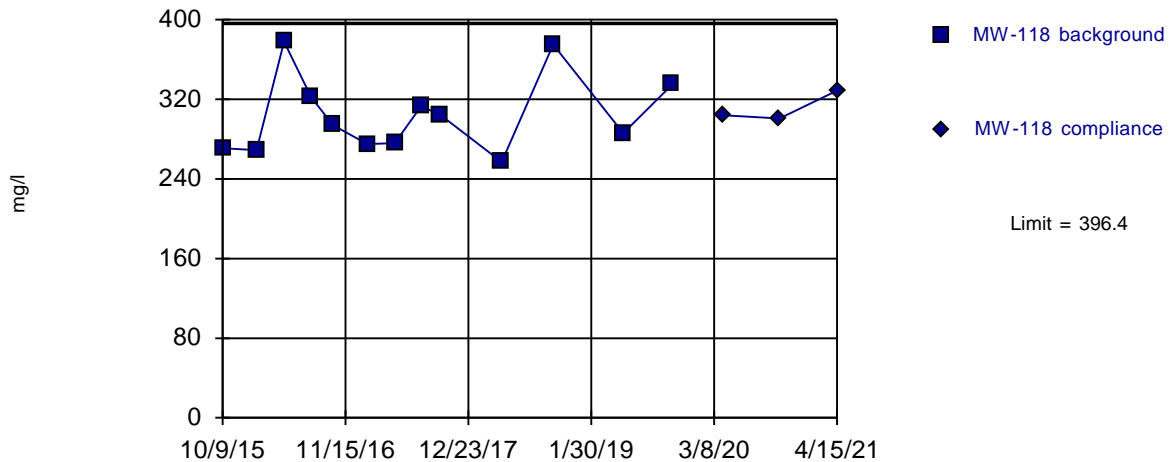
Background Data Summary: Mean=277.4, Std. Dev.=8.601, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9018, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

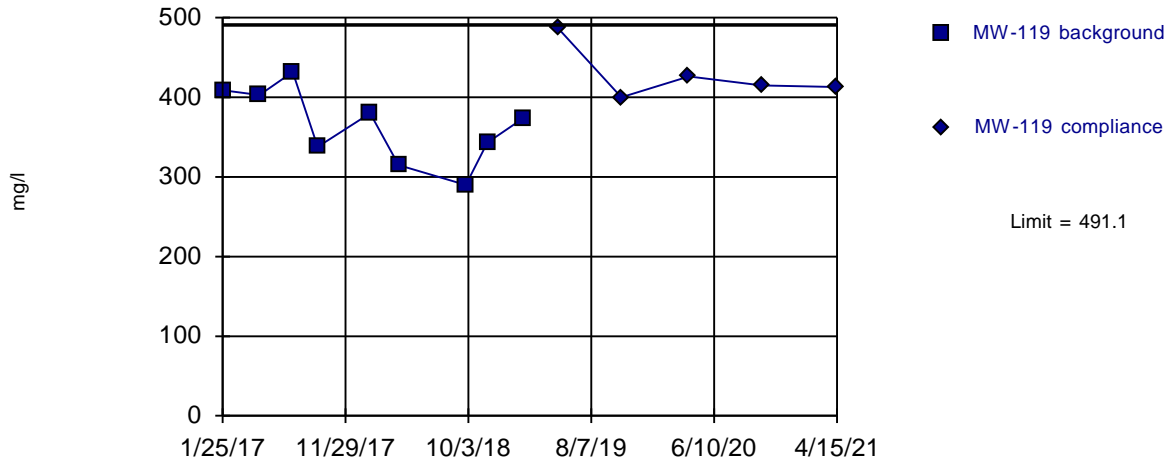
Within Limit

Prediction Limit Intrawell Parametric



Within Limit

Prediction Limit
Intrawell Parametric



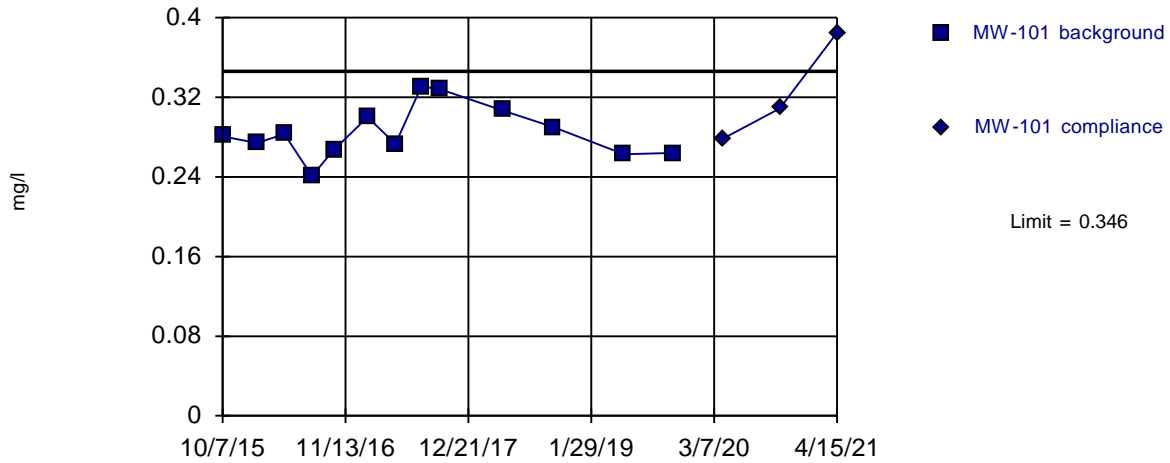
Background Data Summary: Mean=364.9, Std. Dev.=46.79, n=9. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9717, critical = 0.764. Kappa = 2.698 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit
Intrawell Parametric



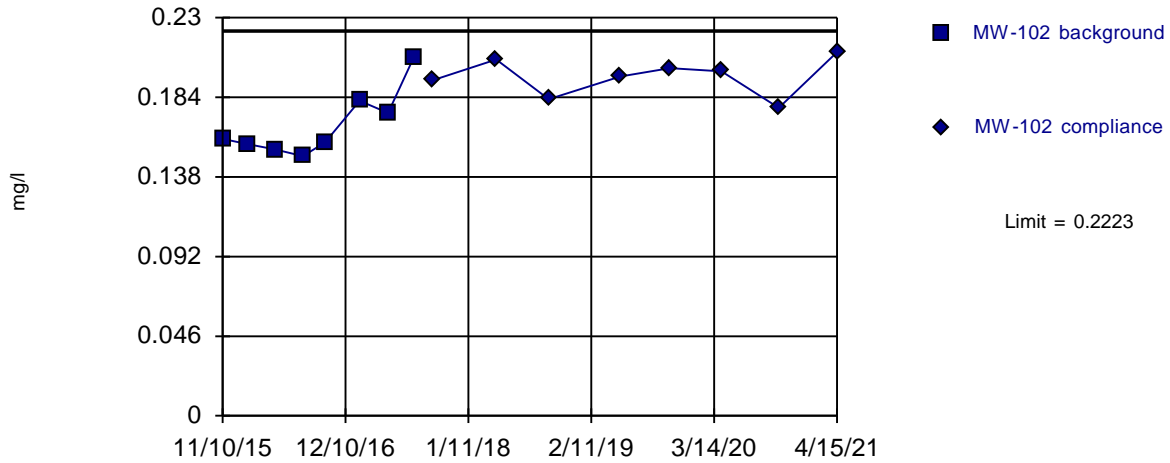
Background Data Summary: Mean=0.2848, Std. Dev.=0.02609, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9524, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



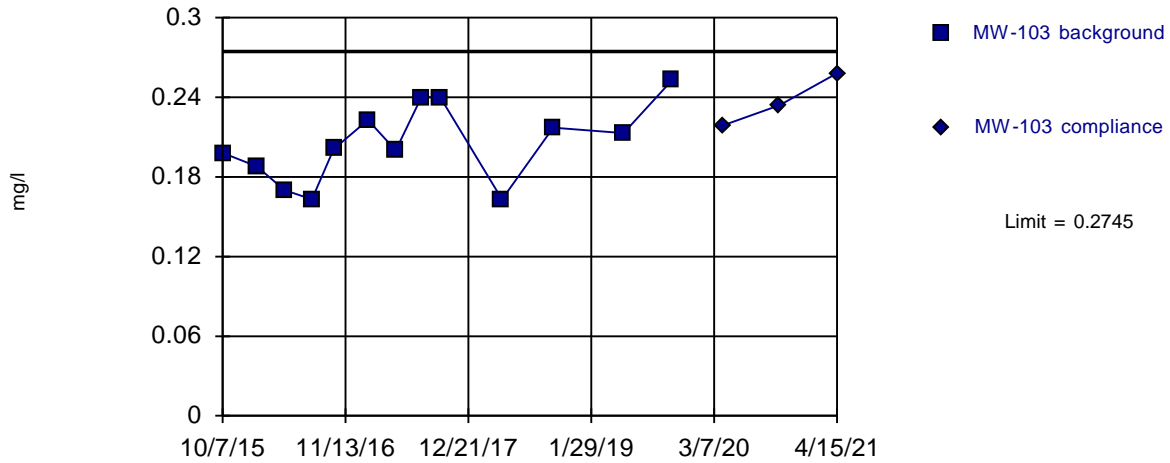
Background Data Summary: Mean=0.1679, Std. Dev.=0.01916, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8449, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



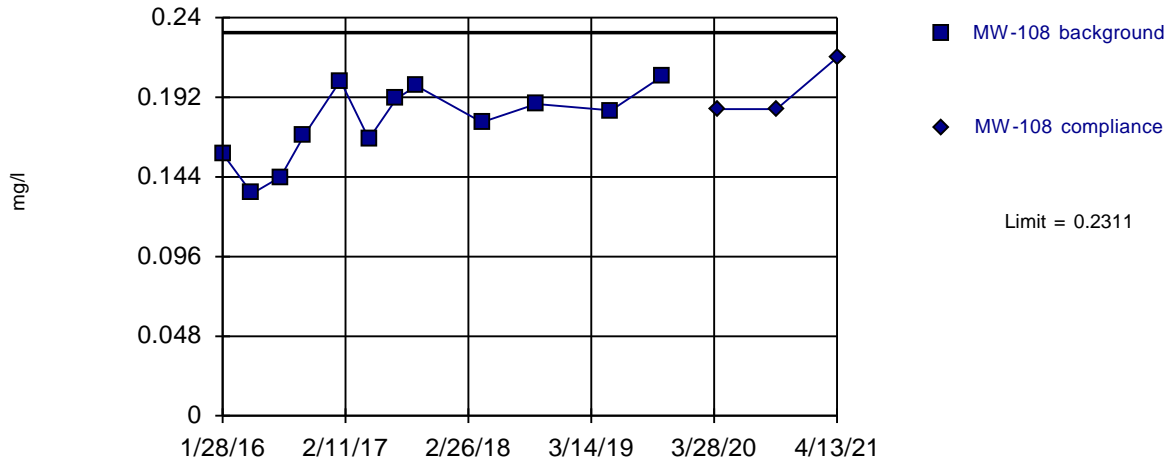
Background Data Summary: Mean=0.2053, Std. Dev.=0.02946, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.95, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



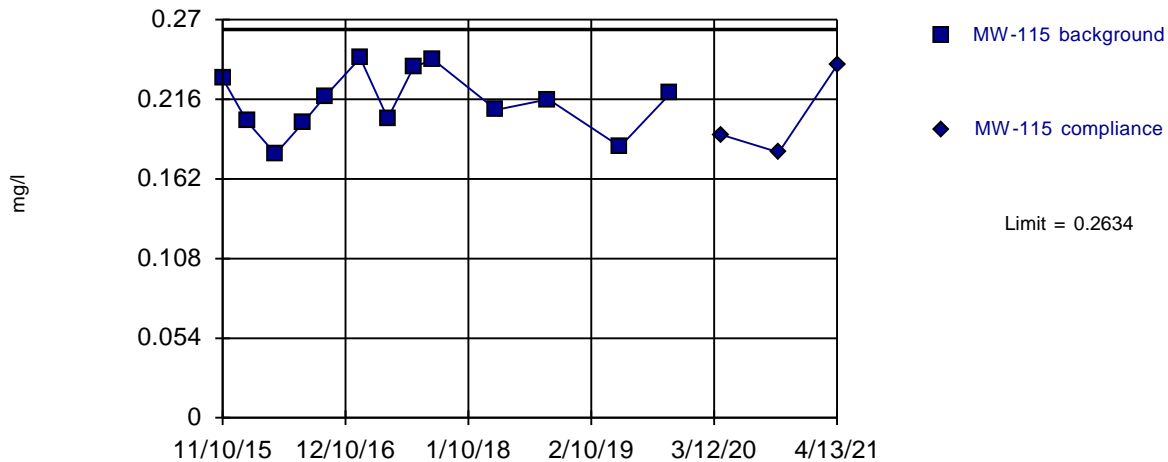
Background Data Summary: Mean=0.1765, Std. Dev.=0.0228, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9459, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



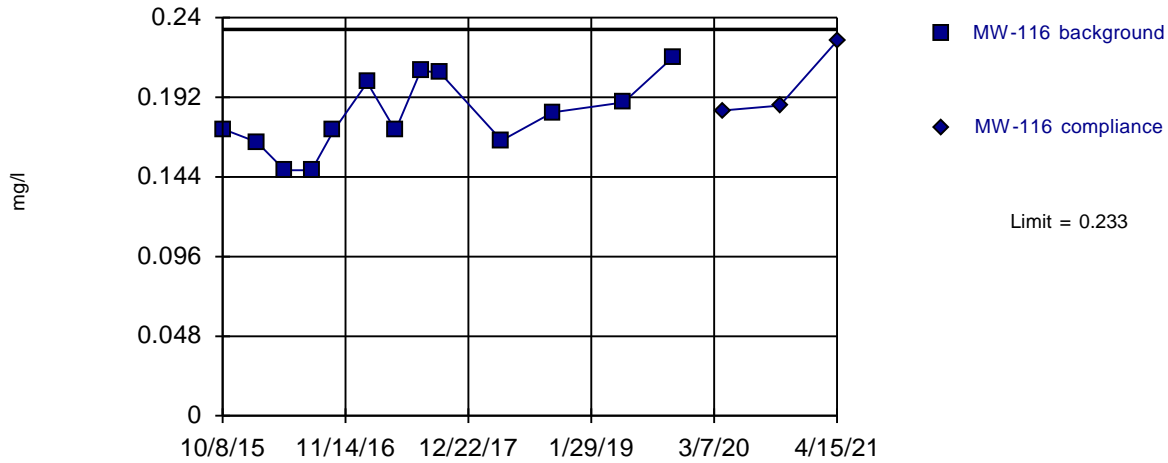
Background Data Summary: Mean=0.2142, Std. Dev.=0.02094, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9554, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

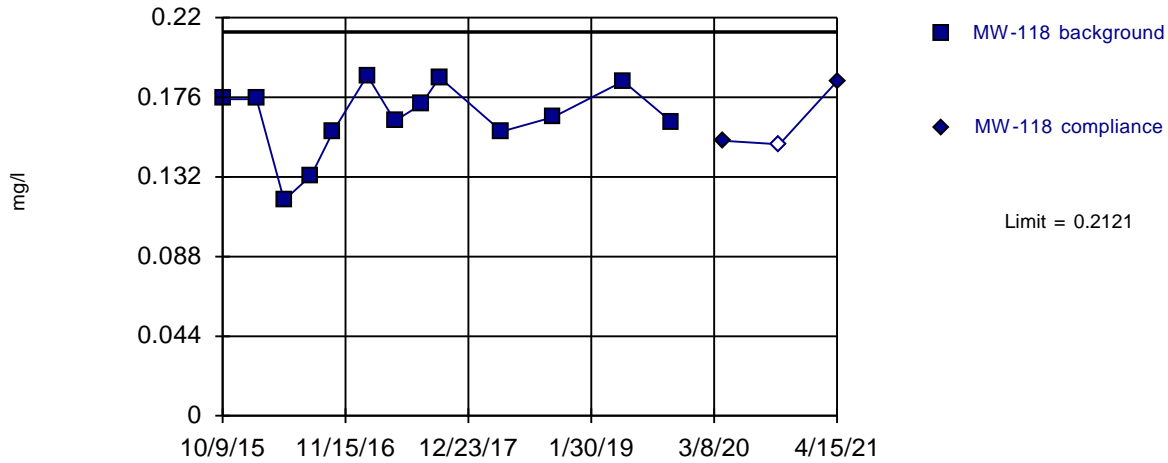
Within Limit

Prediction Limit
Intrawell Parametric



Within Limit

Prediction Limit Intrawell Parametric



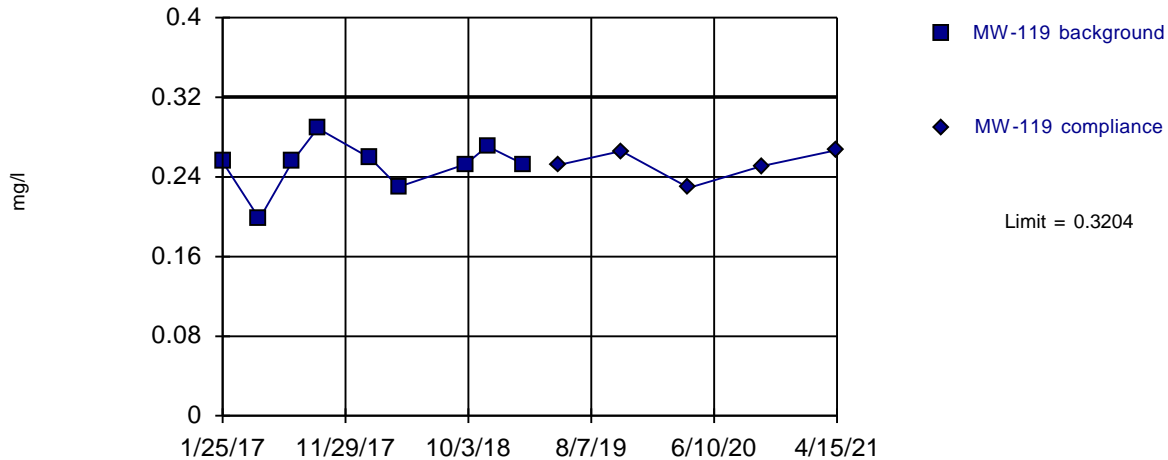
Background Data Summary: Mean=0.1645, Std. Dev.=0.02029, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

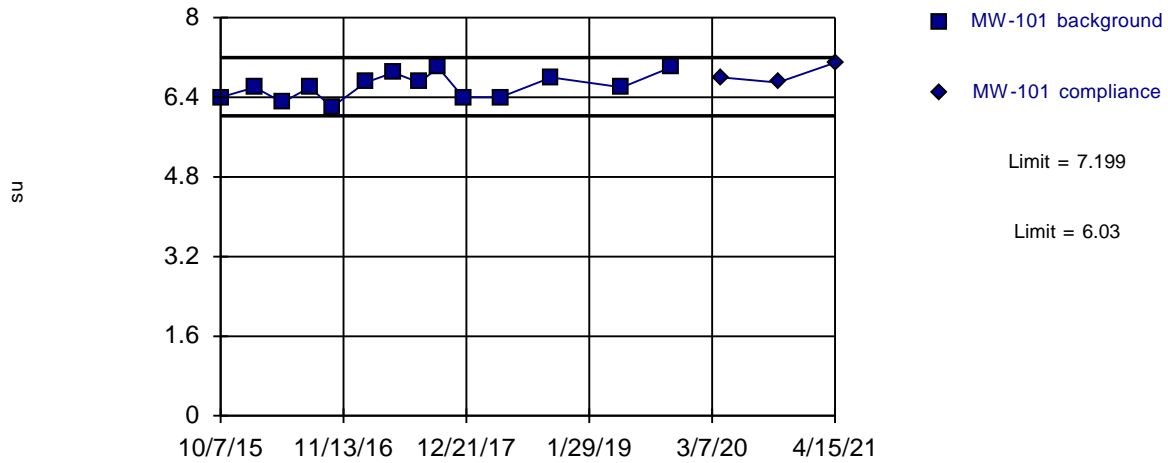
Within Limit

Prediction Limit Intrawell Parametric



Within Limits

Prediction Limit Intrawell Parametric



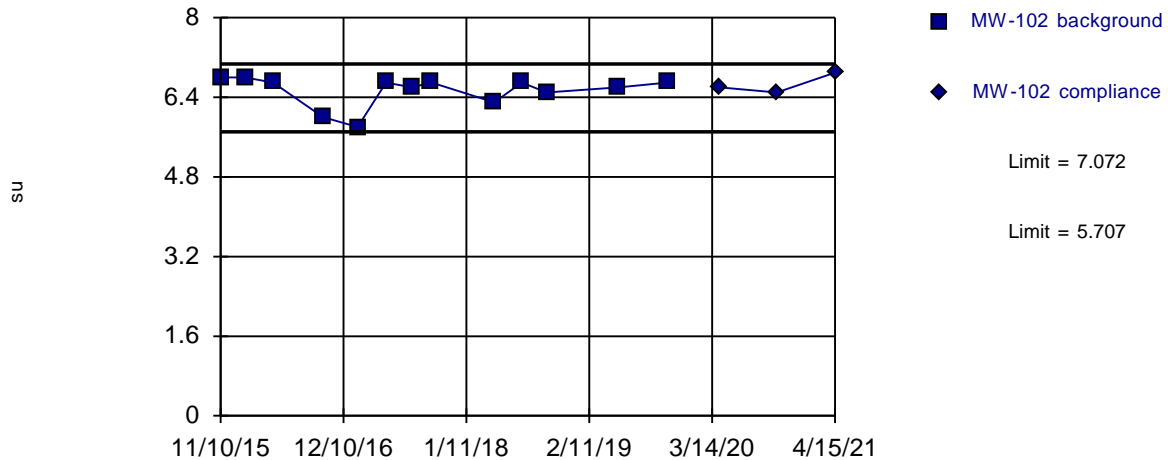
Background Data Summary: Mean=6.614, Std. Dev.=0.2538, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9502, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



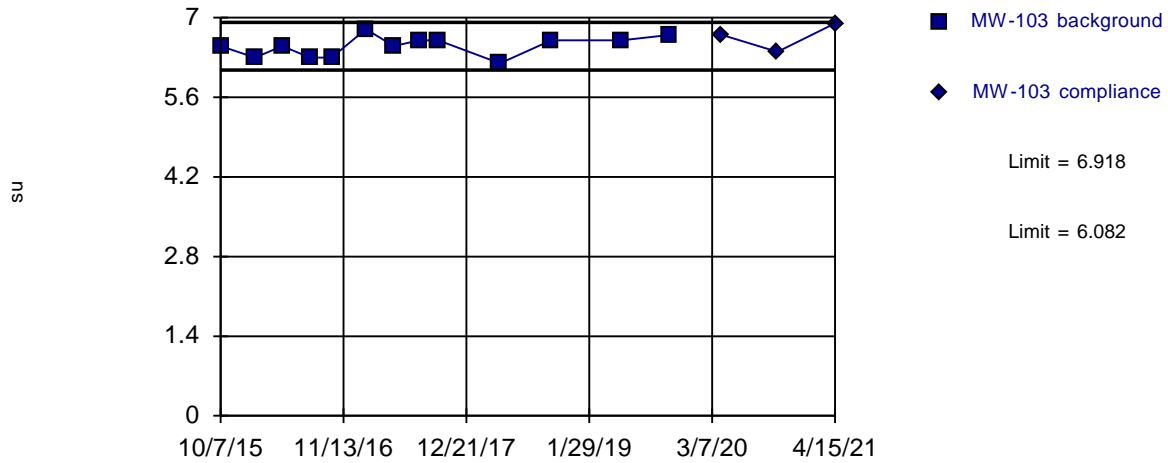
Background Data Summary (based on x^6 transformation): Mean=79846, Std. Dev.=19298, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8197, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



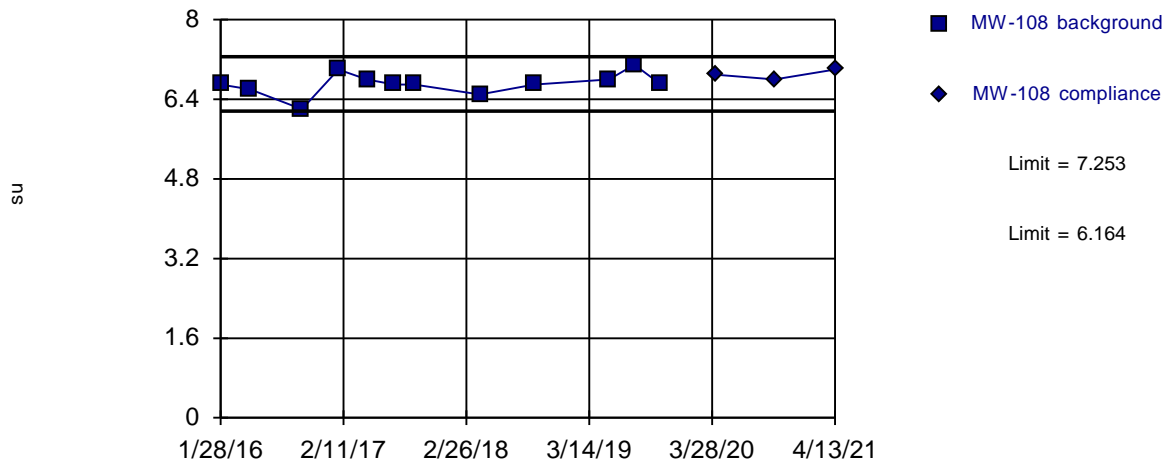
Background Data Summary: Mean=6.5, Std. Dev.=0.178, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.93, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



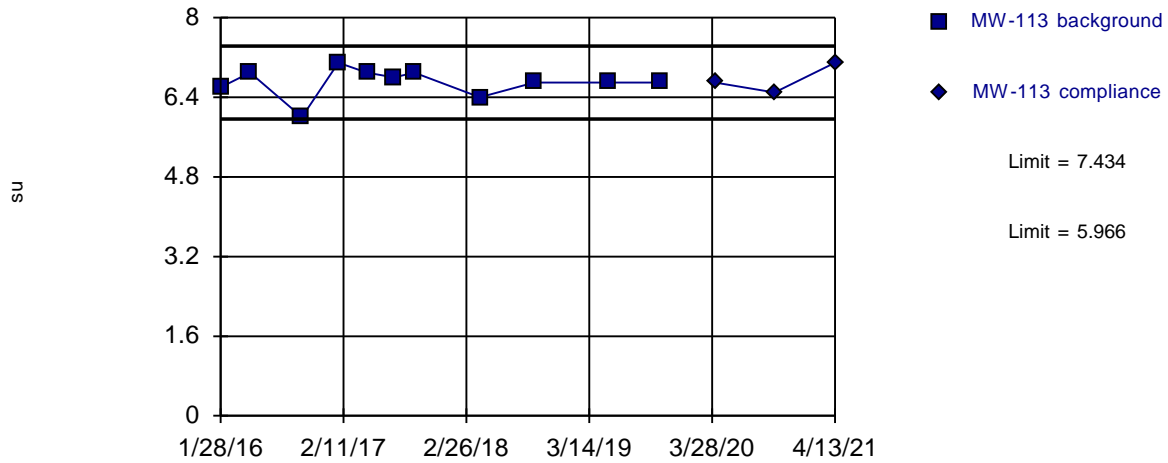
Background Data Summary: Mean=6.708, Std. Dev.=0.2275, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9154, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



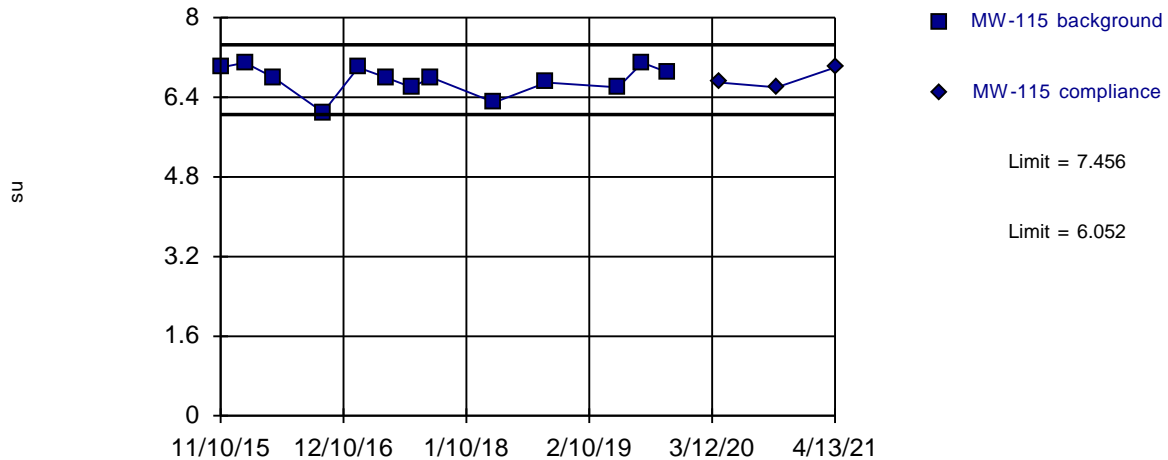
Background Data Summary: Mean=6.7, Std. Dev.=0.2966, n=11. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8904, critical = 0.792. Kappa = 2.474 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



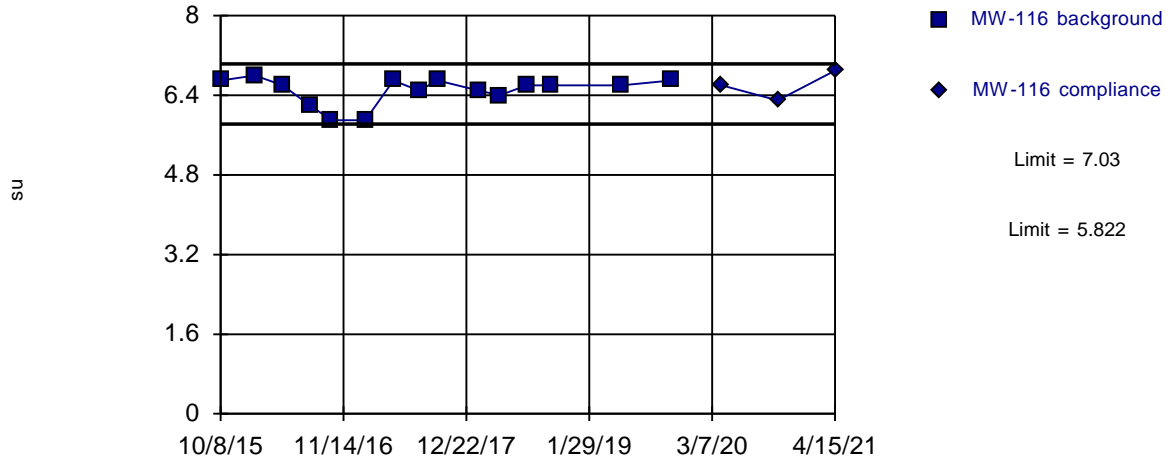
Background Data Summary: Mean=6.754, Std. Dev.=0.2989, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9115, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

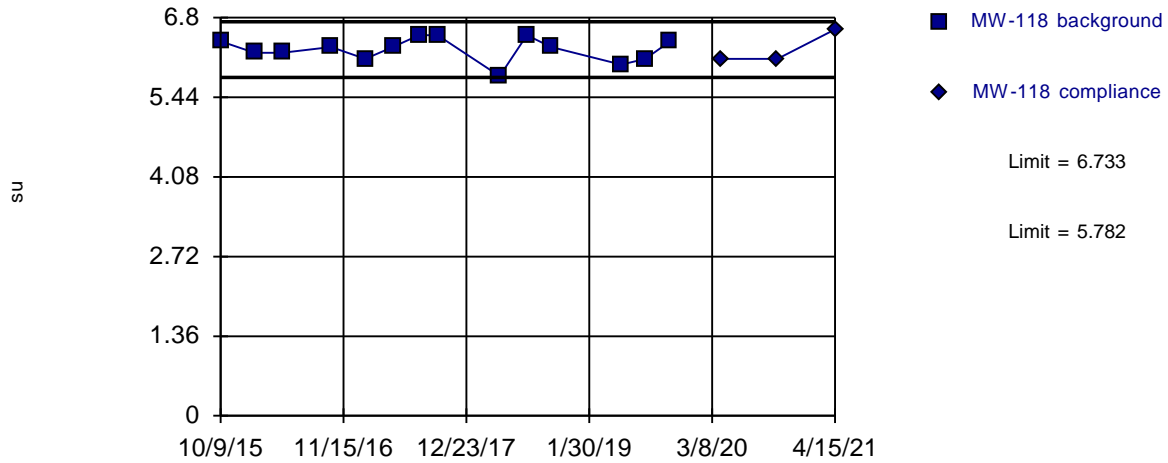
Within Limits

Prediction Limit Intrawell Parametric



Within Limits

Prediction Limit Intrawell Parametric



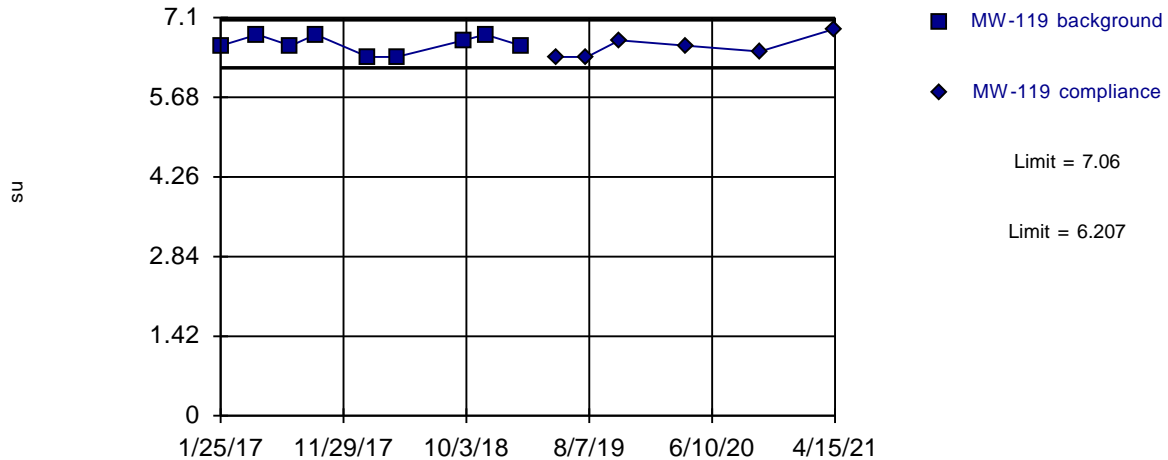
Background Data Summary: Mean=6.257, Std. Dev.=0.2065, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9301, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



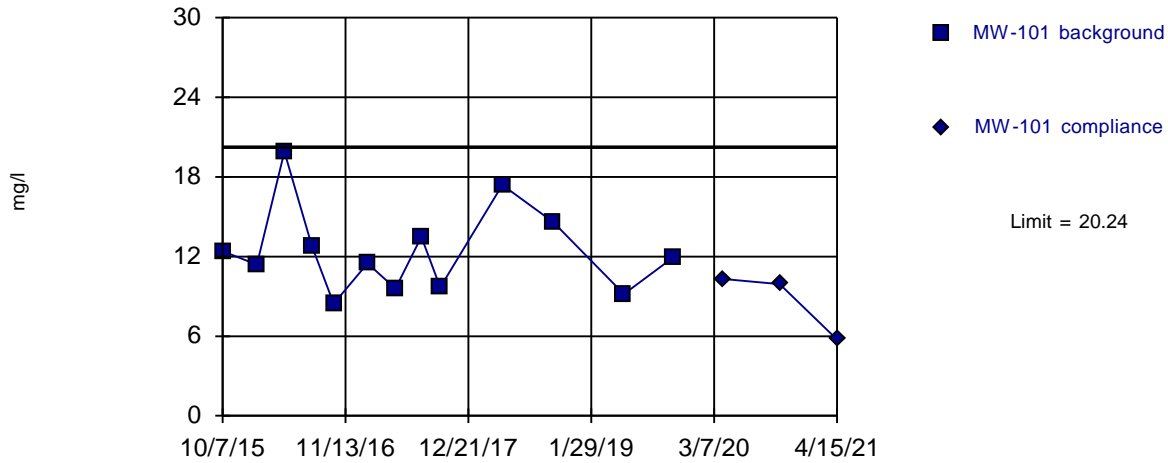
Background Data Summary: Mean=6.633, Std. Dev.=0.1581, n=9. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8581, critical = 0.764. Kappa = 2.698 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



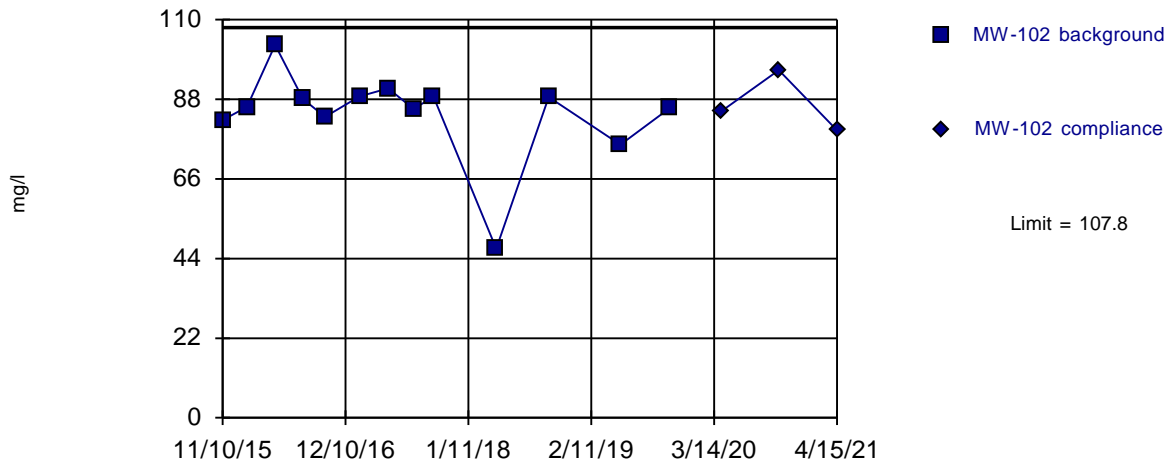
Background Data Summary: Mean=12.48, Std. Dev.=3.303, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9149, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



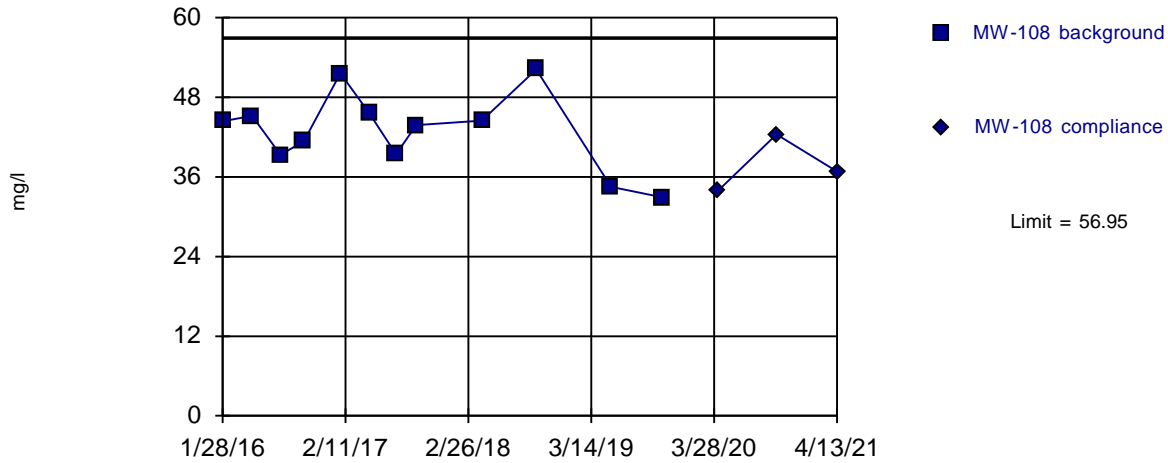
Background Data Summary (based on square transformation): Mean=7217, Std. Dev.=1876, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8224, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



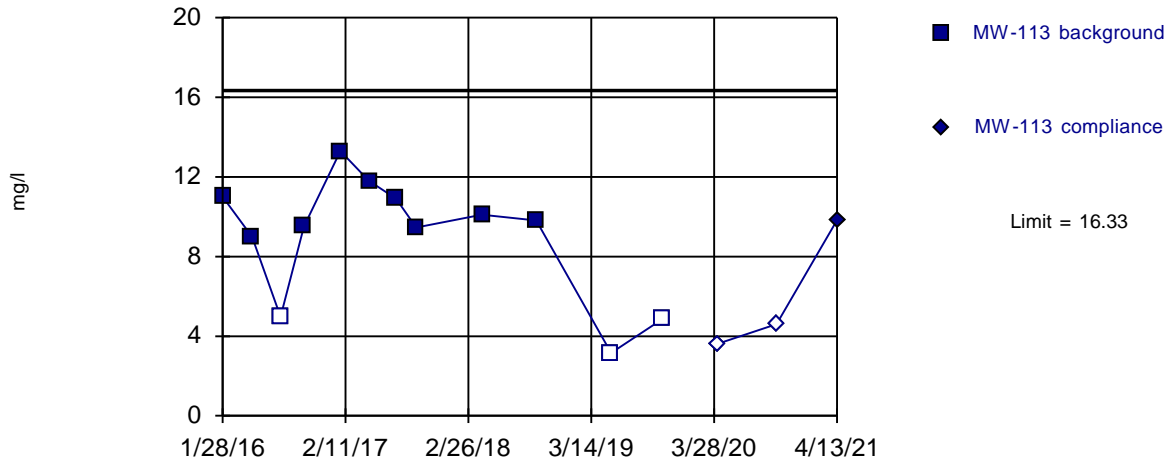
Background Data Summary: Mean=42.91, Std. Dev.=5.869, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9505, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



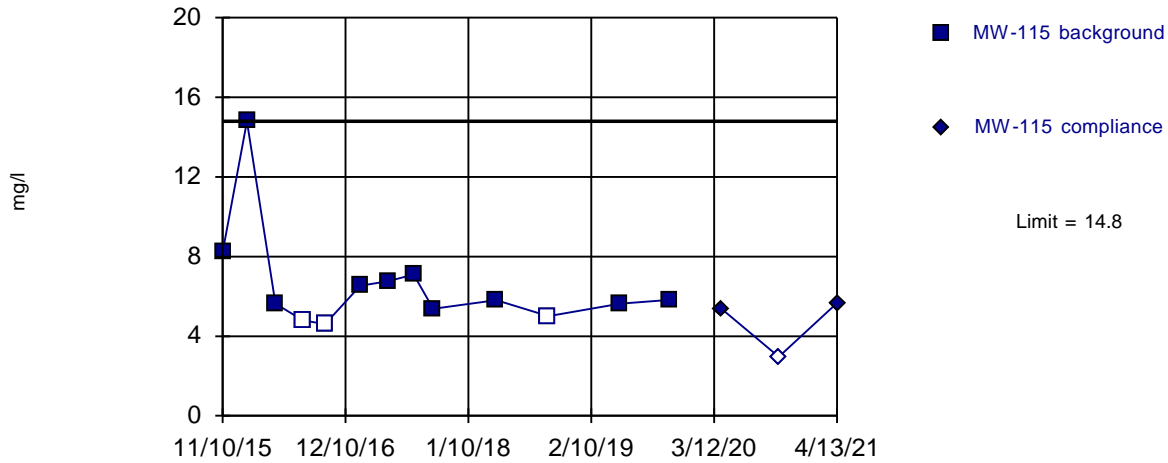
Background Data Summary: Mean=8.988, Std. Dev.=3.07, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8971, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Non-parametric



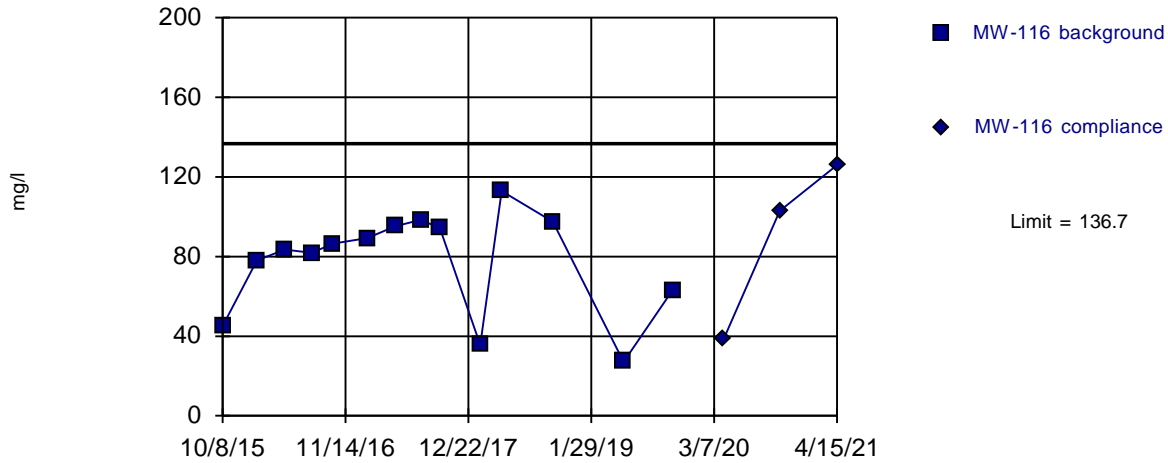
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 13 background values. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



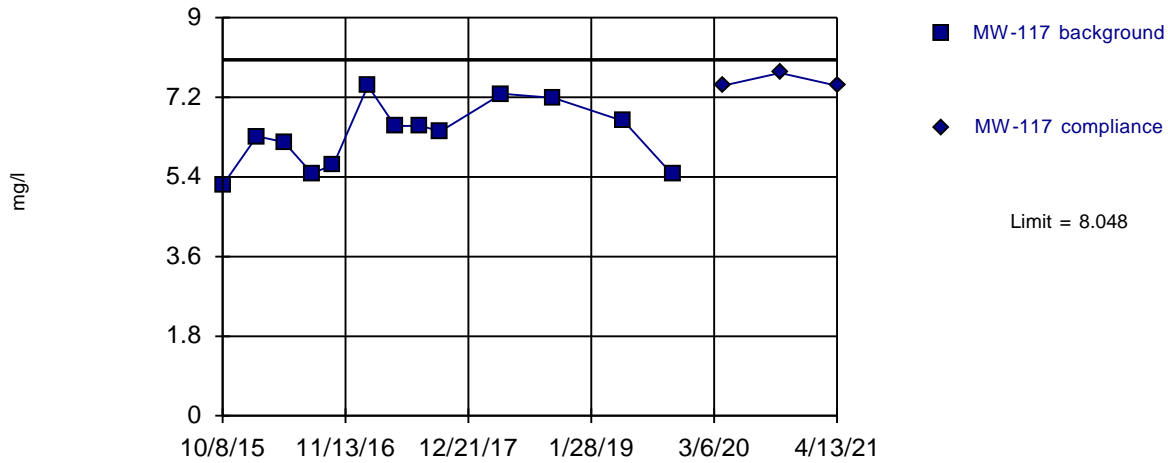
Background Data Summary: Mean=77.71, Std. Dev.=25.62, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8937, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



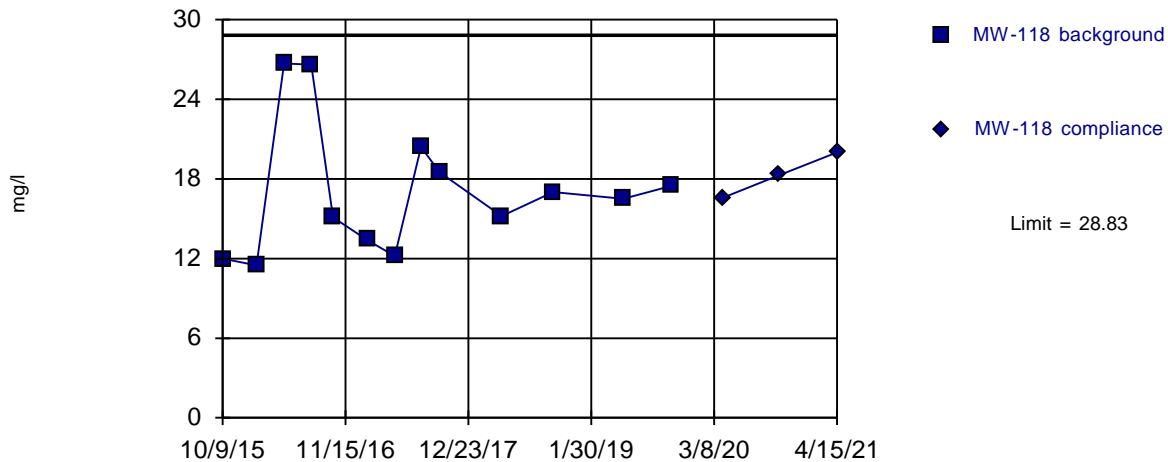
Background Data Summary: Mean=6.343, Std. Dev.=0.7263, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9459, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



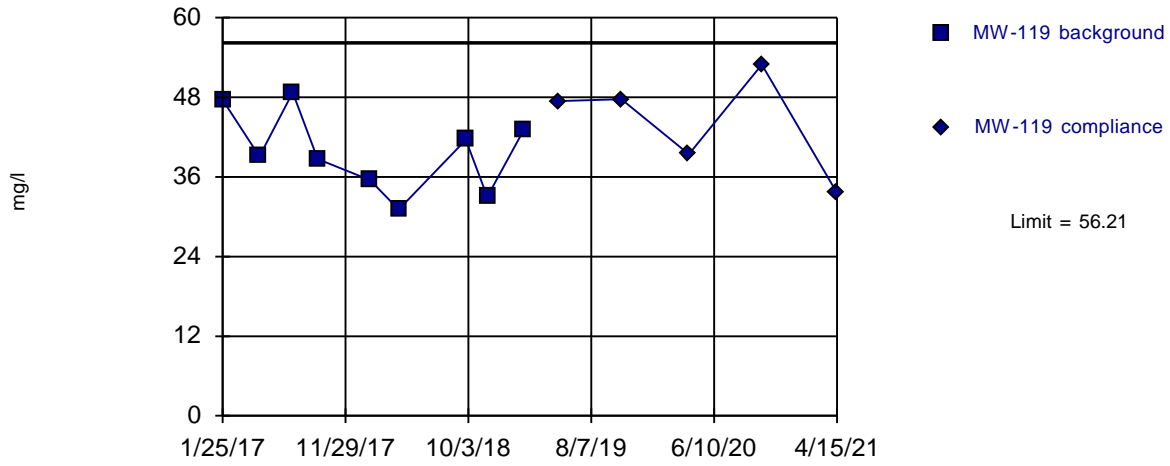
Background Data Summary: Mean=17.12, Std. Dev.=4.987, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8803, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=39.81, Std. Dev.=6.079, n=9. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.961, critical = 0.764. Kappa = 2.698 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

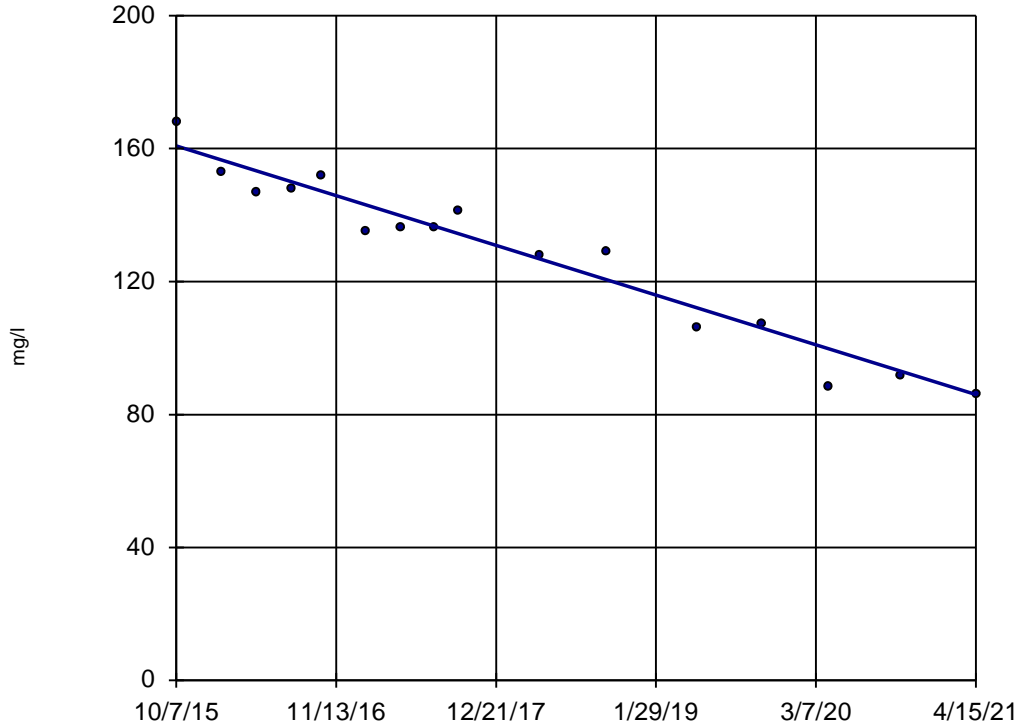
Constituent: Sulfate Analysis Run 5/12/2021 8:35 AM View: 2021-1H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Trend Testing, First Half 2021 Monitoring Event

Sen's Slope Estimator

MW-103



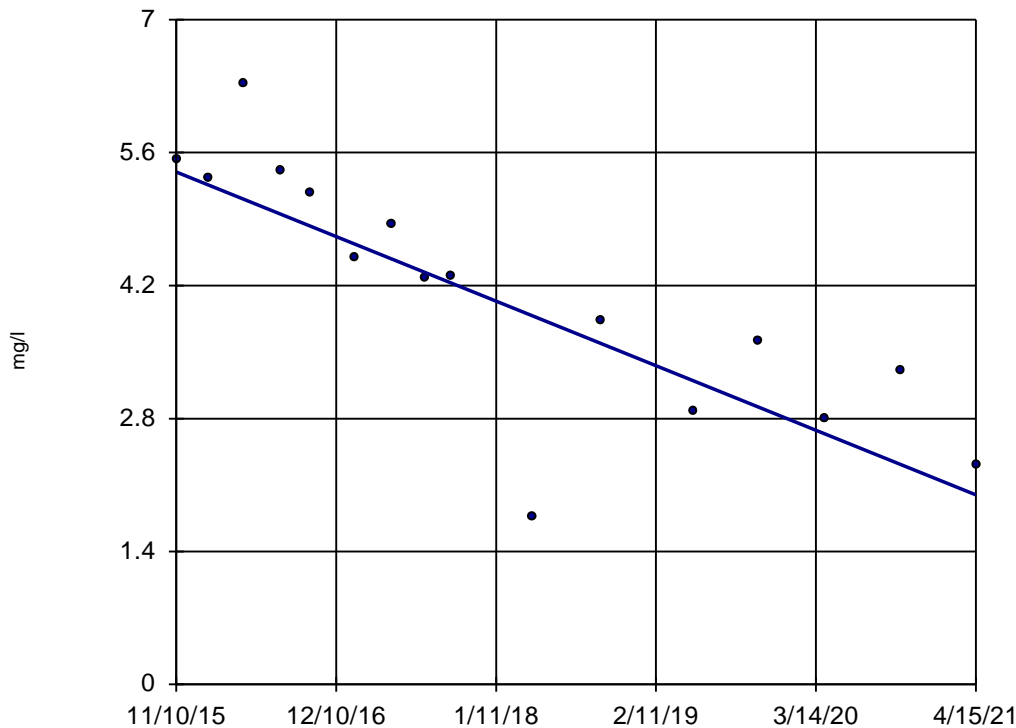
n = 16
Slope = -13.54 units per year.
Mann-Kendall statistic = -97 critical = -53
Decreasing trend significant at 98% confidence level ($\alpha = 0.01$ per tail).

Constituent: Calcium Analysis Run 5/12/2021 8:37 AM View: 2021-1H Trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

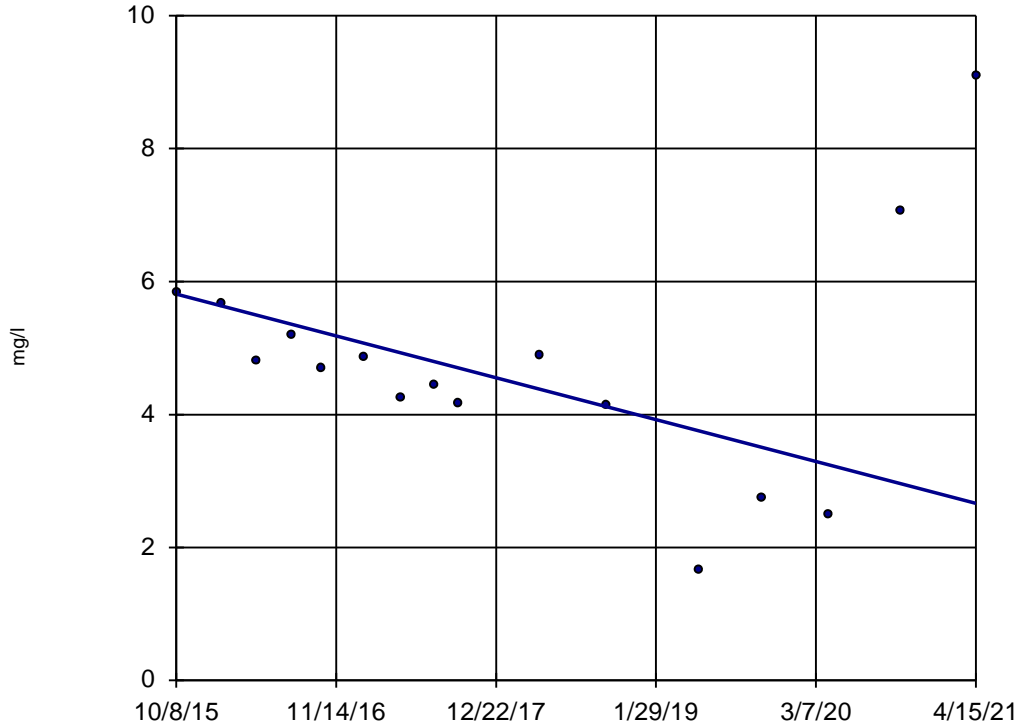
Sen's Slope Estimator

MW-102



Sen's Slope Estimator

MW-116



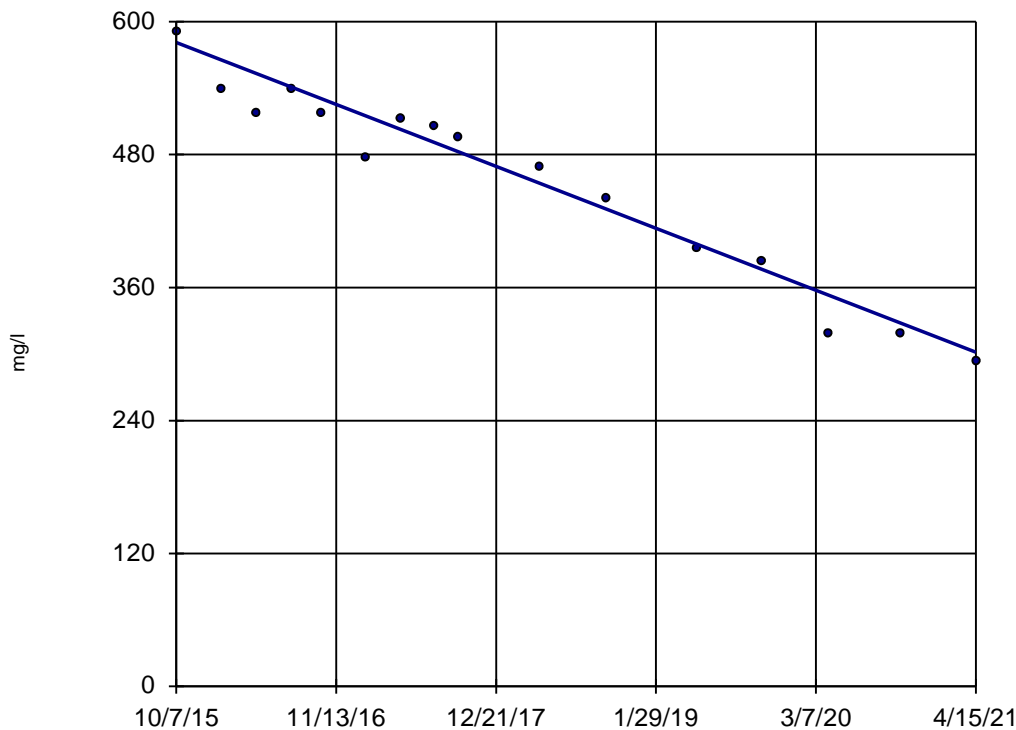
n = 16
Slope = -0.5703
units per year.
Mann-Kendall
statistic = -38
critical = -53
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 5/12/2021 8:37 AM View: 2021-1H Trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-103



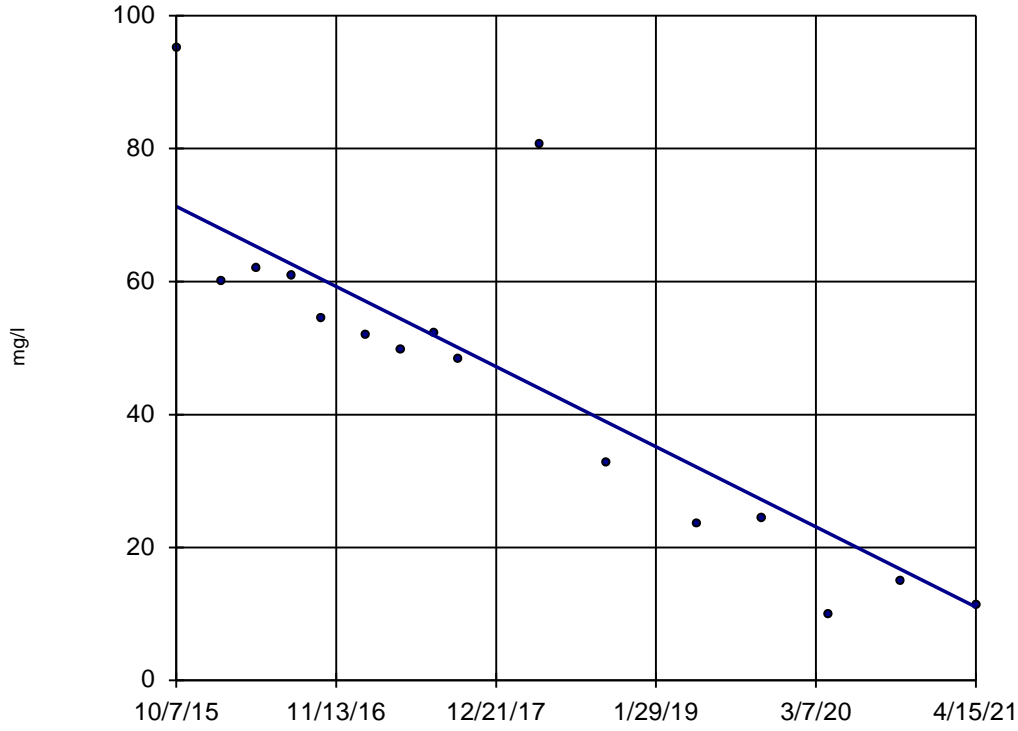
n = 16
Slope = -50.58
units per year.
Mann-Kendall
statistic = -107
critical = -53
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Dissolved Solids Analysis Run 5/12/2021 8:37 AM View: 2021-1H Trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-103



n = 16
Slope = -10.91
units per year.
Mann-Kendall
statistic = -90
critical = -53
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

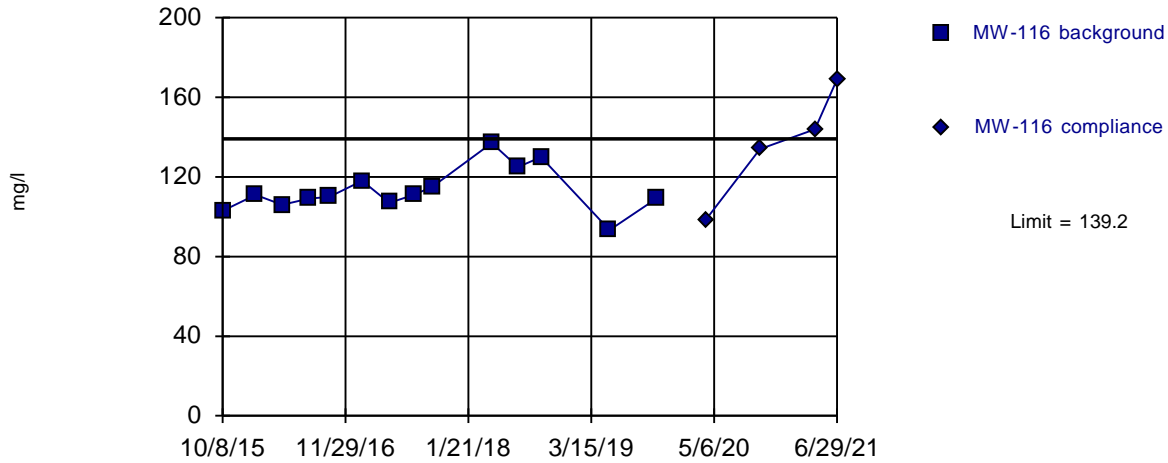
Constituent: Sulfate Analysis Run 5/12/2021 8:37 AM View: 2021-1H Trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Prediction Limits, First Half 2021 Verification Sampling Event

Exceeds Limit

Prediction Limit Intrawell Parametric



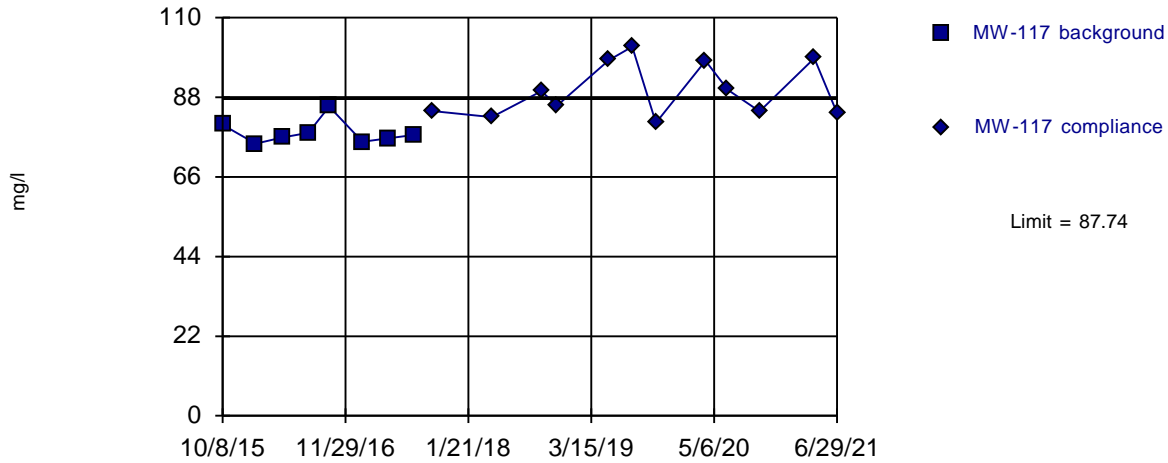
Background Data Summary: Mean=113.2, Std. Dev.=11.31, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9391, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 7/19/2021 10:41 PM View: 2021-1H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



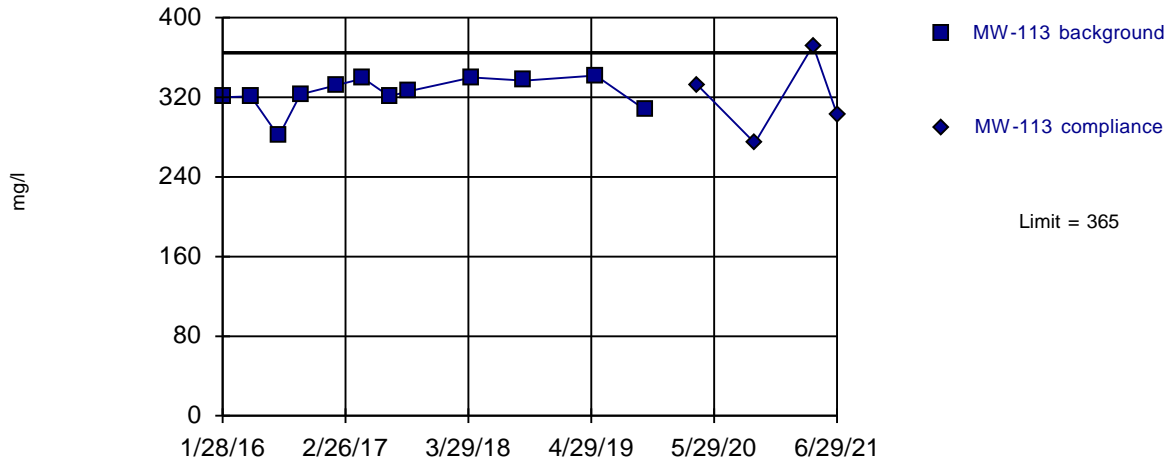
Background Data Summary: Mean=78.28, Std. Dev.=3.33, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8288, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 7/19/2021 10:41 PM View: 2021-1H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

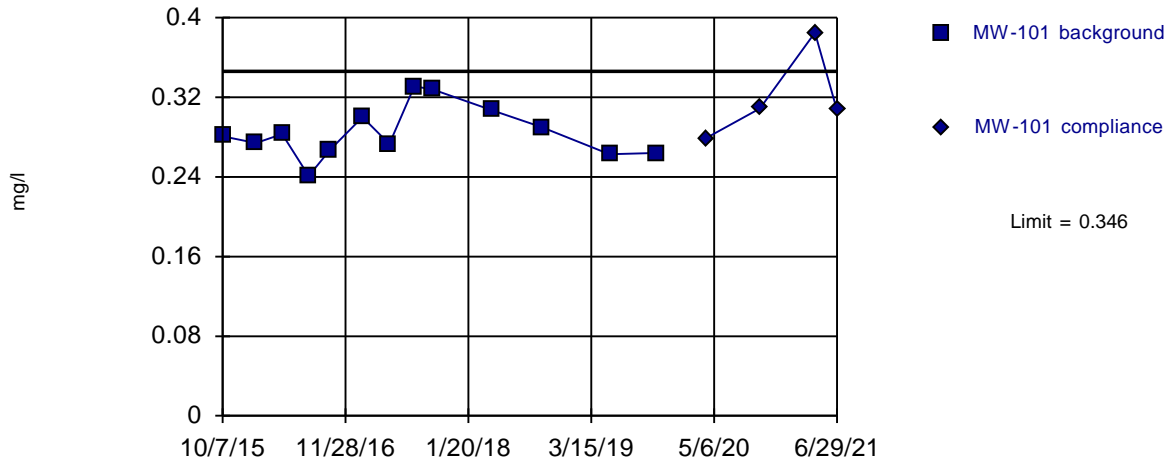
Within Limit

Prediction Limit Intrawell Parametric



Within Limit

Prediction Limit
Intrawell Parametric



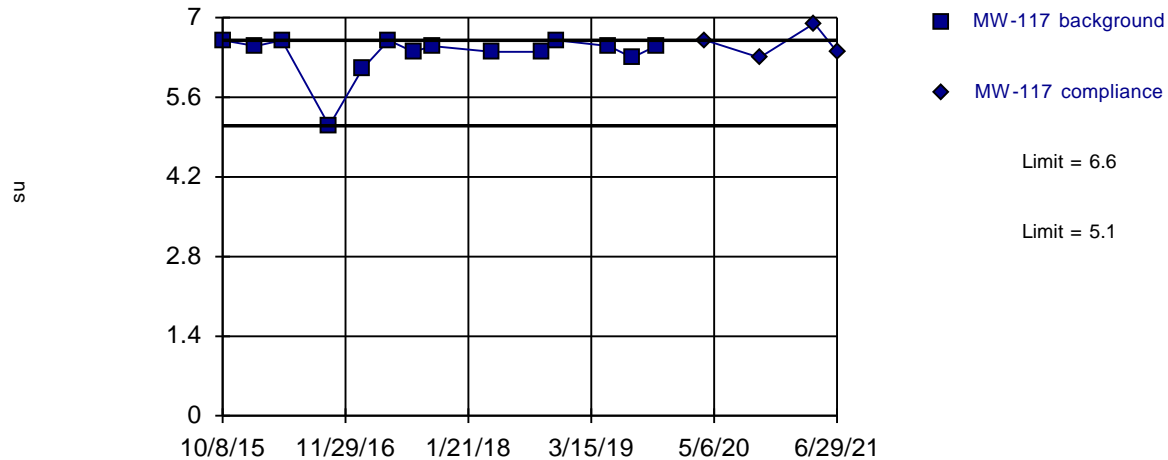
Background Data Summary: Mean=0.2848, Std. Dev.=0.02609, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9524, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 7/19/2021 10:41 PM View: 2021-1H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit
Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 14 background values. Well-constituent pair annual alpha = 0.0343. Individual comparison alpha = 0.01722 (1 of 2). Seasonality was not detected with 95% confidence.

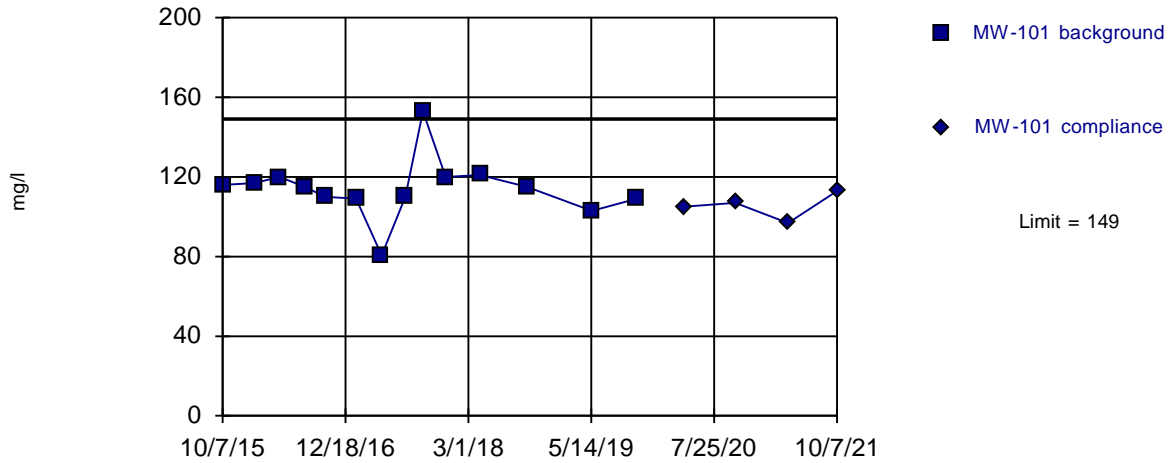
Constituent: pH Analysis Run 12/22/2021 11:29 AM View: 2021-1H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Prediction Limits, Second Half 2021 Monitoring Event

Within Limit

Prediction Limit Intrawell Parametric



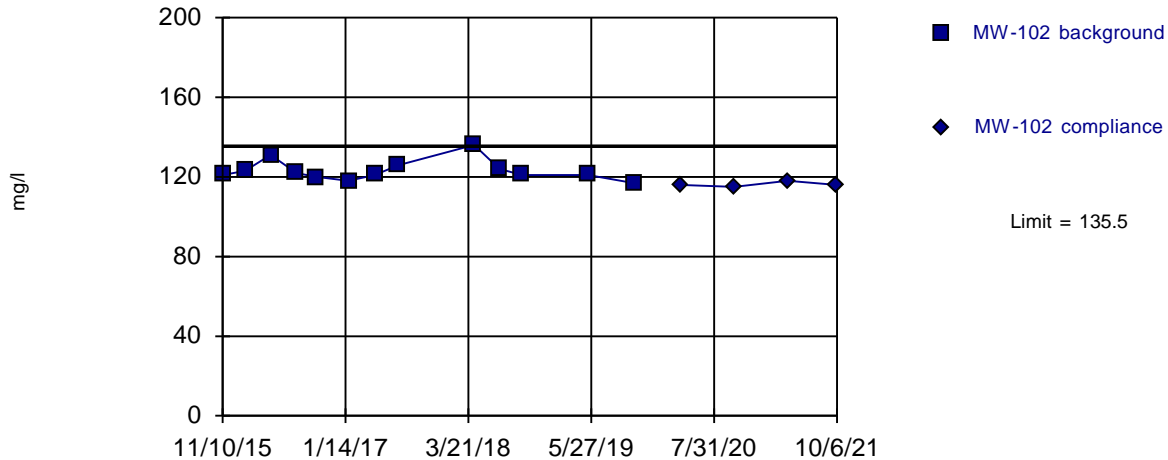
Background Data Summary: Mean=114.2, Std. Dev.=15.14, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8396, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



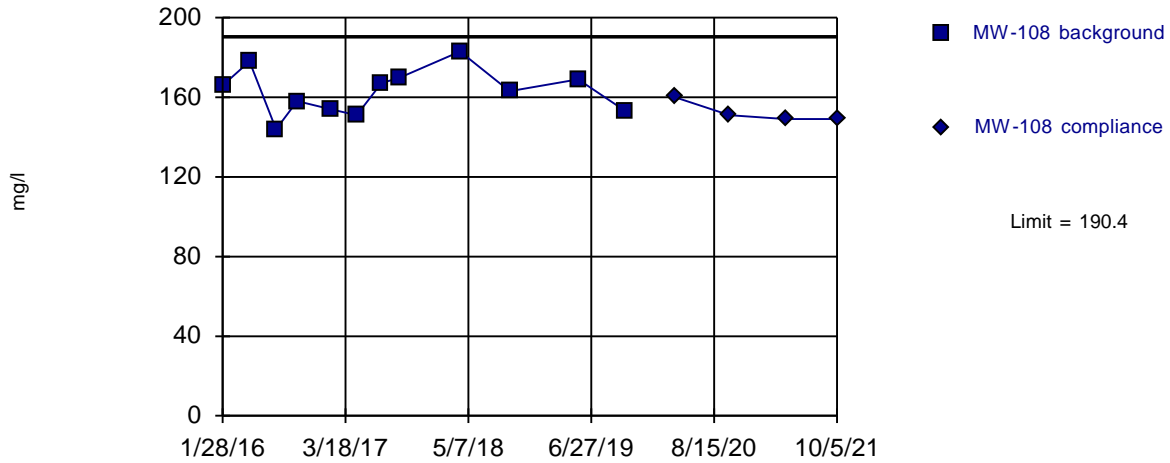
Background Data Summary: Mean=123.2, Std. Dev.=5.242, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8497, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



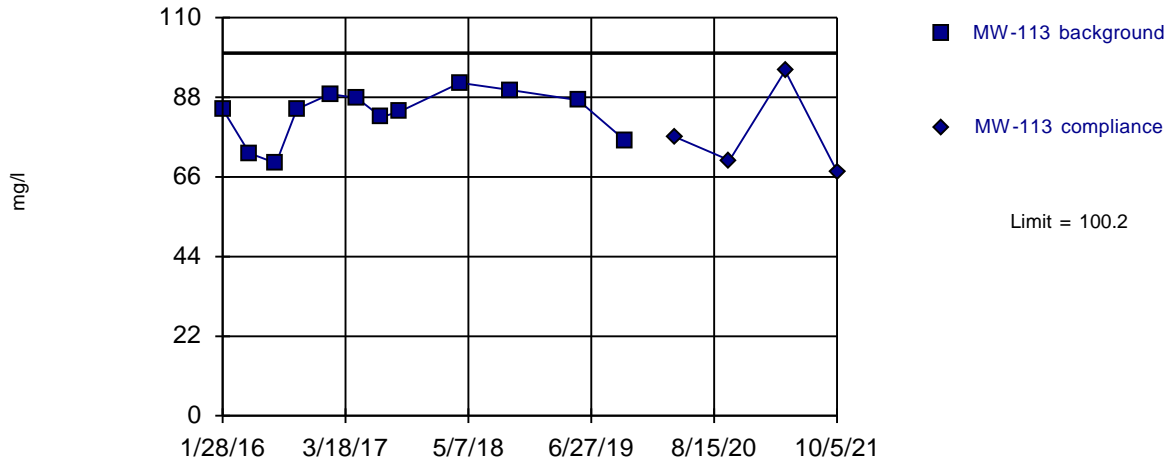
Background Data Summary: Mean=163, Std. Dev.=11.47, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9787, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



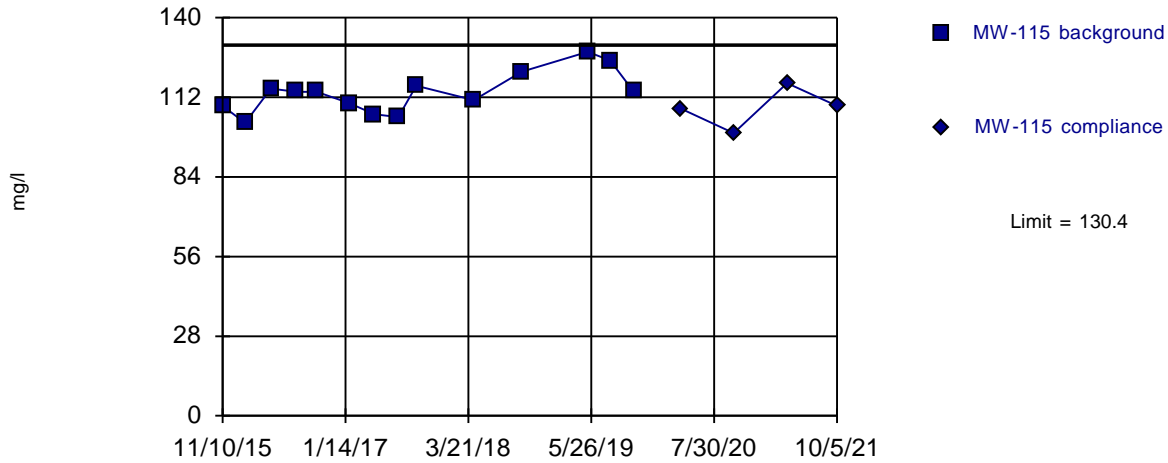
Background Data Summary: Mean=83.35, Std. Dev.=7.053, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8981, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



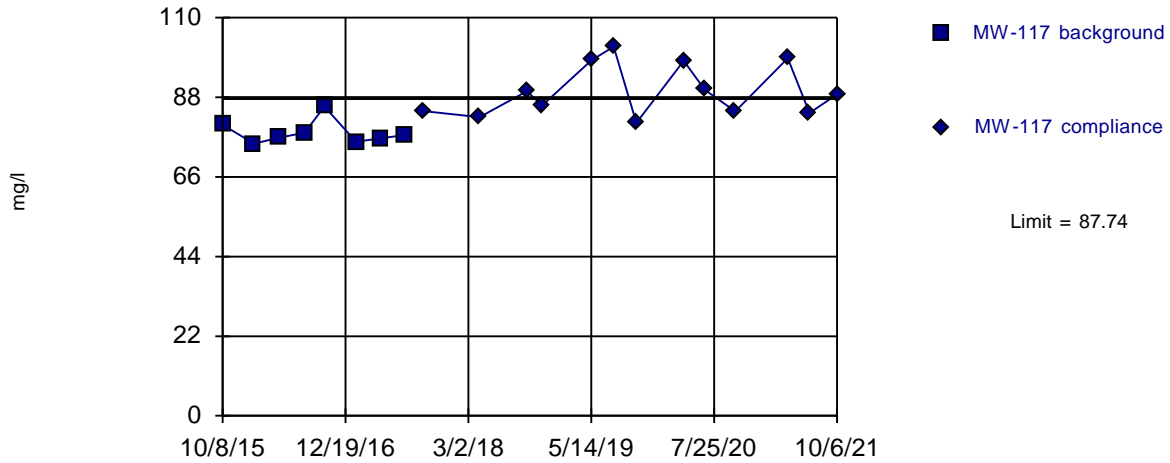
Background Data Summary: Mean=113.6, Std. Dev.=7.26, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9529, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric



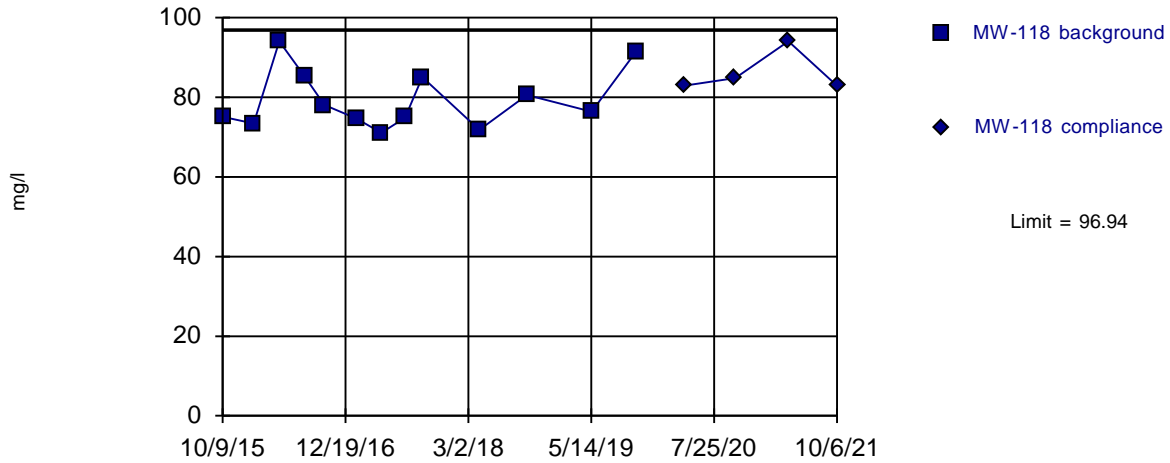
Background Data Summary: Mean=78.28, Std. Dev.=3.33, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8288, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



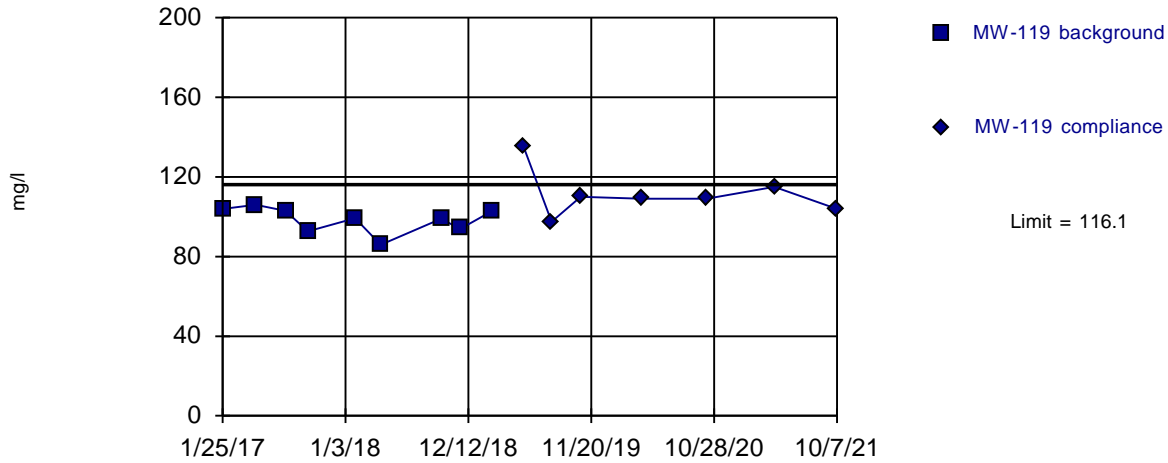
Background Data Summary: Mean=79.41, Std. Dev.=7.467, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8875, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



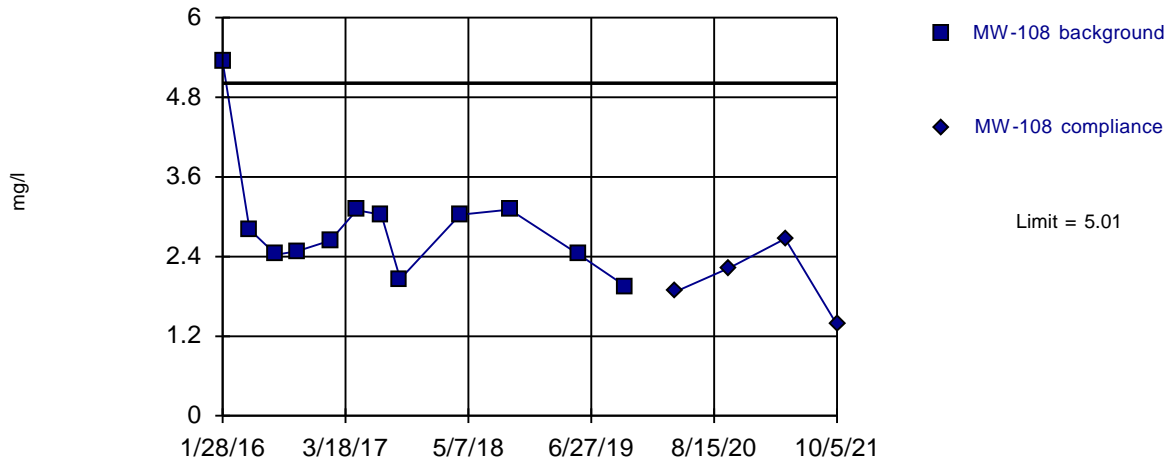
Background Data Summary: Mean=98.54, Std. Dev.=6.524, n=9. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9156, critical = 0.764. Kappa = 2.698 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



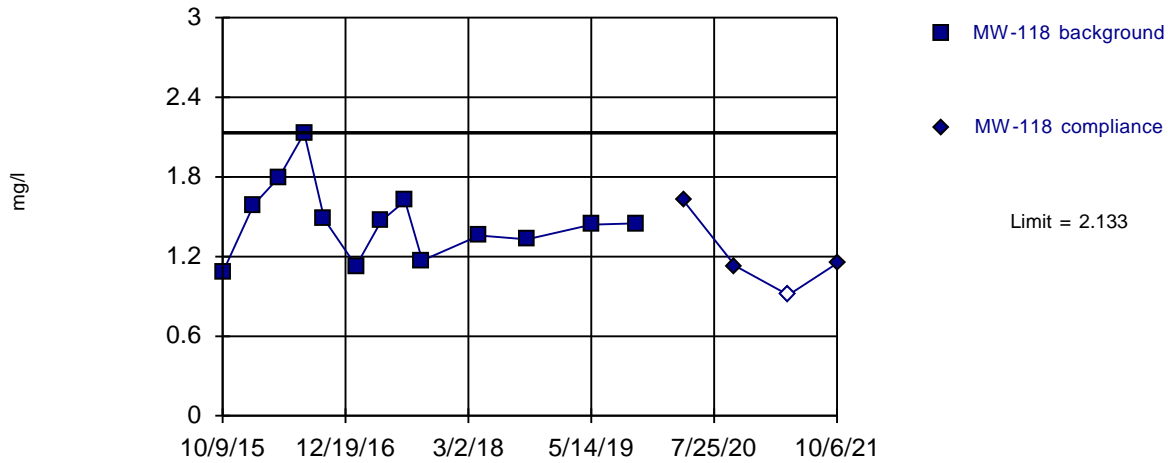
Background Data Summary (based on square root transformation): Mean=1.679, Std. Dev.=0.2339, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8197, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



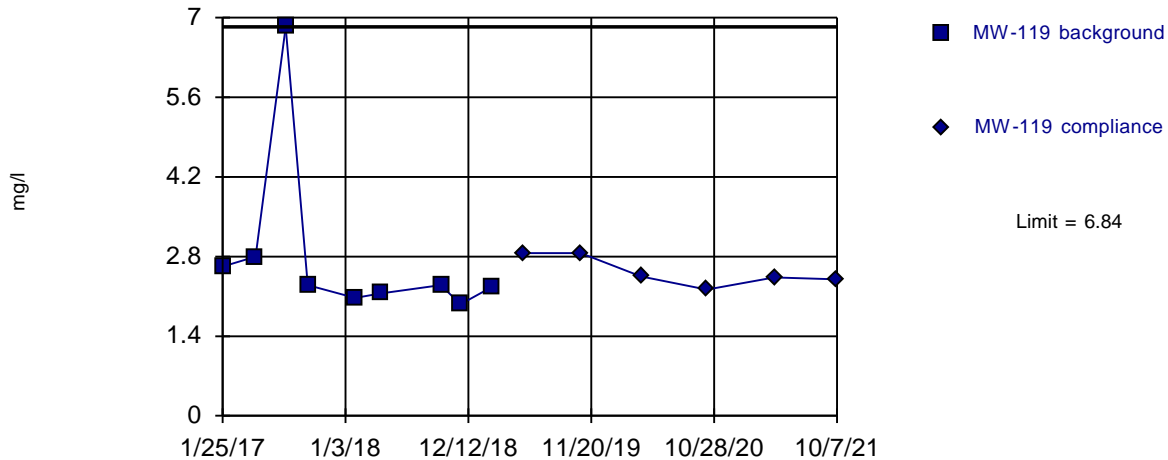
Background Data Summary: Mean=1.465, Std. Dev.=0.2846, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9348, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Chloride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Non-parametric



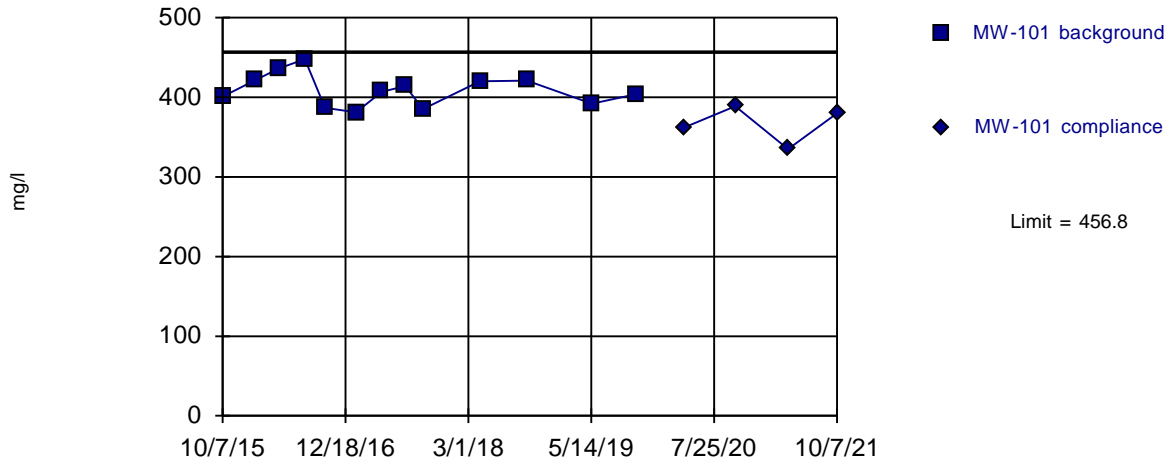
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 9 background values. Well-constituent pair annual alpha = 0.03586. Individual comparison alpha = 0.01809 (1 of 2). Insufficient data to test for seasonality: data were not deseasonalized.

Constituent: Chloride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



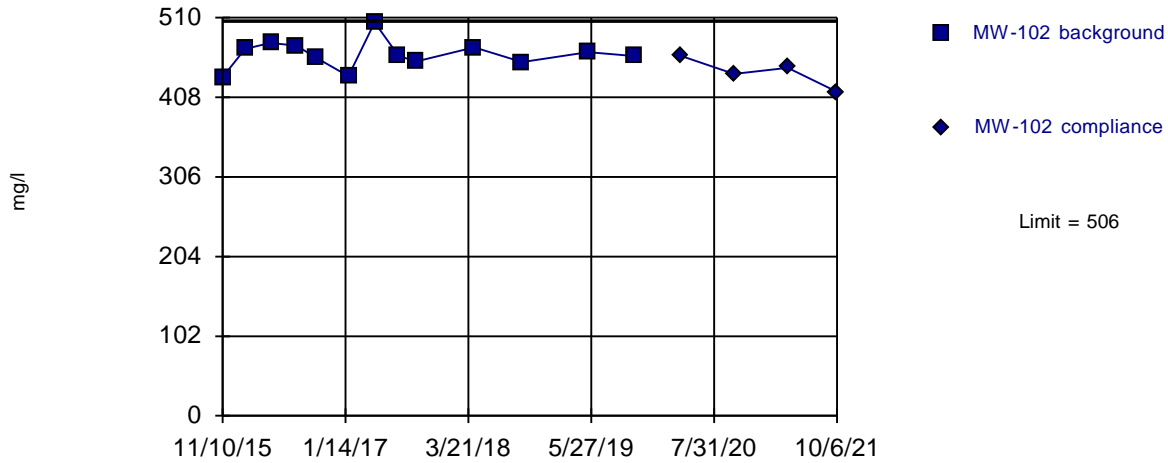
Background Data Summary: Mean=409.1, Std. Dev.=20.34, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9582, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



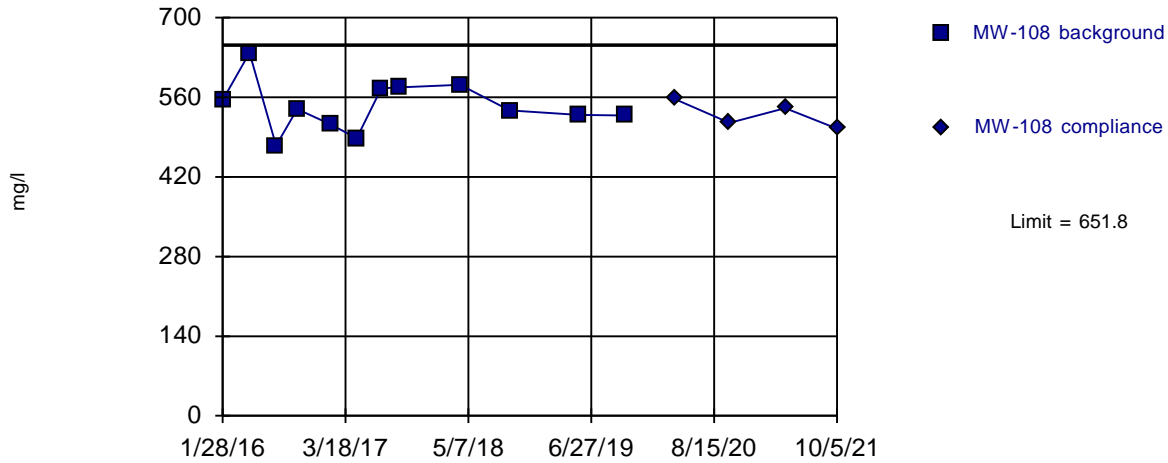
Background Data Summary: Mean=463.1, Std. Dev.=18.27, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9455, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



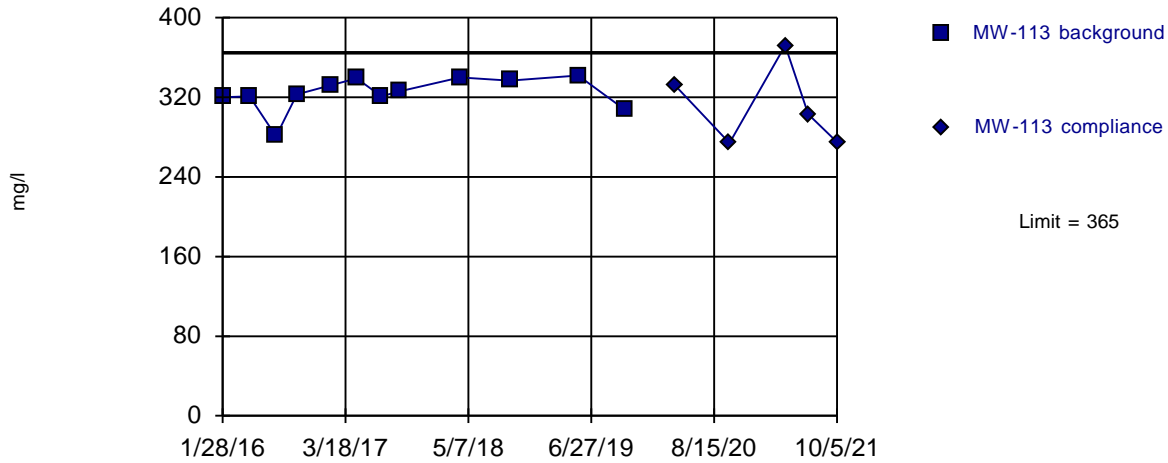
Background Data Summary: Mean=544.8, Std. Dev.=44.71, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9672, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



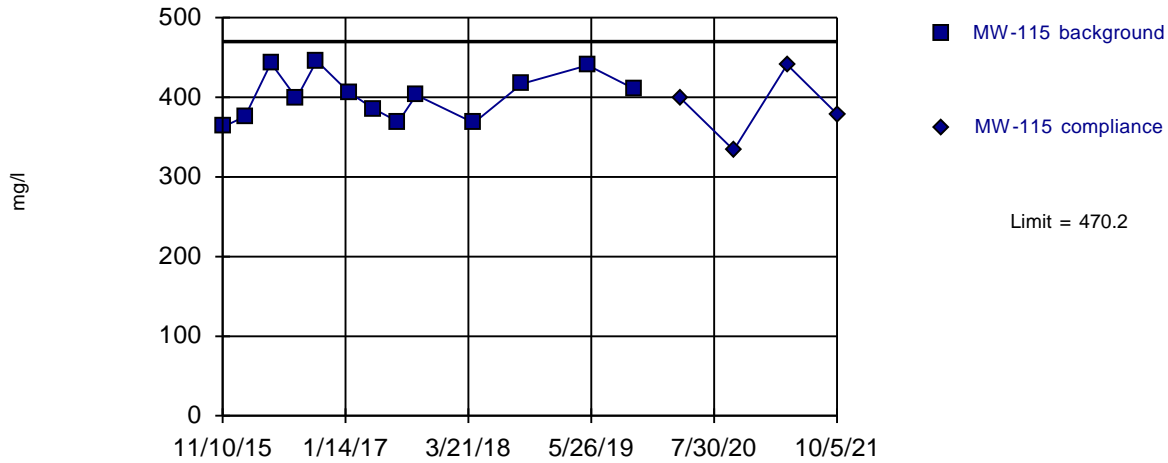
Background Data Summary: Mean=324.1, Std. Dev.=17.1, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8564, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



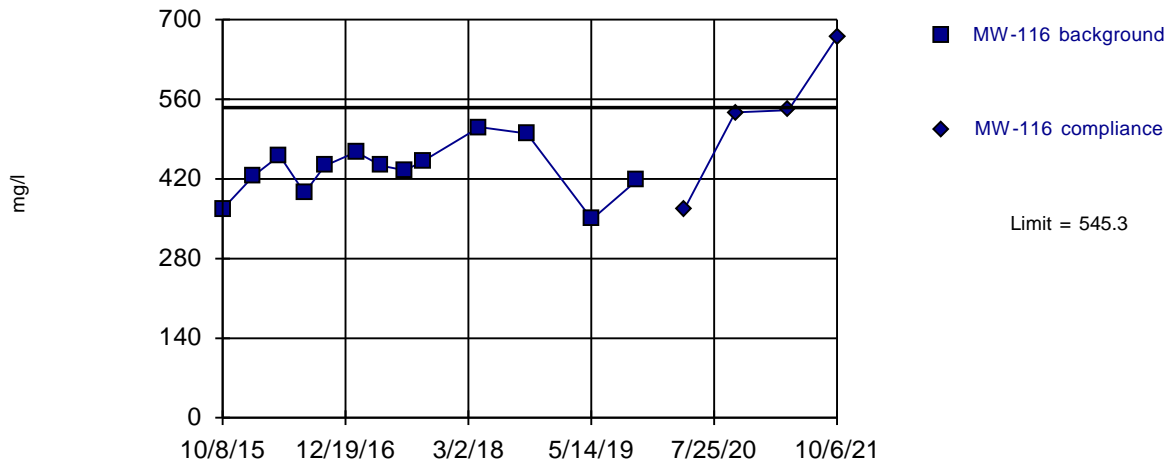
Background Data Summary: Mean=402, Std. Dev.=29.05, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9251, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric



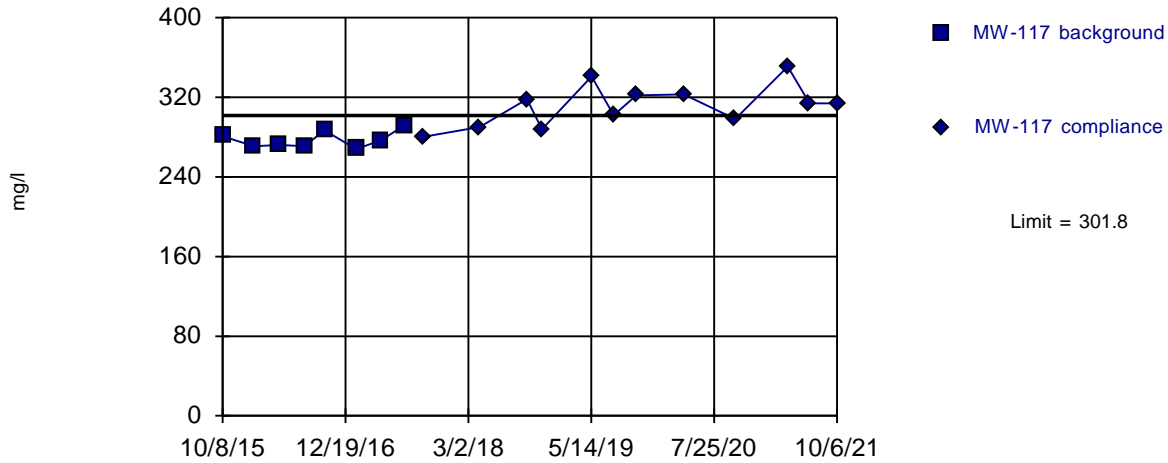
Background Data Summary: Mean=435.8, Std. Dev.=46.64, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9697, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric



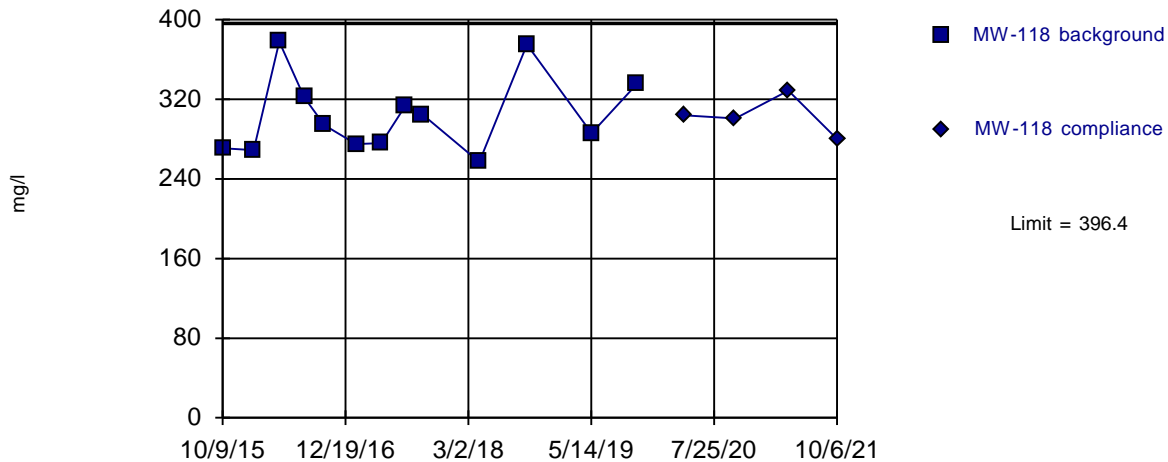
Background Data Summary: Mean=277.4, Std. Dev.=8.601, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9018, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



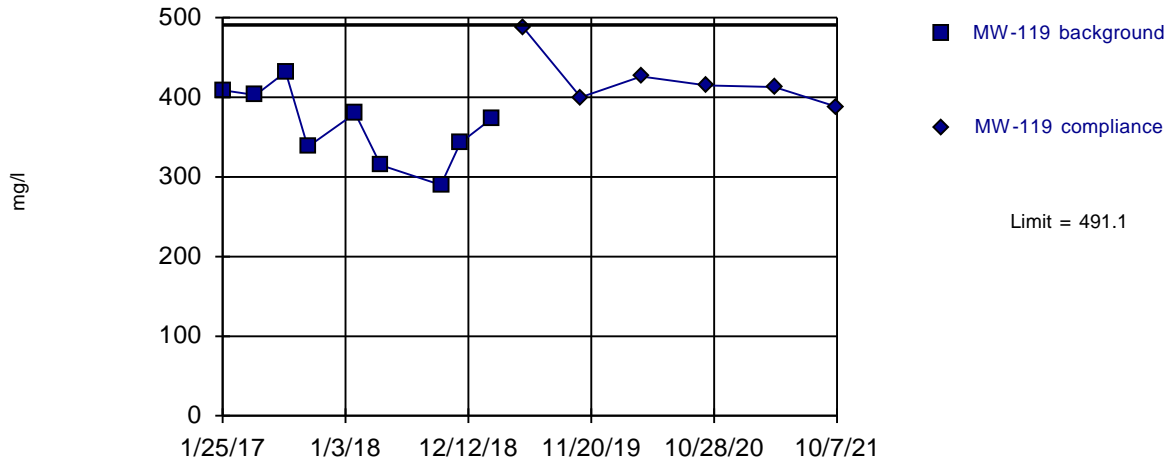
Background Data Summary: Mean=304.3, Std. Dev.=39.22, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8967, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



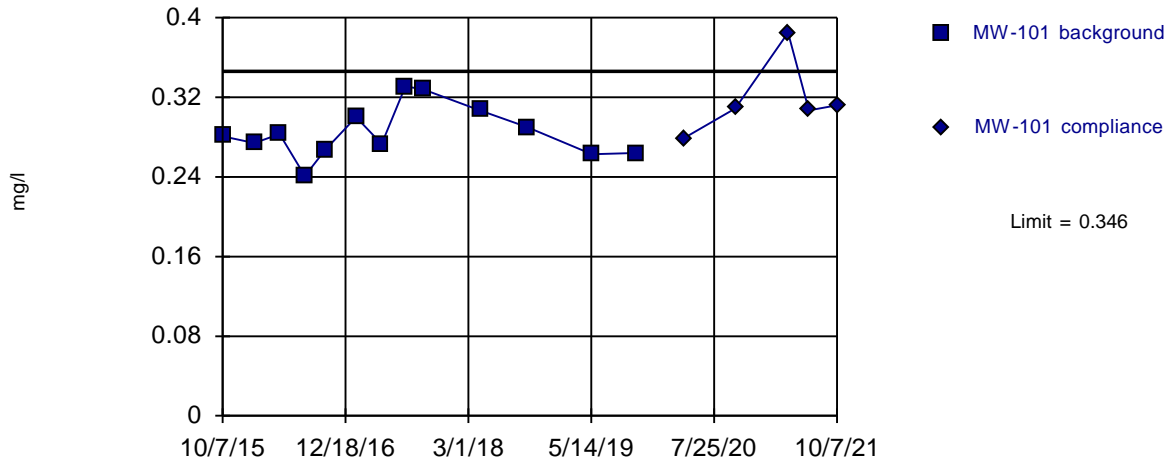
Background Data Summary: Mean=364.9, Std. Dev.=46.79, n=9. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9717, critical = 0.764. Kappa = 2.698 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



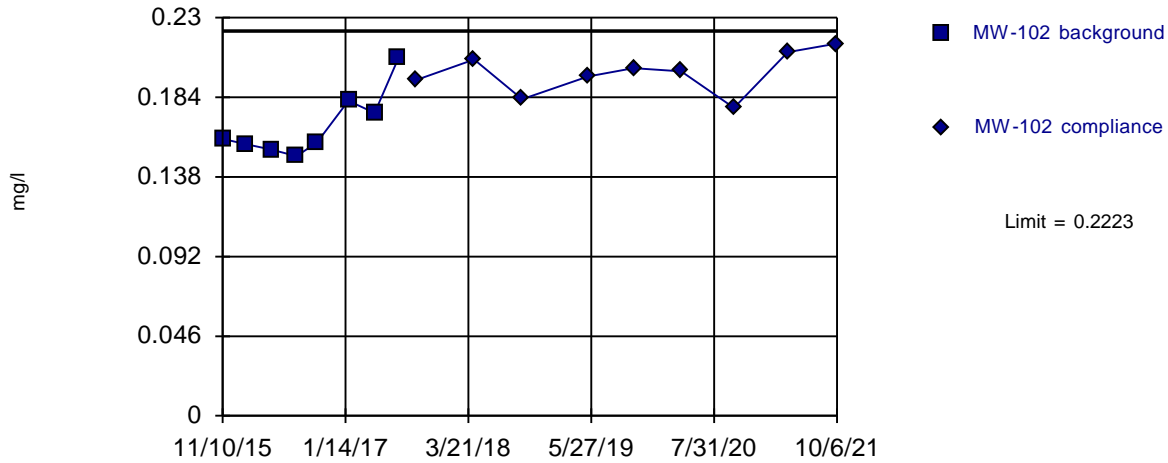
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Constituent: Fluoride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



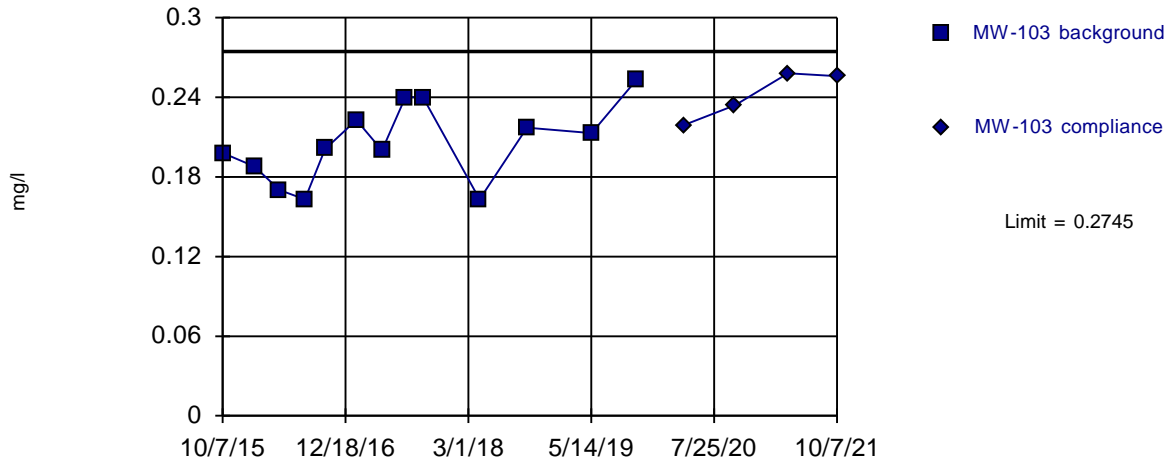
Background Data Summary: Mean=0.1679, Std. Dev.=0.01916, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8449, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



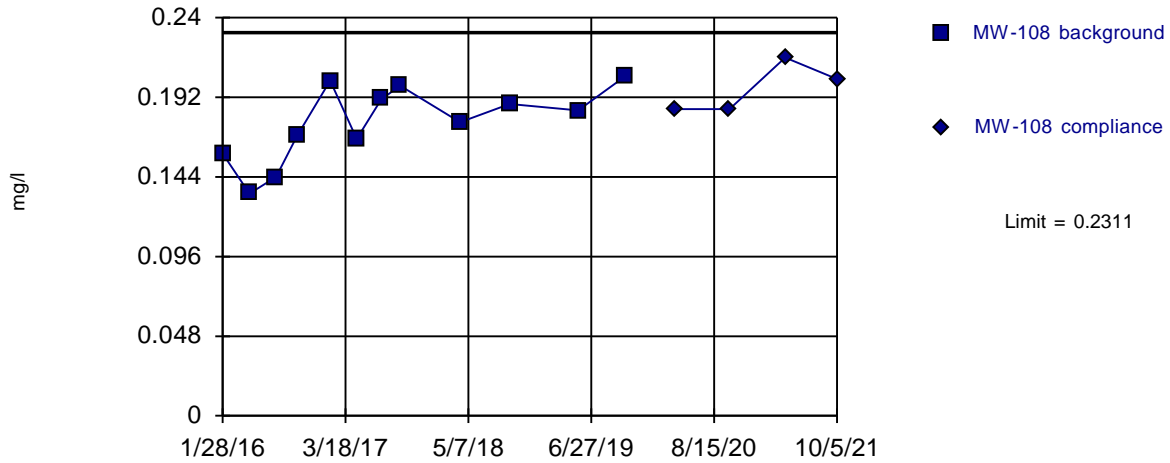
Background Data Summary: Mean=0.2053, Std. Dev.=0.02946, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.95, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



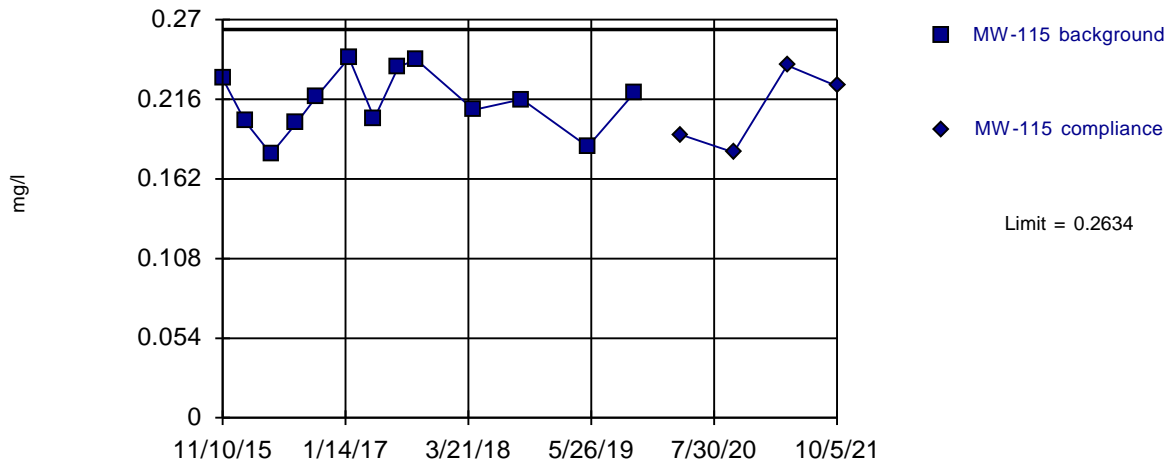
Background Data Summary: Mean=0.1765, Std. Dev.=0.0228, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9459, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



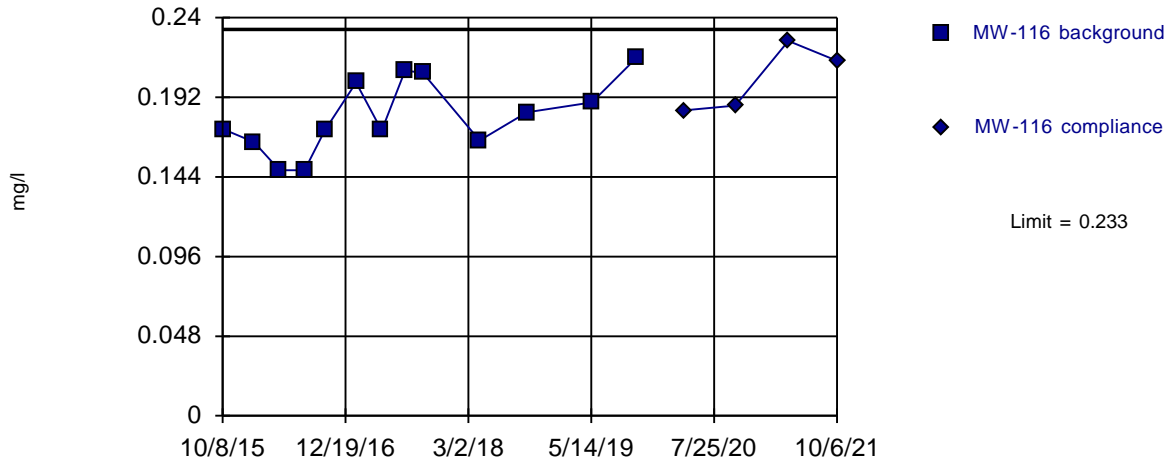
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Constituent: Fluoride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



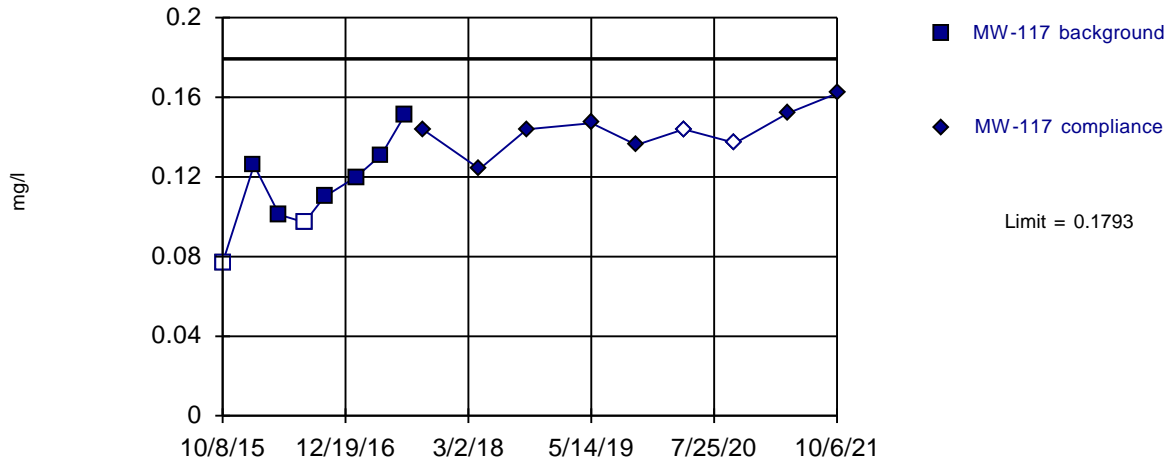
Background Data Summary: Mean=0.1806, Std. Dev.=0.02233, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9394, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit
Intrawell Parametric



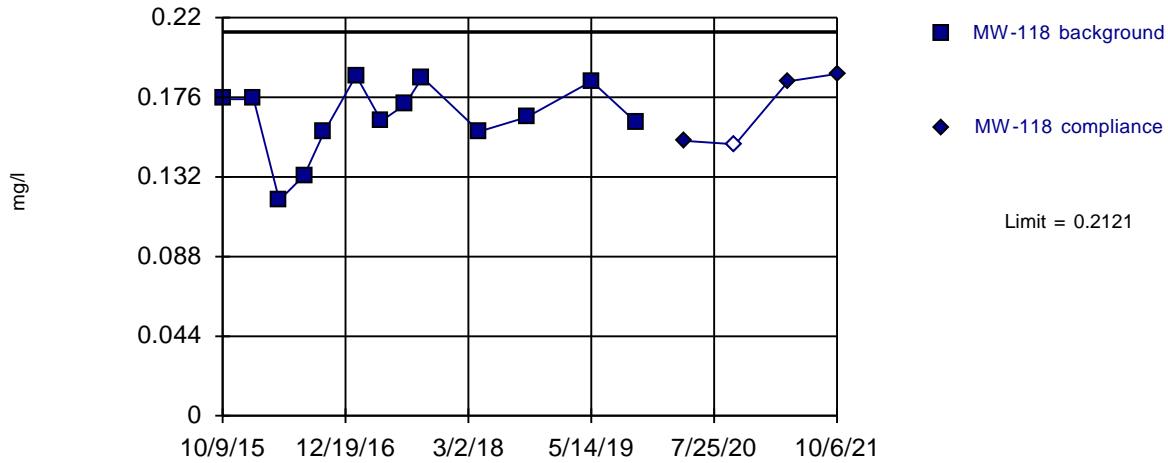
Background Data Summary: Mean=0.1141, Std. Dev.=0.02292, n=8. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.993, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



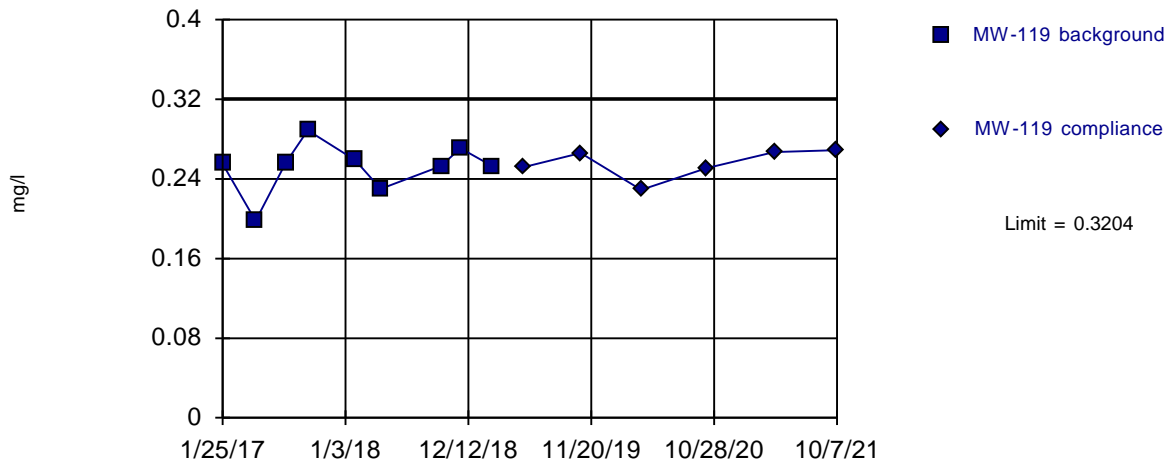
Background Data Summary: Mean=0.1645, Std. Dev.=0.02029, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Fluoride Analysis Run 11/2/2021 6:59 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

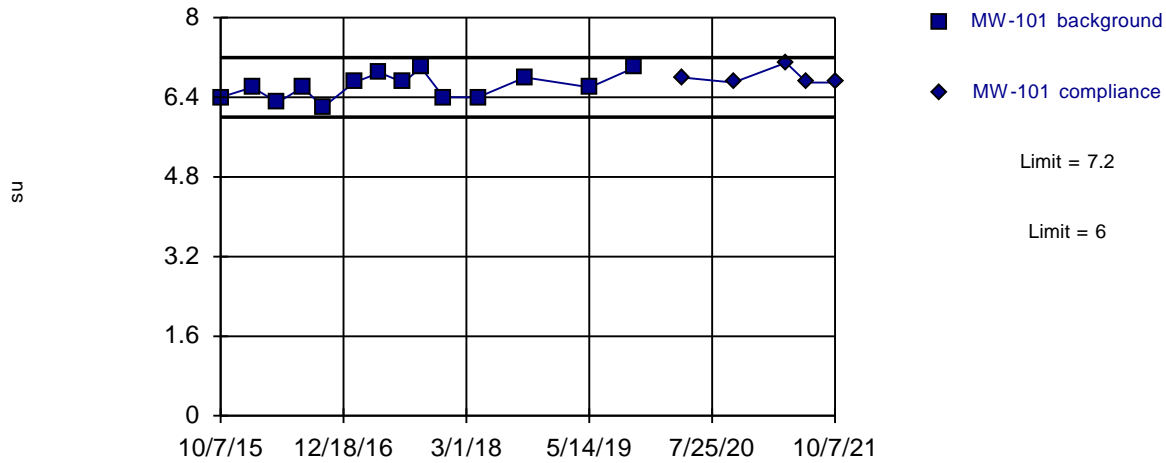
Within Limit

Prediction Limit Intrawell Parametric



Within Limits

Prediction Limit Intrawell Parametric



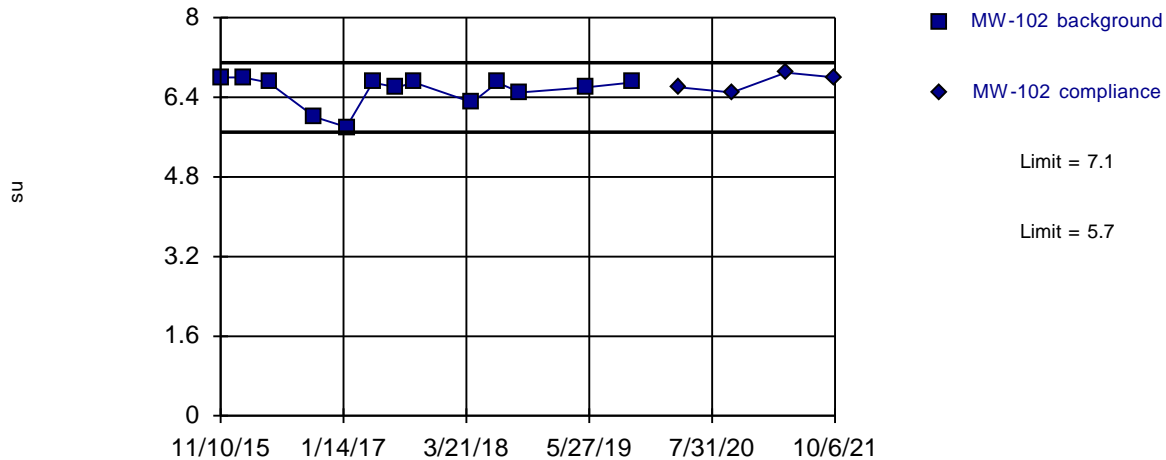
Background Data Summary: Mean=6.614, Std. Dev.=0.2538, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9502, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



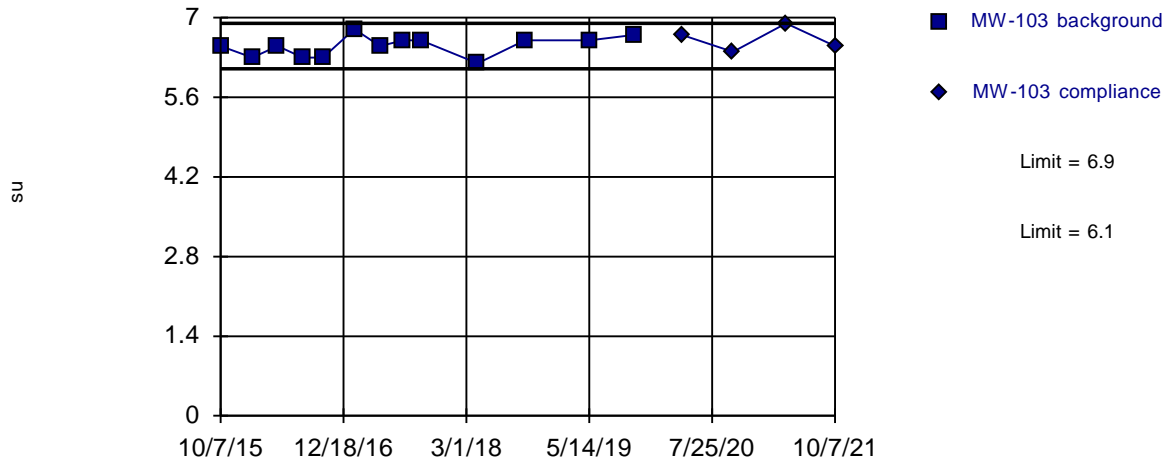
Background Data Summary (based on x^6 transformation): Mean=79846, Std. Dev.=19298, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8197, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



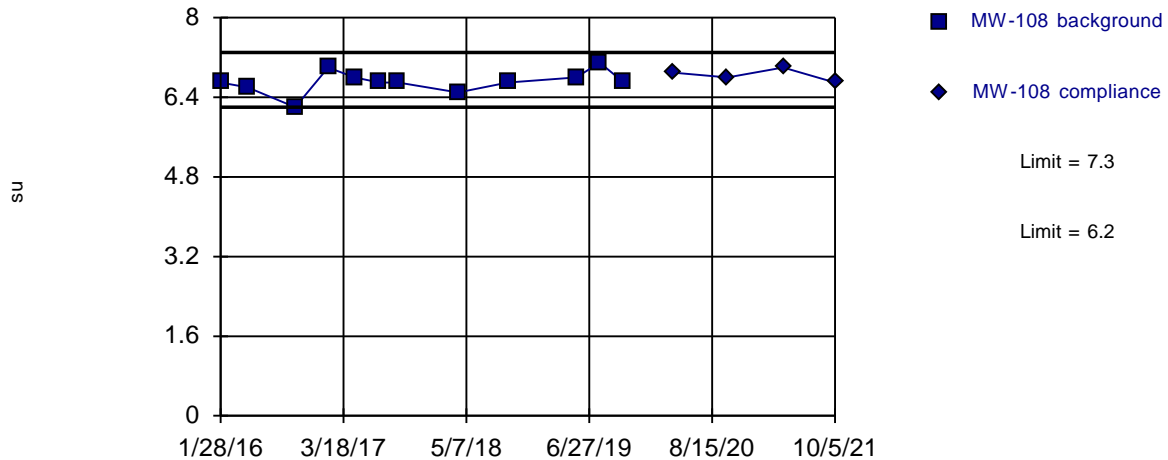
Background Data Summary: Mean=6.5, Std. Dev.=0.178, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.93, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit Intrawell Parametric



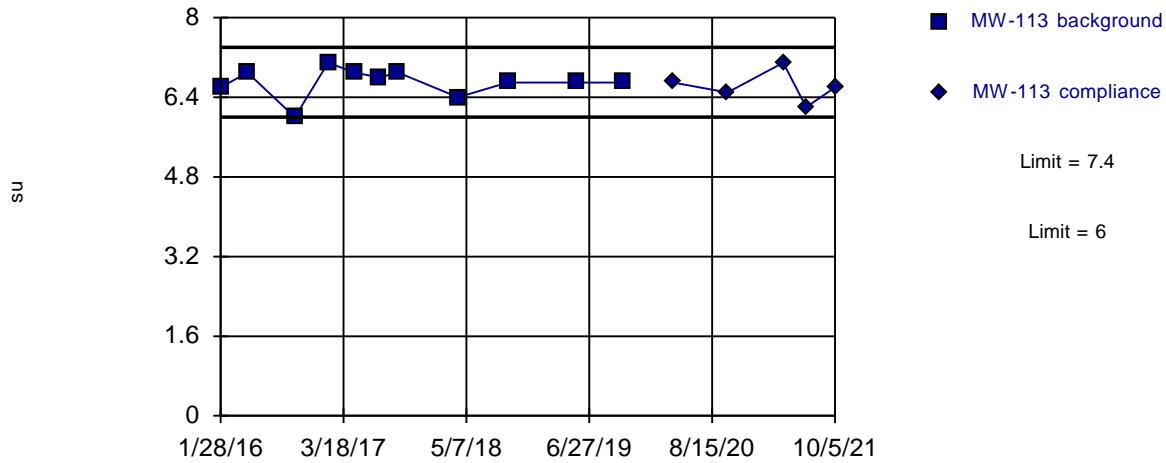
Background Data Summary: Mean=6.708, Std. Dev.=0.2275, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9154, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit
Intrawell Parametric



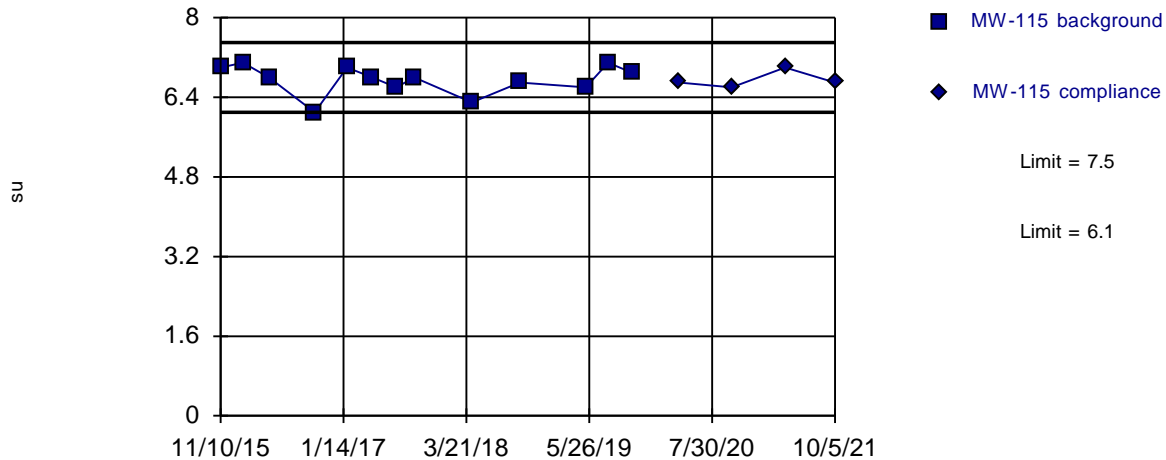
Background Data Summary: Mean=6.7, Std. Dev.=0.2966, n=11. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8904, critical = 0.792. Kappa = 2.474 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limits

Prediction Limit
Intrawell Parametric



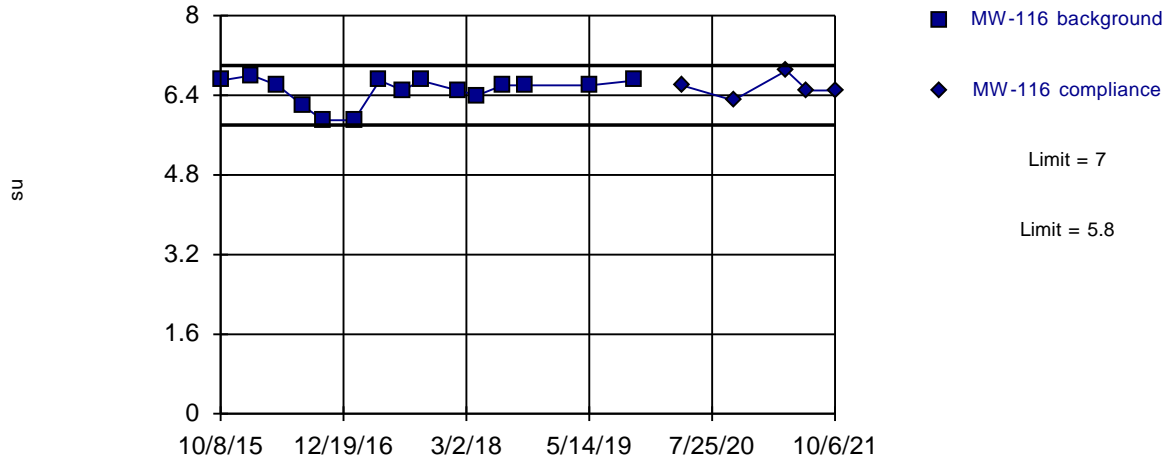
Background Data Summary: Mean=6.754, Std. Dev.=0.2989, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9115, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: pH Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

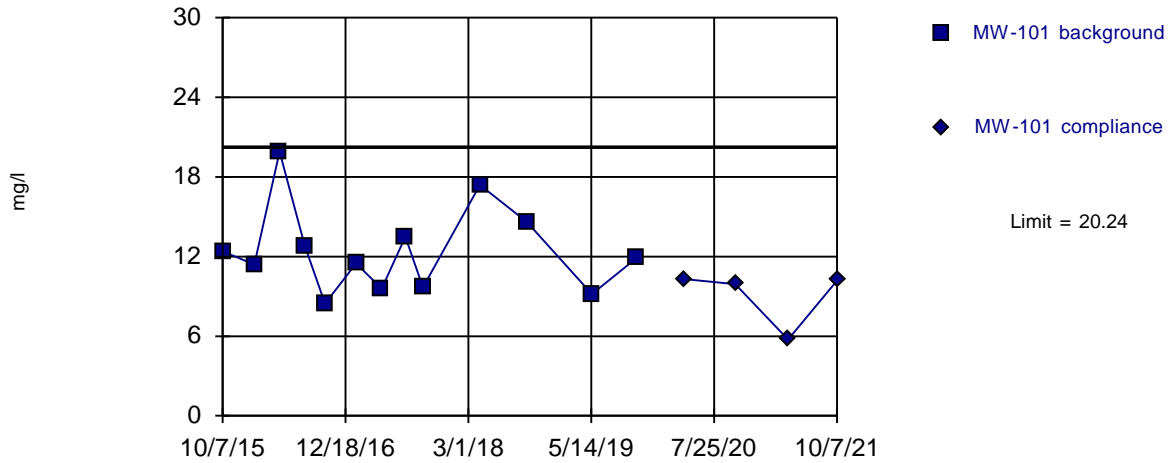
Within Limits

Prediction Limit Intrawell Parametric



Within Limit

Prediction Limit Intrawell Parametric



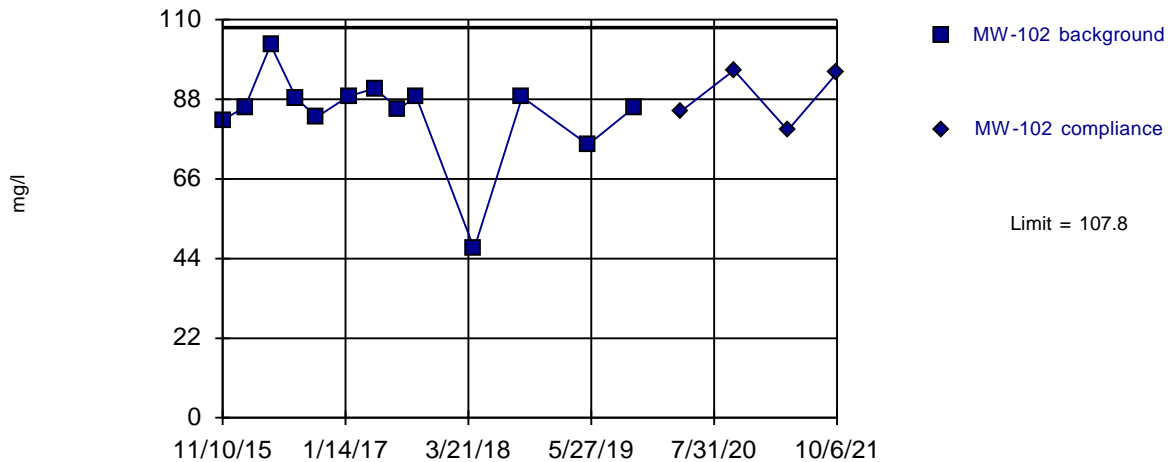
Background Data Summary: Mean=12.48, Std. Dev.=3.303, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9149, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



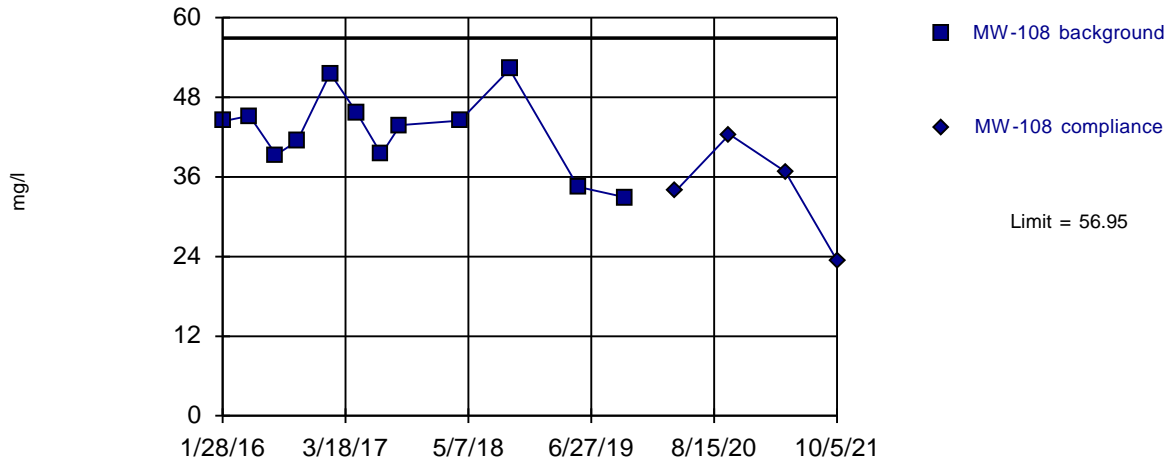
Background Data Summary (based on square transformation): Mean=7217, Std. Dev.=1876, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8224, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



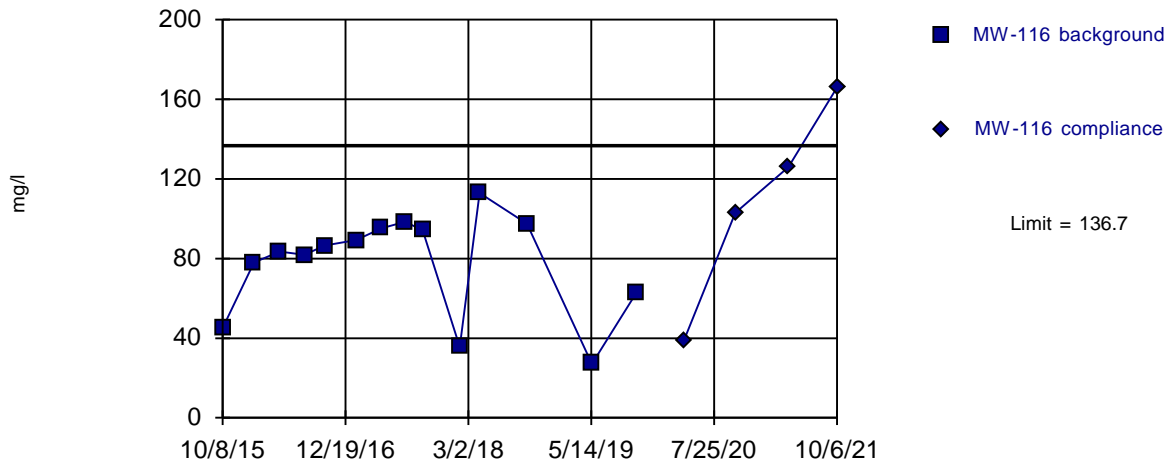
Background Data Summary: Mean=42.91, Std. Dev.=5.869, n=12. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9505, critical = 0.805. Kappa = 2.393 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric



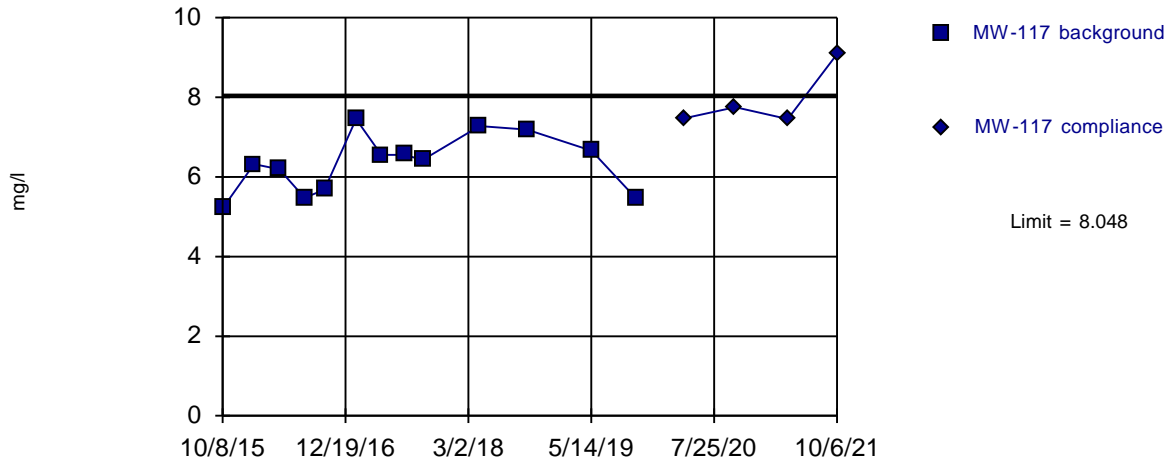
Background Data Summary: Mean=77.71, Std. Dev.=25.62, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8937, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric



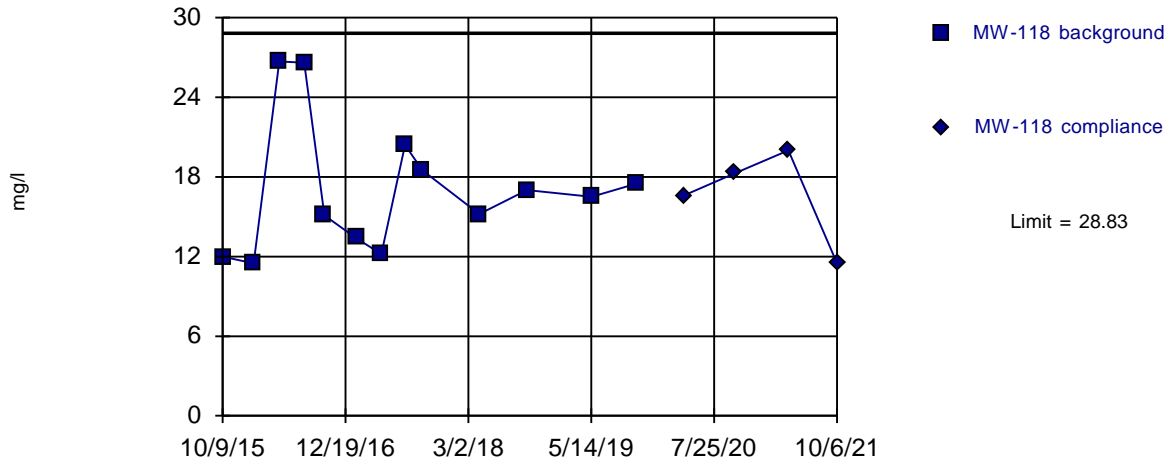
Background Data Summary: Mean=6.343, Std. Dev.=0.7263, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9459, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



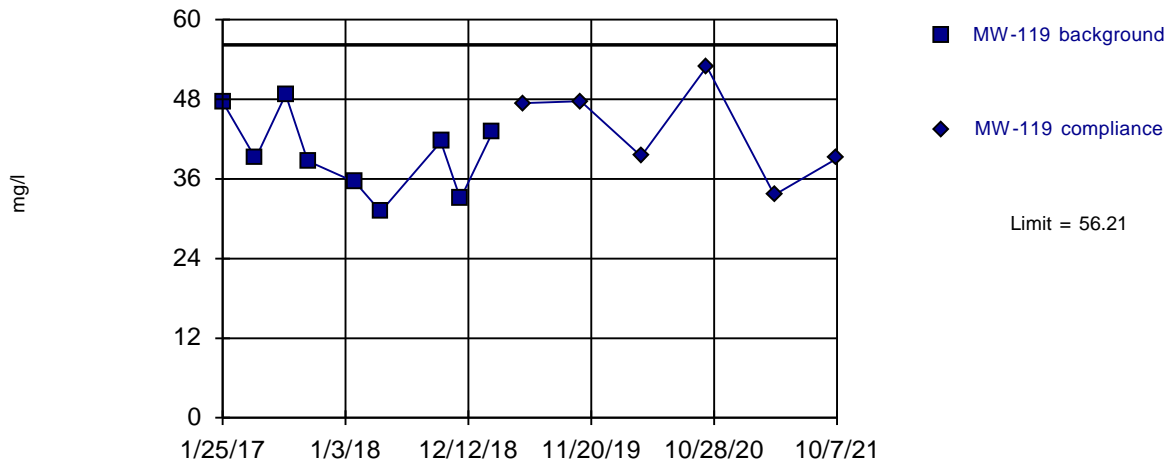
Background Data Summary: Mean=17.12, Std. Dev.=4.987, n=13. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8803, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=39.81, Std. Dev.=6.079, n=9. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.961, critical = 0.764. Kappa = 2.698 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

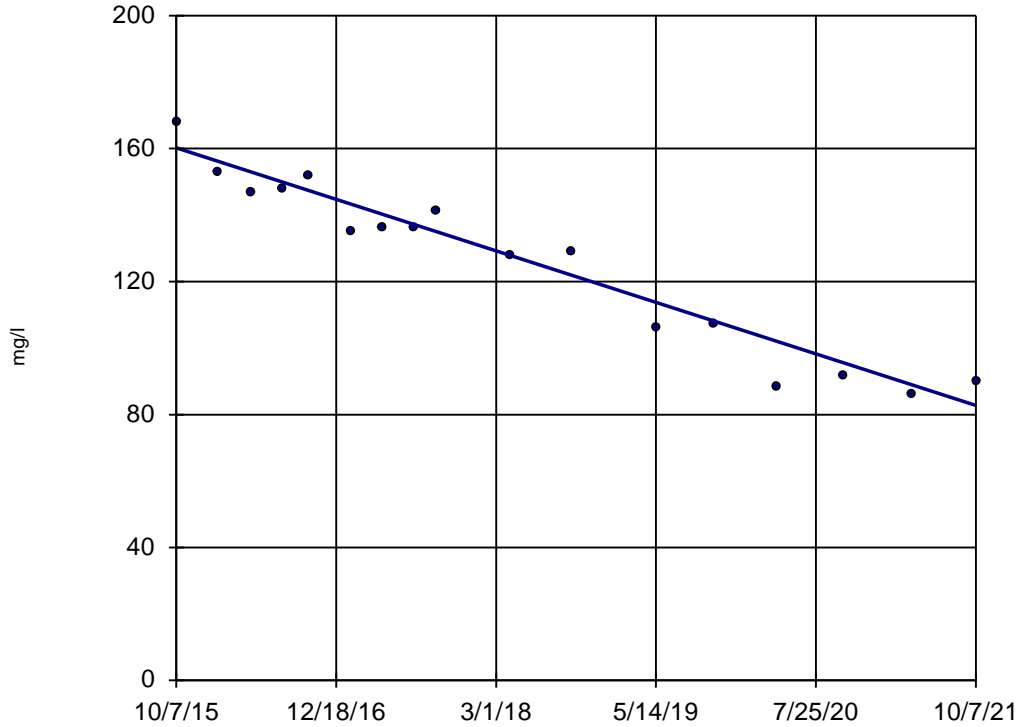
Constituent: Sulfate Analysis Run 11/2/2021 7:00 PM View: 2021-2H PL

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Trend Testing, Second Half 2021 Monitoring Event

Sen's Slope Estimator

MW-103



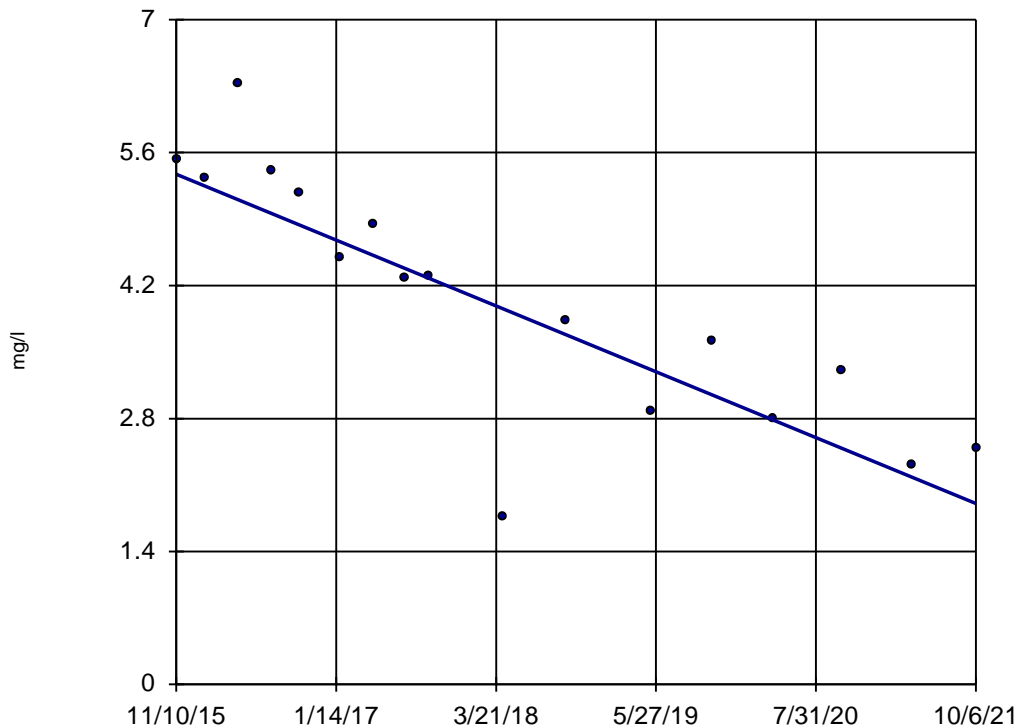
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units per year.
Mann-Kendall
statistic = -109
critical = -58
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Calcium Analysis Run 11/2/2021 7:04 PM View: 2021-2H Trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-102



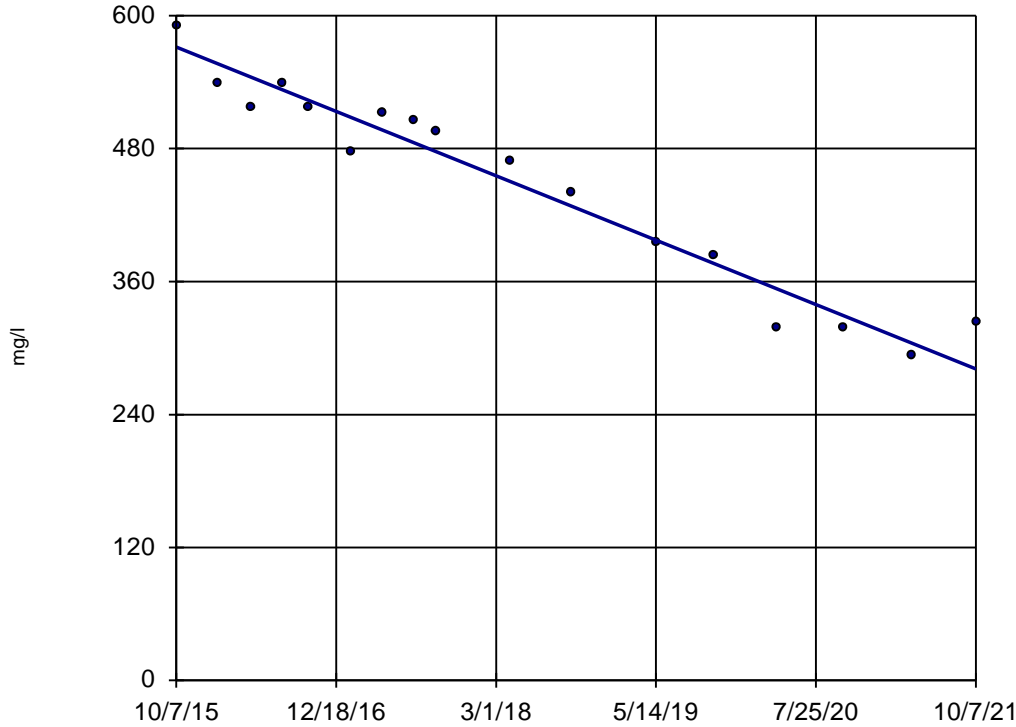
n = 17
Slope = -0.5875
units per year.
Mann-Kendall
statistic = -104
critical = -58
Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Chloride Analysis Run 11/2/2021 7:04 PM View: 2021-2H Trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-103

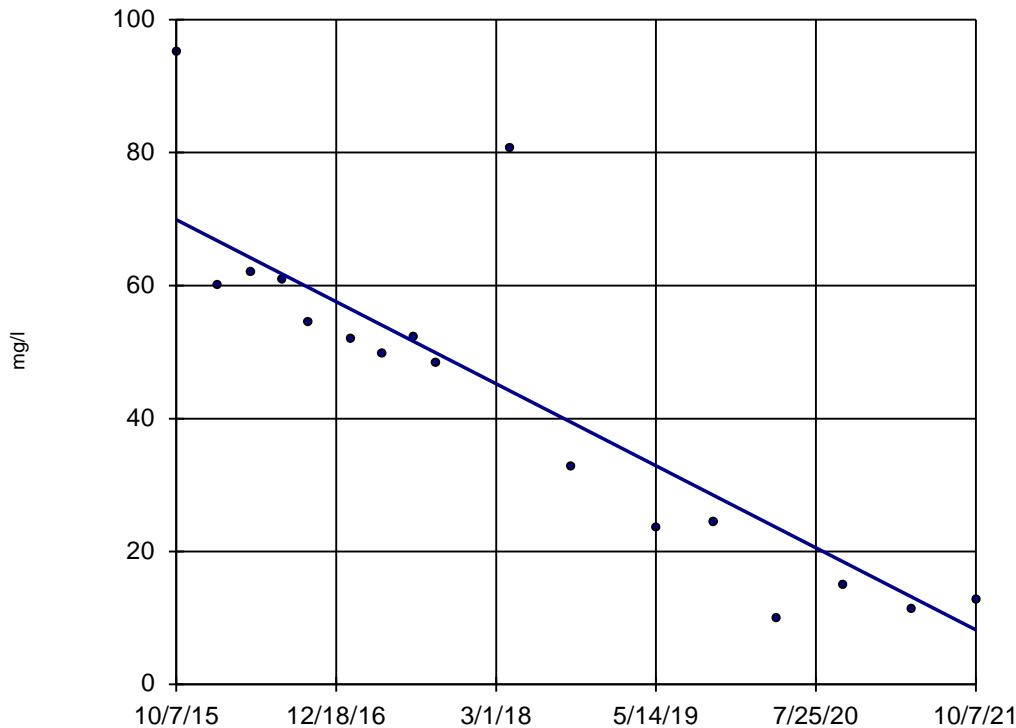


Constituent: Dissolved Solids Analysis Run 11/2/2021 7:04 PM View: 2021-2H Trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Sen's Slope Estimator

MW-103



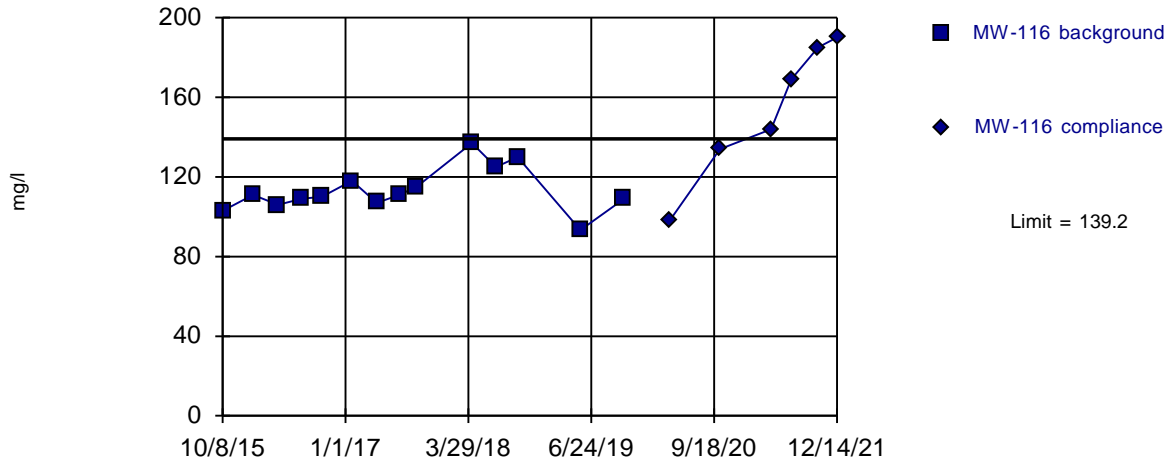
Constituent: Sulfate Analysis Run 11/2/2021 7:04 PM View: 2021-2H Trend

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Prediction Limits, Second Half 2021 Verification Sampling Event

Exceeds Limit

Prediction Limit Intrawell Parametric



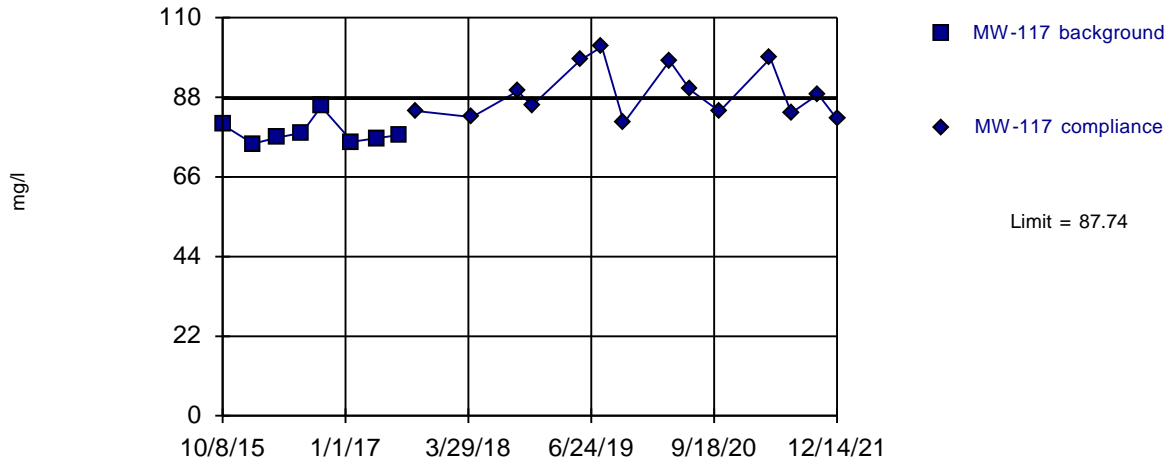
Background Data Summary: Mean=113.2, Std. Dev.=11.31, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9391, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/20/2022 11:48 AM View: 2021-2H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Within Limit

Prediction Limit Intrawell Parametric



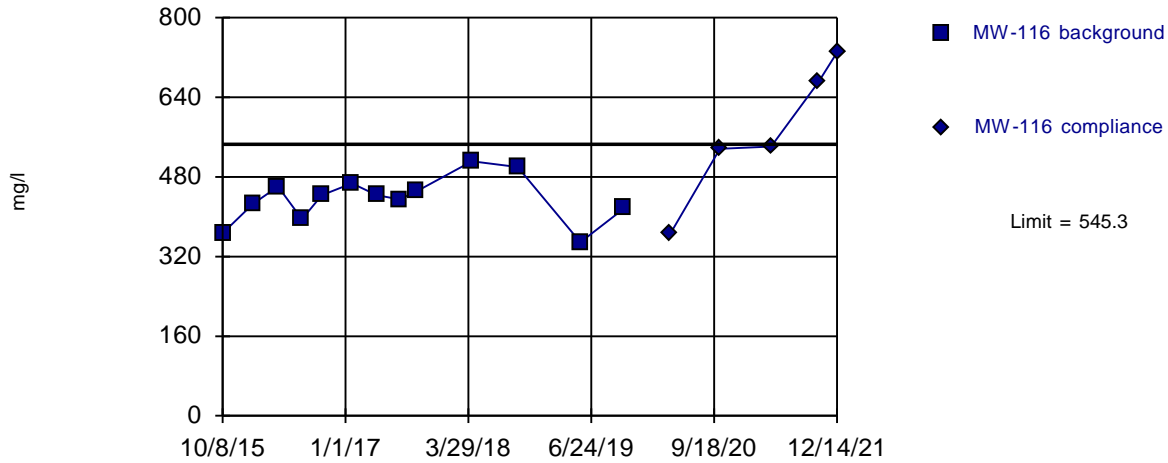
Background Data Summary: Mean=78.28, Std. Dev.=3.33, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8288, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 1/20/2022 11:48 AM View: 2021-2H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

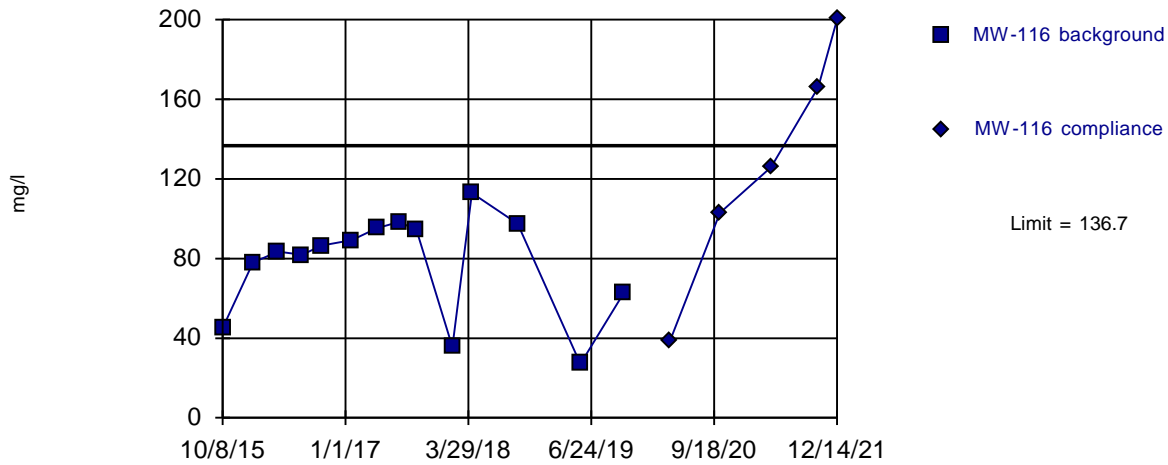
Exceeds Limit

Prediction Limit Intrawell Parametric



Exceeds Limit

Prediction Limit Intrawell Parametric



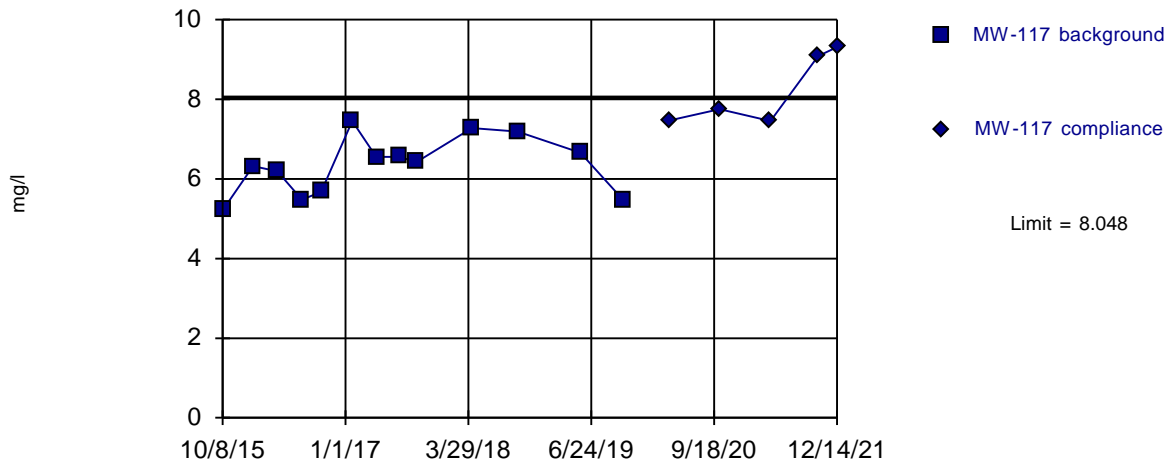
Background Data Summary: Mean=77.71, Std. Dev.=25.62, n=14. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8937, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/20/2022 11:48 AM View: 2021-2H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric



Background Data Summary: Mean=6.343, Std. Dev.=0.7263, n=13. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9459, critical = 0.814. Kappa = 2.348 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Sulfate Analysis Run 1/20/2022 11:48 AM View: 2021-2H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

APPENDIX H

Alternate Source Demonstrations

Alternate Source Demonstration for First Half 2021 Statistical Exceedances




water resources / environmental consultants

3 Innwood Circle, Suite 220 • Little Rock, AR 72211 • (501) 225-7779 • Fax (501) 225-6738

TECHNICAL MEMORANDUM

DATE: October 6, 2021

TO: **Matt Gray**
Plum Point Services Company, LLC

FROM: **Dana Derrington, PE, PG** 
FTN Associates, Ltd.

SUBJECT: Alternate Source Demonstration for Statistically Significant Increases
First Half of 2021 Monitoring Period, Plum Point Energy Station Landfill
FTN No. R14590-2496-001

FTN Associates, Ltd. (FTN), has prepared this technical memorandum for the Plum Point Services Company, LLC (PPSC), coal combustion residuals (CCR) landfill, which is regulated by the Environmental Protection Agency (EPA) Coal Combustion Residuals Rule, promulgated in Title 40 of the Code of Federal Regulations (40 CFR), Part 257. The landfill is also regulated by the Arkansas Pollution Control and Ecology Commission (APCEC) Regulation No. 22 and permitted by the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), under permit no. 0303-S3N-R1.

FTN was contracted to sample groundwater and to statistically evaluate the data from the first half of 2021 monitoring event. Based on statistical evaluation of the data, two confirmed statistically significant increases (SSIs) over background concentrations were identified. Pursuant to §257.94(e)(2), the landfill may demonstrate that a source other than the CCR unit caused an SSI over background levels for a constituent or that an SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. This memorandum, hereafter referred to as an alternate source demonstration (ASD), presents evidence that the confirmed SSIs are the result of off-site influence and/or natural fluctuations in groundwater quality.

1.0 BACKGROUND

FTN performed groundwater sampling for the first half 2021 semiannual groundwater monitoring period during April 2021. Sample collection, preservation, shipment, analytical procedures, chain-of-custody control, and data quality control for this sampling event followed protocol outlined in the landfill's groundwater sampling and analysis plan (GWSAP) (FTN 2017b). Statistical evaluation of the data set followed the most recent EPA guidance (EPA 2009) and the landfill's statistical analysis plan (SAP) (FTN 2017c). An intrawell prediction limit evaluation identified two previously confirmed SSIs: calcium at MW-116 and total dissolved solids (TDS) at MW-117. A site map showing the

locations of these wells relative to the CCR unit (cells 1 and 3) is included as Figure 1 (all figures are included in Attachment 1). Intrawell prediction limit plots are included in Attachment 2.

In accordance with the landfill's SAP and EPA guidance (EPA 2009), verification sampling was performed during June 2021. As shown in Table 1 (Attachment 3), concentrations for calcium at MW-116 and TDS at MW-117 remain above their respective intrawell prediction limits. In accordance with §257.94(e)(2), prior ASDs have been prepared for the confirmed SSIs for calcium at MW-116 (FTN 2018, 2019a) and for TDS at MW-117 (FTN 2019a, 2019b, 2020), and each ASD successfully demonstrated that the SSIs were not the result of influence from the CCR unit.

Laboratory reports for the April and June sampling events are included in Attachment 4.

2.0 DISCUSSION

A review of the monitoring system with respect to onsite background wells, background groundwater quality, published literature, and landfill leachate was performed to determine if the confirmed SSIs for calcium at compliance well MW-116 and TDS at compliance well MW-117 were indicative of a release from the CCR unit. Findings from this review are discussed below.

2.1 Monitoring System Background Wells

As required by §257.91(c)(1), the groundwater monitoring network is required to contain a minimum of one monitoring well that is hydraulically upgradient of the CCR management area for the purpose of monitoring background water quality. However, there is not a hydraulically upgradient location at this facility because the direction of groundwater flow is seasonably variable. As allowed by §257.91(a)(1), a facility may utilize wells for background water quality that are not hydraulically upgradient of the CCR unit. For this reason, the facility incorporated monitoring wells MW-108, MW-113, and MW-115 (Figure 1) to monitor background water quality because those wells are positioned outside the potential zone of impact from the CCR unit. The rationale for this is based on the age of the landfill; the estimated maximum rate of groundwater flow; and the distance of MW-108, MW-113, and MW-115 from the CCR unit. Specifically:

- MW-108, MW-113, and MW-115 are located more than 2,300 ft from the eastern edge of cell 3;
- Groundwater at the landfill has historically exhibited a maximum flow rate of 40 ft/year; and
- The landfill became active during March 2010.

Using the information available above, a potential leachate plume would not be expected to have migrated more than 445 ft from the CCR unit as of the first half 2021 monitoring event. This estimate is conservative for the following reasons:

1. It assumes impact to groundwater occurred at the same time cell 1 was activated (March 2010) and does not account for travel time through the confining unit soils;

2. It assumes that groundwater flows in one direction; however, it is well-documented that groundwater flow at the landfill is multidirectional and reverses flow on a seasonal basis (FTN 2017a); and
3. It does not account for any physical or chemical properties of the constituents of concern that would cause them to travel at rates slower than groundwater (e.g., adsorption).

2.2 Comparison to Onsite Background Groundwater Quality

Period-of-record calcium and TDS data for compliance wells MW-116 and MW-117, respectively, are plotted on the time-series graphs and box-and-whiskers diagrams included in Attachment 2, along with period-of-record calcium and TDS data for background wells MW-108, MW-113, and MW-115. As is evident from these graphs and diagrams, concentrations for calcium at MW-116 and TDS at MW-117 are well within the range of values measured at the onsite background wells. This comparison provides supporting evidence that the currently measured values of calcium at MW-116 and TDS at MW-117 reflect natural fluctuations in groundwater quality.

2.3 Comparison to Published Groundwater Quality for the Aquifer

Each monitoring well is screened in the Mississippi River Valley alluvial aquifer, the uppermost aquifer in the vicinity of the landfill (FTN 2017b). The United States Geological Survey published a study of groundwater quality of the aquifer, specifically with respect to that of Holocene alluvium and Pleistocene valley train deposits, which are two of the major hydrogeologic units within the aquifer (Gonthier 2003). The landfill is located in Holocene alluvium, as shown on Figure 2. According to this study, the reported median and maximum calcium values in wells screened in Holocene alluvium were 77 mg/L and 130 mg/L, respectively. The reported median and maximum TDS values were 355 mg/L and 728 mg/L, respectively. As shown in Table 1 (Attachment 3), these levels are comparable to those measured at MW-116 and MW-117 and at background wells MW-108, MW-113, and MW-115. This comparison provides supporting evidence that the currently measured values of calcium at MW-116 and TDS at MW-117 reflect natural fluctuations in groundwater quality.

2.4 Comparison to Landfill Leachate

The major ion composition of leachate and groundwater samples collected during April 2021 was evaluated using the Stiff and Piper diagrams included in Attachment 2. These data are collected on a semiannual basis for the landfill's APCEC Regulation No. 22 monitoring program, as required by Permit No. 0303-S3N-R1, and are publicly available on the DEQ website¹. If groundwater has been impacted by landfill leachate, the relative proportions of major ions in groundwater will resemble those in leachate.

A review of the Stiff diagrams shows that the ionic distributions in groundwater at MW-116 and MW-117 are similar to those at background wells MW-108, MW-113, and MW-115. In contrast, the

¹ https://www.adeg.state.ar.us/sw/permits/facility_data.aspx



leachate diagram is distinctly different. Specifically, the leachate sample exhibits concentrations of sodium, potassium, and sulfate ions that are comparatively absent in groundwater. The Piper diagram also illustrates the dissimilarity of groundwater quality to leachate, with data for MW-116, MW-117, MW-108, MW-113, and MW-115 clustered in the quadrant classified as calcium bicarbonate-type water and positioned apart from the leachate data, which is located in the sodium chloride quadrant. If leachate was mixing with groundwater at MW-116 or MW-117, the data for MW-116 or MW-117 would plot at an intermediate distance between the leachate data and the data for background wells MW-108, MW-113, and MW-115 on the Piper diagram.

The Stiff and Piper diagrams show that the relative proportions of major ions in groundwater at MW-116 and MW-117 are different than landfill leachate, providing a key line of evidence that the SSIs for calcium at MW-116 and TDS at MW-117 are not due to a release from the CCR unit.

3.0 CONCLUSIONS

In consideration of the information presented in this memorandum, FTN concludes that the SSIs for calcium at MW-116 and TDS at MW-117 are the result of off-site influence and/or natural fluctuations in groundwater quality.

This memorandum serves as the ASD prepared in accordance with §257.94(e)(2) and supports the position that the confirmed SSIs identified for calcium at MW-116 and TDS at MW-117 are not due to a release from the CCR unit. Therefore, no further action is required and the landfill will remain in detection monitoring.

If you have questions or comments regarding this memorandum, please do not hesitate to call Dana Derrington, PE, PG, at (314) 786-5855 or Heather Ferguson at (501) 225-7779.

DLD/hlf

Attachments

U:\WP_FILES\14590-2496-001\2021-10-06 FTN TO PPES - EPA ASD FOR 1H2021 SSIS\2021-10-06 FTN TO PPES - EPA ASD FOR 1H2021 EXCEEDANCES.DOCX *HLF*



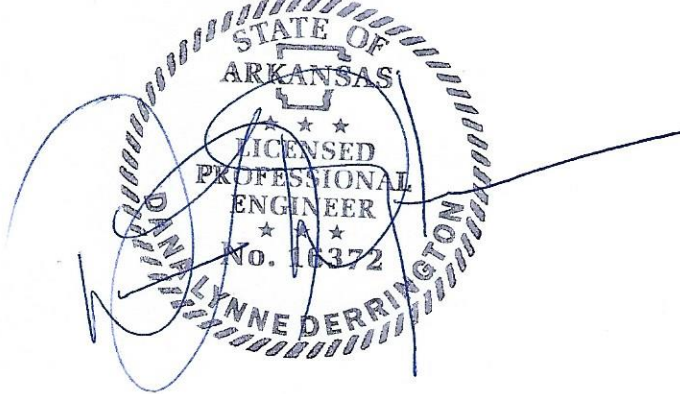
REFERENCES

- EPA [US Environmental Protection Agency]. 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* [EPA 530-R-09-007]. Washington, DC: Office of Resource Conservation and Recovery, Program Implementation and Information Division, US Environmental Protection Agency. March 2009.
- FTN [FTN Associates, Ltd.]. 2017a. *Groundwater Monitoring Network Evaluation, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2017b. *Groundwater Sampling and Analysis Plan, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2017c. *Statistical Analysis Plan, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd.
- . 2018. *Alternate Source Demonstration for Statistically Significant Increase, First Half of 2018 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. October 9, 2018.
- . 2019a. *Alternate Source Demonstration for Statistically Significant Increase, Second Half of 2018 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. January 29, 2019.
- . 2019b. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2019 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. October 24, 2019.
- . 2019c. *Alternate Source Demonstration for Statistically Significant Increases, Second Half of 2019 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. December 17, 2019.
- . 2020. *Alternate Source Demonstration for Statistically Significant Increases, First Half of 2020 Monitoring Period, Plum Point Energy Station Landfill*. Little Rock, AR: FTN Associates, Ltd. August 3, 2020.
- Gonthier, G.J. 2003. *Quality of Groundwater in Pleistocene and Holocene Subunits of the Mississippi River Alluvial Aquifer, 1998* [Water-Resources Investigations Report 03-4202]. Jackson, MS: National Water-Quality Assessment Program, US Geological Survey.
- Kresse, T.M., P.D. Hays, K.R. Merriman, J.A. Gillip, D.T. Fugitt, J.L. Spellman, A.M. Nottmeier, D.A. Westerman, J.M. Blackstock, and J.L. Battreal. 2014. *Aquifers of Arkansas—Protection, Management, and Hydrologic and Geochemical Characteristics of Groundwater Resources in Arkansas* [USGS Scientific Investigations Report 2014-5149]. Prepared in cooperation with the Arkansas Natural Resources Commission. Reston, VA: US Geological Survey. 334 pp. doi: <http://dx.doi.org/10.3133/sir20145149>.

Matt Gray
October 6, 2021
Page 6

PROFESSIONAL ENGINEER'S CERTIFICATION

With this certification, I certify that I, as a professional engineer in the state of Arkansas, am a qualified professional engineer as defined in §257.53 of Title 40 of the Code of Federal Regulations (CFR), Part 257, that this technical memorandum has been prepared under my direction in accordance with generally accepted good engineering practices, that the findings are accurate to the best of my knowledge, and that the alternate source demonstration described herein meets the requirements of §257.94(e)(2) of 40 CFR Part 257.

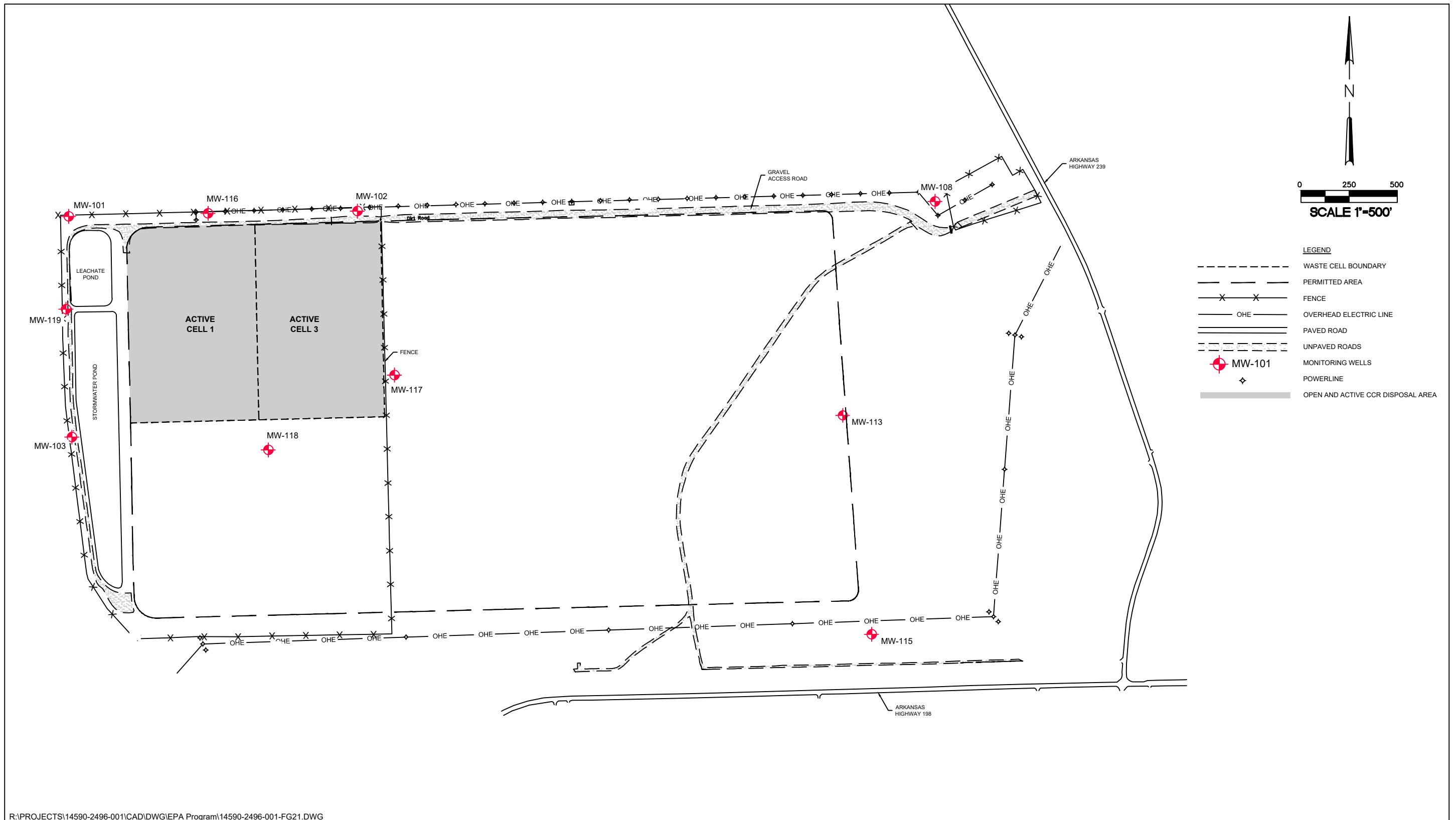


Dana L. Derrington, Arkansas PE #16372

Date 10/06/2021

ATTACHMENT 1

Figures



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Figure 1. Monitoring well location map.

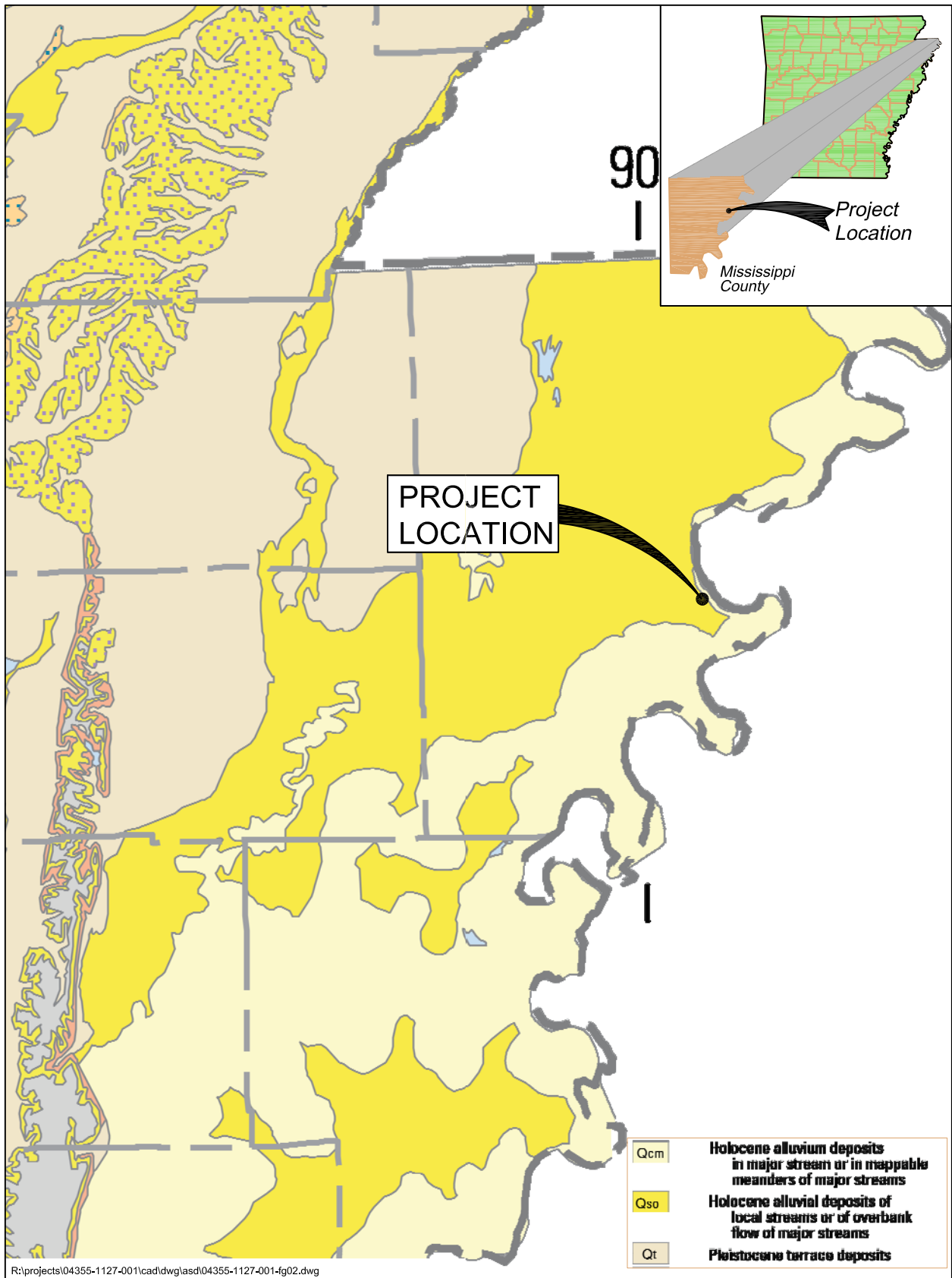


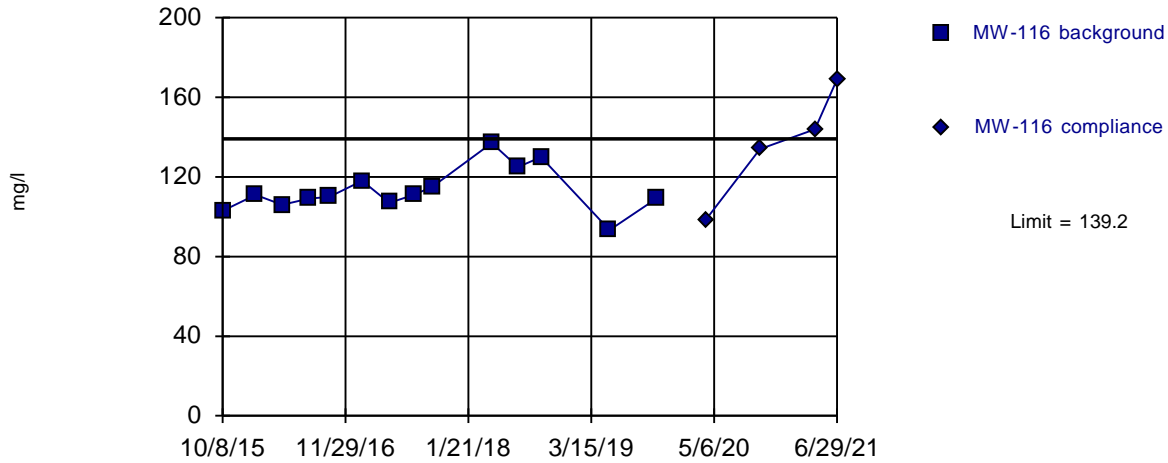
Figure 2. Surface geology of Mississippi County, Arkansas (adapted from Kresse et al. 2014).

ATTACHMENT 2

Statistical Plots

Exceeds Limit

Prediction Limit Intrawell Parametric



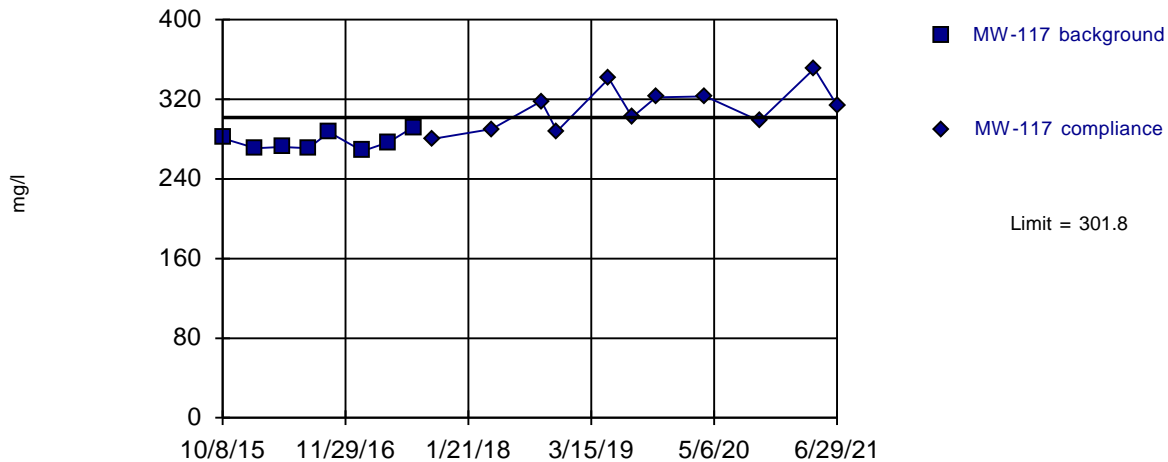
Background Data Summary: Mean=113.2, Std. Dev.=11.31, n=14. Insufficient data to test for seasonality: data were not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9391, critical = 0.825. Kappa = 2.302 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Calcium Analysis Run 7/19/2021 10:41 PM View: 2021-1H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Exceeds Limit

Prediction Limit Intrawell Parametric

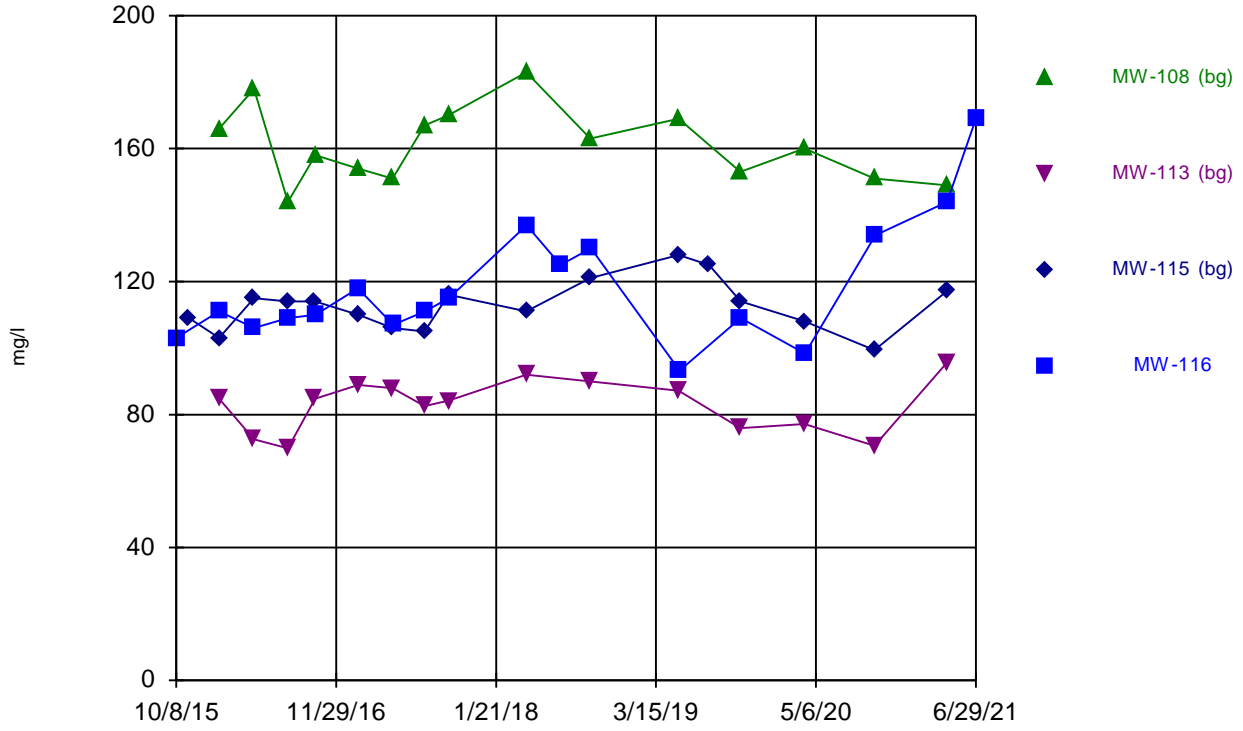


Background Data Summary: Mean=277.4, Std. Dev.=8.601, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9018, critical = 0.749. Kappa = 2.841 (c=6, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.001254.

Constituent: Dissolved Solids Analysis Run 7/19/2021 10:41 PM View: 2021-1H PL verification

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

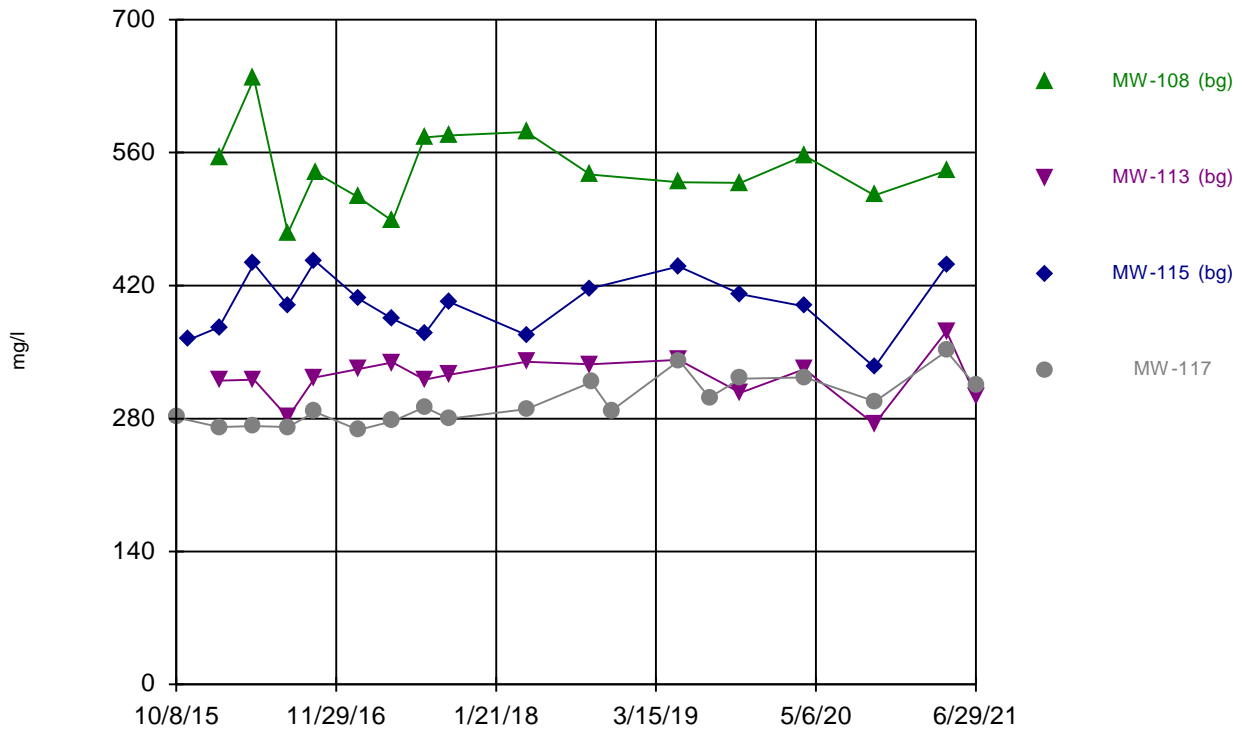
Time Series



Constituent: Calcium Analysis Run 8/10/2021 2:44 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

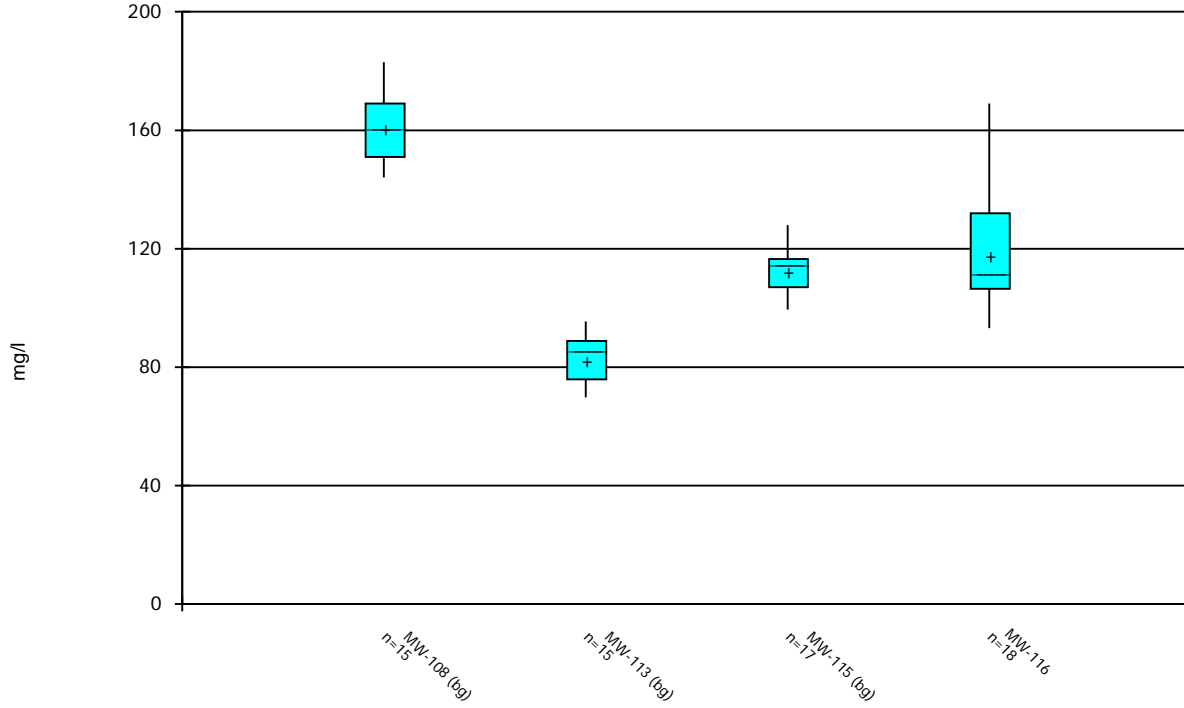
Time Series



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Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

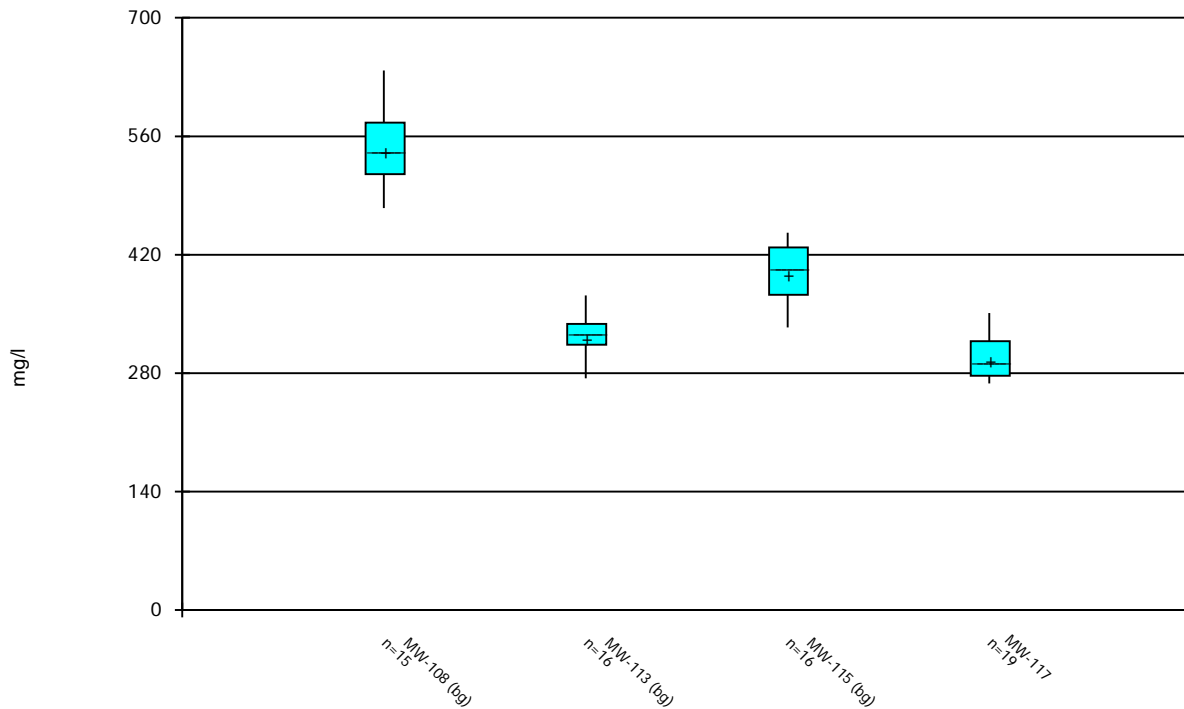
Box & Whiskers Plot



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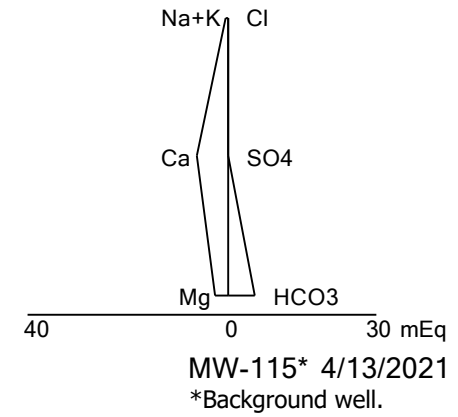
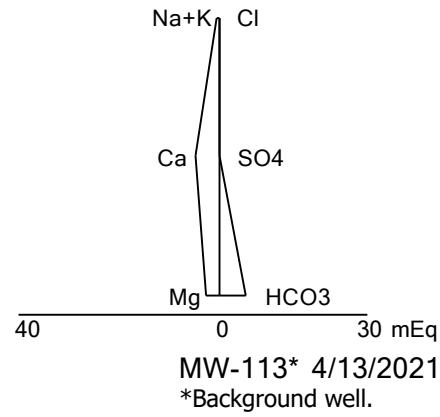
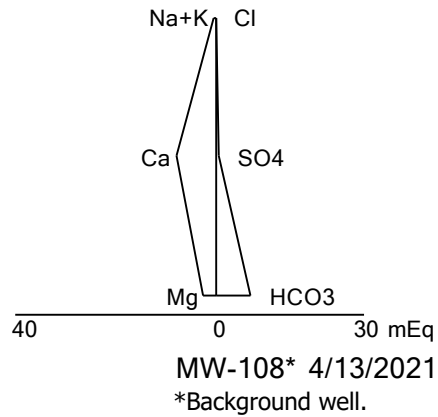
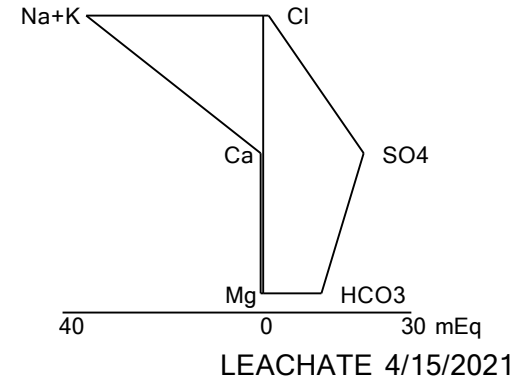
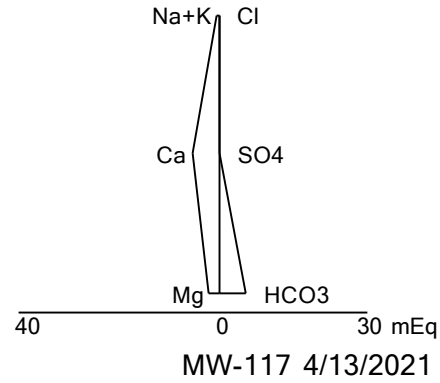
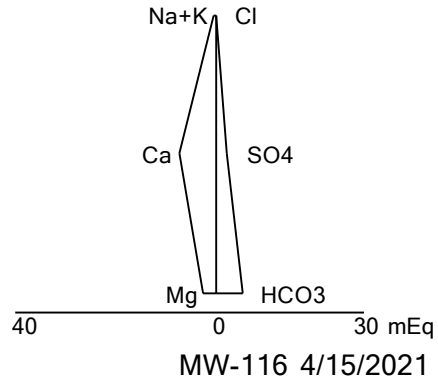
Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database

Box & Whiskers Plot



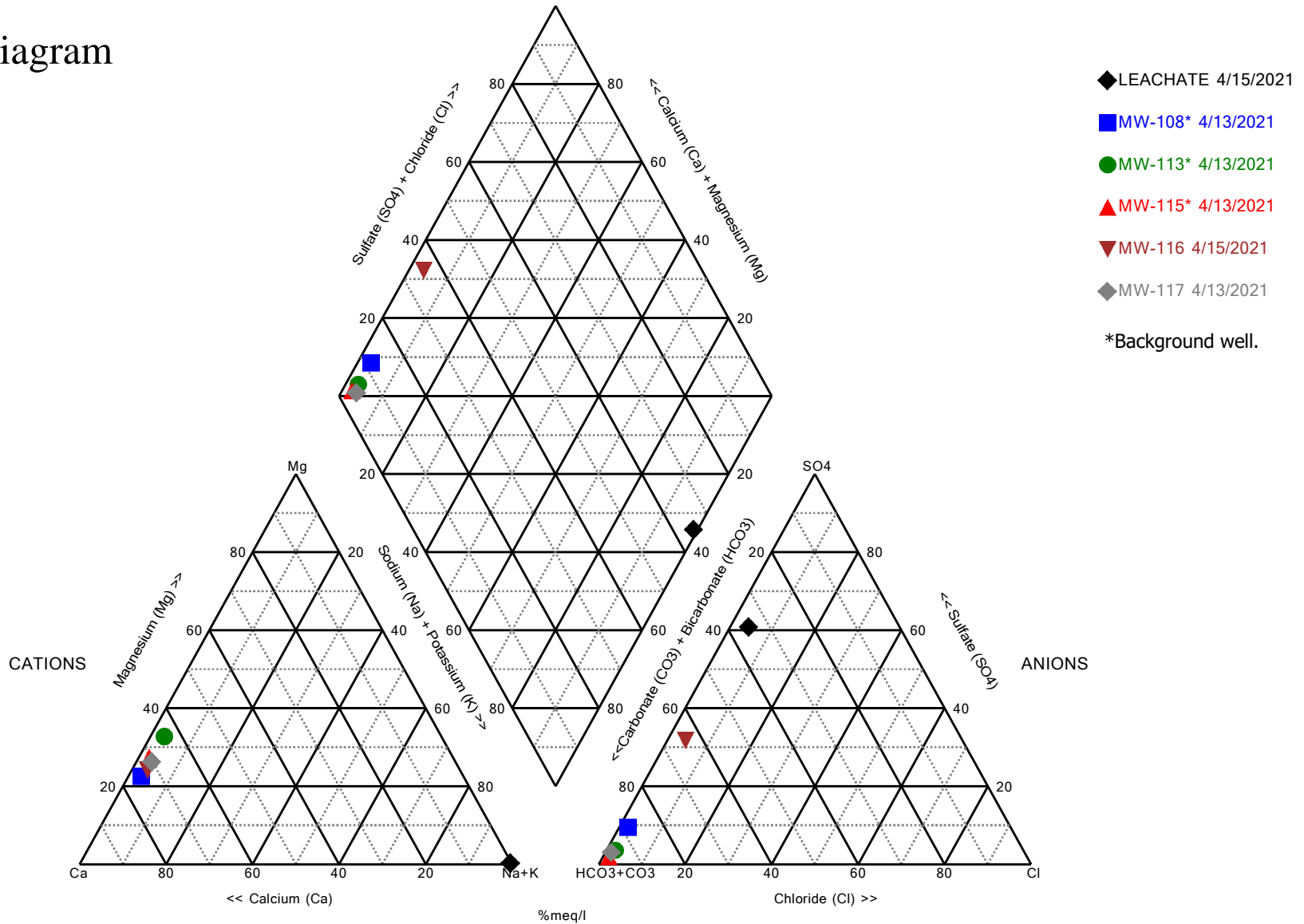
Constituent: Dissolved Solids Analysis Run 8/10/2021 2:54 PM

Plum Point Energy Station Client: Plum Point Services Company, LLC Data: PPES EPA CCR Rule Groundwater Database



Stiff Diagram Analysis Run 8/10/2021 3:22 PM

Piper Diagram



Analysis Run 8/10/2021 3:22 PM

Plum Point Energy Station

Client: Plum Point Services Company, LLC

Data: PPES EPA CCR Database (GWQ parameters)

ATTACHMENT 3

Summary Table

Table 1. Summary of statistically significant results and maximum background and published levels.

| Well ID | Parameter | Prediction Limit (mg/L) | April 2021 Initial Result (mg/L) | June 2021 Verification Result (mg/L) | SSI Confirmed? | Maximum Background Level^(a) (mg/L) | Maximum Published Level^(b) (mg/L) |
|----------------|------------------|--------------------------------|---|---|-----------------------|--|---|
| MW-116 | Calcium | 139.2 | 144 | 169 | Yes | 190 (MW-108, May 2014) | 130 |
| MW-117 | TDS | 301.8 | 323 | 314 | Yes | 700 (MW-108, October 2016) | 728 |

Notes:

- a. Based on historical values at MW-108, MW-113, and MW-115.
- b. From Gonthier 2003.

REFERENCES

Gonthier, G.J. 2003. *Quality of Groundwater in Pleistocene and Holocene Subunits of the Mississippi River Alluvial Aquifer, 1998* [Water-Resources Investigations Report 03-4202]. Jackson, MS: US Geological Survey, National Water-Quality Assessment Program.

ATTACHMENT 4

Laboratory Reports

Plum Point Services Co., LLC

Sample Delivery Group: L1340644
Samples Received: 04/17/2021
Project Number: R14590-2496-001
Description: Plum Point Energy Station

Report To: Dana Derrington
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:



Mark W. Beasley
Project Manager

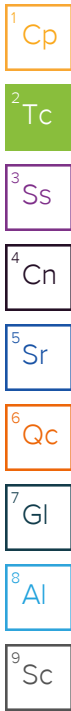
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

MW-101 L1340644-01 GW

Collected by Michael Clayton Collected date/time 04/15/21 13:05 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656129 | 1 | 04/21/21 14:13 | 04/21/21 17:54 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 13:25 | 04/26/21 13:25 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:13 | CCE | Mt. Juliet, TN |



MW-102 L1340644-02 GW

Collected by Michael Clayton Collected date/time 04/15/21 15:25 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656129 | 1 | 04/21/21 14:13 | 04/21/21 17:54 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 13:48 | 04/26/21 13:48 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:15 | CCE | Mt. Juliet, TN |

MW-103 L1340644-03 GW

Collected by Michael Clayton Collected date/time 04/15/21 11:10 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656129 | 1 | 04/21/21 14:13 | 04/21/21 17:54 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 14:23 | 04/26/21 14:23 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:23 | CCE | Mt. Juliet, TN |

MW-108 L1340644-04 GW

Collected by Michael Clayton Collected date/time 04/13/21 11:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 14:34 | 04/26/21 14:34 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:26 | CCE | Mt. Juliet, TN |

MW-113 L1340644-05 GW

Collected by Michael Clayton Collected date/time 04/13/21 10:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 14:46 | 04/26/21 14:46 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 03:57 | CCE | Mt. Juliet, TN |

MW-115 L1340644-06 GW

Collected by Michael Clayton Collected date/time 04/13/21 09:15 Received date/time 04/17/21 09:00

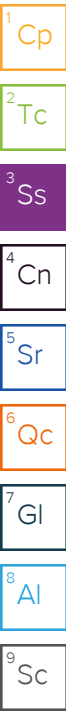
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 15:20 | 04/26/21 15:20 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:29 | CCE | Mt. Juliet, TN |

SAMPLE SUMMARY

MW-116 L1340644-07 GW

Collected by Michael Clayton Collected date/time 04/15/21 14:05 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656117 | 1 | 04/21/21 14:08 | 04/21/21 15:38 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 15:31 | 04/26/21 15:31 | MCG | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 5 | 04/26/21 17:03 | 04/26/21 17:03 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:31 | CCE | Mt. Juliet, TN |



MW-117 L1340644-08 GW

Collected by Michael Clayton Collected date/time 04/13/21 14:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 15:43 | 04/26/21 15:43 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:34 | CCE | Mt. Juliet, TN |

MW-118 L1340644-09 GW

Collected by Michael Clayton Collected date/time 04/15/21 09:10 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656117 | 1 | 04/21/21 14:08 | 04/21/21 15:38 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 15:54 | 04/26/21 15:54 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:37 | CCE | Mt. Juliet, TN |

MW-119 L1340644-10 GW

Collected by Michael Clayton Collected date/time 04/15/21 12:10 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656117 | 1 | 04/21/21 14:08 | 04/21/21 15:38 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 16:06 | 04/26/21 16:06 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:39 | CCE | Mt. Juliet, TN |

MW-117 DUP L1340644-11 GW

Collected by Michael Clayton Collected date/time 04/13/21 14:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1654736 | 1 | 04/19/21 23:43 | 04/20/21 01:42 | CAT | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 16:17 | 04/26/21 16:17 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:42 | CCE | Mt. Juliet, TN |

EPA EB L1340644-12 GW

Collected by Michael Clayton Collected date/time 04/15/21 16:20 Received date/time 04/17/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1656117 | 1 | 04/21/21 14:08 | 04/21/21 15:38 | MML | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1658783 | 1 | 04/26/21 16:40 | 04/26/21 16:40 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1659933 | 1 | 04/28/21 21:28 | 04/29/21 04:45 | CCE | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 335000 | | 10000 | 1 | 04/21/2021 17:54 | WG1656129 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 855 | J | 379 | 1000 | 1 | 04/26/2021 13:25 | WG1658783 |
| Fluoride | 385 | | 64.0 | 150 | 1 | 04/26/2021 13:25 | WG1658783 |
| Sulfate | 5730 | | 594 | 5000 | 1 | 04/26/2021 13:25 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 60.8 | J | 20.0 | 200 | 1 | 04/29/2021 04:13 | WG1659933 |
| Calcium | 96900 | | 79.3 | 1000 | 1 | 04/29/2021 04:13 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 446000 | | 10000 | 1 | 04/21/2021 17:54 | WG1656129 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 2310 | | 379 | 1000 | 1 | 04/26/2021 13:48 | WG1658783 |
| Fluoride | 210 | | 64.0 | 150 | 1 | 04/26/2021 13:48 | WG1658783 |
| Sulfate | 79400 | | 594 | 5000 | 1 | 04/26/2021 13:48 | WG1658783 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 96.6 | J | 20.0 | 200 | 1 | 04/29/2021 04:15 | WG1659933 |
| Calcium | 118000 | | 79.3 | 1000 | 1 | 04/29/2021 04:15 | WG1659933 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 294000 | | 10000 | 1 | 04/21/2021 17:54 | WG1656129 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 976 | J | 379 | 1000 | 1 | 04/26/2021 14:23 | WG1658783 |
| Fluoride | 258 | | 64.0 | 150 | 1 | 04/26/2021 14:23 | WG1658783 |
| Sulfate | 11400 | | 594 | 5000 | 1 | 04/26/2021 14:23 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 72.6 | J | 20.0 | 200 | 1 | 04/29/2021 04:23 | WG1659933 |
| Calcium | 85900 | | 79.3 | 1000 | 1 | 04/29/2021 04:23 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 541000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

¹ Cp

² Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 2670 | | 379 | 1000 | 1 | 04/26/2021 14:34 | WG1658783 |
| Fluoride | 216 | | 64.0 | 150 | 1 | 04/26/2021 14:34 | WG1658783 |
| Sulfate | 36800 | | 594 | 5000 | 1 | 04/26/2021 14:34 | WG1658783 |

³ Ss

⁴ Cn

⁵ Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 125 | J | 20.0 | 200 | 1 | 04/29/2021 04:26 | WG1659933 |
| Calcium | 149000 | | 79.3 | 1000 | 1 | 04/29/2021 04:26 | WG1659933 |

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 372000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 2500 | | 379 | 1000 | 1 | 04/26/2021 14:46 | WG1658783 |
| Fluoride | 102 | J | 64.0 | 150 | 1 | 04/26/2021 14:46 | WG1658783 |
| Sulfate | 9830 | | 594 | 5000 | 1 | 04/26/2021 14:46 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 67.3 | J | 20.0 | 200 | 1 | 04/29/2021 03:57 | WG1659933 |
| Calcium | 95400 | V | 79.3 | 1000 | 1 | 04/29/2021 03:57 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 441000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Chloride | 789 | J | 379 | 1000 | 1 | 04/26/2021 15:20 | WG1658783 |
| Fluoride | 239 | | 64.0 | 150 | 1 | 04/26/2021 15:20 | WG1658783 |
| Sulfate | 5670 | | 594 | 5000 | 1 | 04/26/2021 15:20 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Boron | 37.9 | J | 20.0 | 200 | 1 | 04/29/2021 04:29 | WG1659933 |
| Calcium | 117000 | | 79.3 | 1000 | 1 | 04/29/2021 04:29 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 541000 | | 10000 | 1 | 04/21/2021 15:38 | WG1656117 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 9090 | | 379 | 1000 | 1 | 04/26/2021 15:31 | WG1658783 |
| Fluoride | 226 | | 64.0 | 150 | 1 | 04/26/2021 15:31 | WG1658783 |
| Sulfate | 126000 | | 2970 | 25000 | 5 | 04/26/2021 17:03 | WG1658783 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 85.4 | J | 20.0 | 200 | 1 | 04/29/2021 04:31 | WG1659933 |
| Calcium | 144000 | | 79.3 | 1000 | 1 | 04/29/2021 04:31 | WG1659933 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 351000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 976 | J | 379 | 1000 | 1 | 04/26/2021 15:43 | WG1658783 |
| Fluoride | 152 | | 64.0 | 150 | 1 | 04/26/2021 15:43 | WG1658783 |
| Sulfate | 7460 | | 594 | 5000 | 1 | 04/26/2021 15:43 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 70.5 | J | 20.0 | 200 | 1 | 04/29/2021 04:34 | WG1659933 |
| Calcium | 98800 | | 79.3 | 1000 | 1 | 04/29/2021 04:34 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 329000 | | 10000 | 1 | 04/21/2021 15:38 | WG1656117 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 911 | J | 379 | 1000 | 1 | 04/26/2021 15:54 | WG1658783 |
| Fluoride | 185 | | 64.0 | 150 | 1 | 04/26/2021 15:54 | WG1658783 |
| Sulfate | 20000 | | 594 | 5000 | 1 | 04/26/2021 15:54 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 66.3 | J | 20.0 | 200 | 1 | 04/29/2021 04:37 | WG1659933 |
| Calcium | 94100 | | 79.3 | 1000 | 1 | 04/29/2021 04:37 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 413000 | | 10000 | 1 | 04/21/2021 15:38 | WG1656117 |

1 Cp

2 Tc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 2430 | | 379 | 1000 | 1 | 04/26/2021 16:06 | WG1658783 |
| Fluoride | 267 | | 64.0 | 150 | 1 | 04/26/2021 16:06 | WG1658783 |
| Sulfate | 33600 | | 594 | 5000 | 1 | 04/26/2021 16:06 | WG1658783 |

3 Ss

4 Cn

5 Sr

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 68.7 | J | 20.0 | 200 | 1 | 04/29/2021 04:39 | WG1659933 |
| Calcium | 115000 | | 79.3 | 1000 | 1 | 04/29/2021 04:39 | WG1659933 |

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | 353000 | | 10000 | 1 | 04/20/2021 01:42 | WG1654736 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | 972 | J | 379 | 1000 | 1 | 04/26/2021 16:17 | WG1658783 |
| Fluoride | 153 | P1 | 64.0 | 150 | 1 | 04/26/2021 16:17 | WG1658783 |
| Sulfate | 7410 | | 594 | 5000 | 1 | 04/26/2021 16:17 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | 70.8 | J | 20.0 | 200 | 1 | 04/29/2021 04:42 | WG1659933 |
| Calcium | 99000 | | 79.3 | 1000 | 1 | 04/29/2021 04:42 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|-------|----------|------------------|---------------------------|
| | ug/l | | ug/l | | date / time | |
| Dissolved Solids | ND | | 10000 | 1 | 04/21/2021 15:38 | WG1656117 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Chloride | U | | 379 | 1000 | 1 | 04/26/2021 16:40 | WG1658783 |
| Fluoride | U | | 64.0 | 150 | 1 | 04/26/2021 16:40 | WG1658783 |
| Sulfate | U | | 594 | 5000 | 1 | 04/26/2021 16:40 | WG1658783 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|------|------|----------|------------------|---------------------------|
| | ug/l | | ug/l | ug/l | | date / time | |
| Boron | U | | 20.0 | 200 | 1 | 04/29/2021 04:45 | WG1659933 |
| Calcium | U | | 79.3 | 1000 | 1 | 04/29/2021 04:45 | WG1659933 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3644900-1 04/20/21 01:42

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

L1340535-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1340535-16 04/20/21 01:42 • (DUP) R3644900-3 04/20/21 01:42

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 836000 | 835000 | 1 | 0.120 | | 5 |

4 Cn

5 Sr

6 Qc

L1340650-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1340650-09 04/20/21 01:42 • (DUP) R3644900-4 04/20/21 01:42

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 424000 | 422000 | 1 | 0.473 | | 5 |

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3644900-2 04/20/21 01:42

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8930000 | 101 | 77.4-123 | |

Method Blank (MB)

(MB) R3645394-1 04/21/21 15:38

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

L1340644-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1340644-07 04/21/21 15:38 • (DUP) R3645394-3 04/21/21 15:38

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 541000 | 537000 | 1 | 0.742 | | 5 |

4 Cn

5 Sr

L1340644-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1340644-09 04/21/21 15:38 • (DUP) R3645394-4 04/21/21 15:38

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 329000 | 332000 | 1 | 0.908 | | 5 |

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3645394-2 04/21/21 15:38

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8680000 | 98.6 | 77.4-123 | |

9 Sc

Method Blank (MB)

(MB) R3645382-1 04/21/21 17:54

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

L1340602-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1340602-06 04/21/21 17:54 • (DUP) R3645382-3 04/21/21 17:54

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 319000 | 315000 | 1 | 1.26 | | 5 |

4 Cn

5 Sr

L1340602-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1340602-07 04/21/21 17:54 • (DUP) R3645382-4 04/21/21 17:54

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 188000 | 171000 | 1 | 9.47 | J3 | 5 |

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3645382-2 04/21/21 17:54

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8690000 | 98.8 | 77.4-123 | |

9 Sc

Method Blank (MB)

(MB) R3646883-1 04/26/21 11:42

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Chloride | U | | 379 | 1000 |
| Fluoride | U | | 64.0 | 150 |
| Sulfate | U | | 594 | 5000 |

L1340644-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1340644-01 04/26/21 13:25 • (DUP) R3646883-3 04/26/21 13:37

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Chloride | 855 | 933 | 1 | 8.79 | J | 15 |
| Fluoride | 385 | 384 | 1 | 0.390 | | 15 |
| Sulfate | 5730 | 5790 | 1 | 0.917 | | 15 |

L1340644-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1340644-11 04/26/21 16:17 • (DUP) R3646883-6 04/26/21 16:29

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Chloride | 972 | 1010 | 1 | 4.29 | | 15 |
| Fluoride | 153 | 120 | 1 | 24.0 | J P1 | 15 |
| Sulfate | 7410 | 7330 | 1 | 1.16 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3646883-2 04/26/21 11:53

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Chloride | 40000 | 39200 | 97.9 | 80.0-120 | |
| Fluoride | 8000 | 8030 | 100 | 80.0-120 | |
| Sulfate | 40000 | 39900 | 99.6 | 80.0-120 | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1340644-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1340644-02 04/26/21 13:48 • (MS) R3646883-4 04/26/21 14:00 • (MSD) R3646883-5 04/26/21 14:11

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Chloride | 50000 | 2310 | 53000 | 52900 | 101 | 101 | 1 | 80.0-120 | | | 0.276 | 15 |
| Fluoride | 5000 | 210 | 5430 | 5440 | 104 | 105 | 1 | 80.0-120 | | | 0.0386 | 15 |
| Sulfate | 50000 | 79400 | 127000 | 127000 | 95.2 | 94.7 | 1 | 80.0-120 | E | E | 0.192 | 15 |

L1340644-12 Original Sample (OS) • Matrix Spike (MS)

(OS) L1340644-12 04/26/21 16:40 • (MS) R3646883-7 04/26/21 16:52

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|--------------|
| Chloride | 50000 | U | 51900 | 104 | 1 | 80.0-120 | |
| Fluoride | 5000 | U | 5410 | 108 | 1 | 80.0-120 | |
| Sulfate | 50000 | U | 52300 | 105 | 1 | 80.0-120 | |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3648131-1 04/29/21 03:52

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| | ug/l | | ug/l | ug/l |
| Boron | U | | 20.0 | 200 |
| Calcium | U | | 79.3 | 1000 |

Laboratory Control Sample (LCS)

(LCS) R3648131-2 04/29/21 03:54

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| | ug/l | ug/l | % | % | |
| Boron | 1000 | 934 | 93.4 | 80.0-120 | |
| Calcium | 10000 | 9510 | 95.1 | 80.0-120 | |

L1340644-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1340644-05 04/29/21 03:57 • (MS) R3648131-4 04/29/21 04:02 • (MSD) R3648131-5 04/29/21 04:04

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| Boron | 1000 | 67.3 | 1020 | 1000 | 95.3 | 93.6 | 1 | 75.0-125 | | | 1.68 | 20 |
| Calcium | 10000 | 95400 | 102000 | 103000 | 70.2 | 75.6 | 1 | 75.0-125 | V | | 0.525 | 20 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

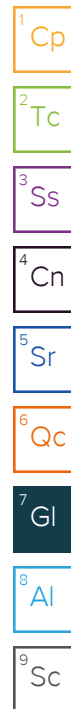
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122


| | | | |
|-------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



| | | | | | | | | | | | | | |
|--|--|--|---------------|--|---------|---|---|--|---|-------|--|---|--|
| Company Name/Address: Plum Point Services Co., LLC 2739 SCR 623 Osceola, AR 72370 | | Billing Information: Accounts Payable P.O. Box 567 Osceola, AR 72370 | | Pres Chk | | Analysis / Container / Preservative | | | | | | Chain of Custody Page <u>2</u> of <u>9</u> | |
| Report to: Dana Derrington | | Email To: dld@ftn-assoc.com;mmv@ftn-assoc.com;hlf@ftn-assoc.com;hlf@ftn- | | | | L2 CI, F, SO4 125mlHDPE-NoPres TDS 250mlHDPE-NoPres Total B, Ca 250mlHDPE-HNO3 | | | | | |  12065 Lebanon Road Mt Juliet, TN 37122 Phone: 615-758-5858 Alt: 800-767-5859 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubs/pas-standard-terms.pdf SDG # 1340644 C093 Acctnum: NAESOAR Template: T175308 Prelogin: P839309 PM: 134 - Mark W. Beasley PB: Shipped Via: FedEX Ground | |
| Project Description: Plum Point Energy Station | | City/State Collected: Osceola AR | | Please Circle: PT MT CT ET | | | | | | | | | |
| Phone: 501-920-9642 | | Client Project # R14590-2496-001 | | Lab Project # NAESOAR-PLUMPOINT | | | | | | | | | |
| Collected by (print): <i>Michael Clayton</i> | | Site/Facility ID # | | P.O. # 2020-00128 | | | | | | | | | |
| Collected by (signature): <i>Michael Clayton</i> | | Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day Immediately Packed on Ice N ___ Y <u>Y</u> | | Quote # | | | | | | | | | |
| | | | | Date Results Needed | | | | | | | | | |
| | | | | No. of Cntrs | | | | | | | | | |
| Sample ID | | Comp/Grab | Matrix * | Depth | Date | Time | | | | | | | |
| MW-101 | | GRAB | GW | | 4/15/21 | 1305 | 3 | X | X | X | | | |
| MW-102 | | | GW | | 4/15/21 | 1525 | 3 | X | X | X | | | |
| MW-103 | | | GW | | 4/15/21 | 1110 | 3 | X | X | X | | | |
| MW-108 | | | GW | | 4/13/21 | 1120 | 3 | X | X | X | | | |
| MW-113 | | | GW | | 4/13/21 | 1020 | 3 | X | X | X | | | |
| MW-115 | | | GW | | 4/13/21 | 915 | 3 | X | X | X | | | |
| MW-116 | | | GW | | 4/15/21 | 1405 | 3 | X | X | X | | | |
| MW-117 | | | GW | | 4/13/21 | 1420 | 3 | X | X | X | | | |
| MW-118 | | | GW | | 4/13/21 | 910 | 3 | X | X | X | | | |
| MW-119 | | ↓ | GW | | 4/15/21 | 1210 | 3 | X | X | X | | | |
| * Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____ | | Remarks: | | pH _____ Temp _____ | | Flow _____ Other _____ | | Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> NP <input type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | | | | | |
| Samples returned via: ___ UPS ___ FedEx ___ Courier _____ | | Tracking # | | 5016 1221 3727 | | | | | | | | | |
| Relinquished by: (Signature) <i>Michael Clayton</i> | | Date: 4/16/21 | Time: 1800 | Received by: (Signature) <i>[Signature]</i> | | Trip Blank Received: Yes/No HCL/MeOH TBR | | Temp: 13.01 °C 1.4t-2.1.6 Bottles Received: 36 If preservation required by Login: Date/Time | | | | | |
| Relinquished by: (Signature) | | Date: | Time: | Received for lab by: (Signature) <i>[Signature]</i> | | Date: 4-17-21 | | Time: 0900 | | Hold: | | Condition: NCF / <input checked="" type="checkbox"/> OK | |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Plum Point Services Co., LLC

Sample Delivery Group: L1373490
Samples Received: 07/01/2021
Project Number: R14590-2275-001
Description: Plum Point Energy Station

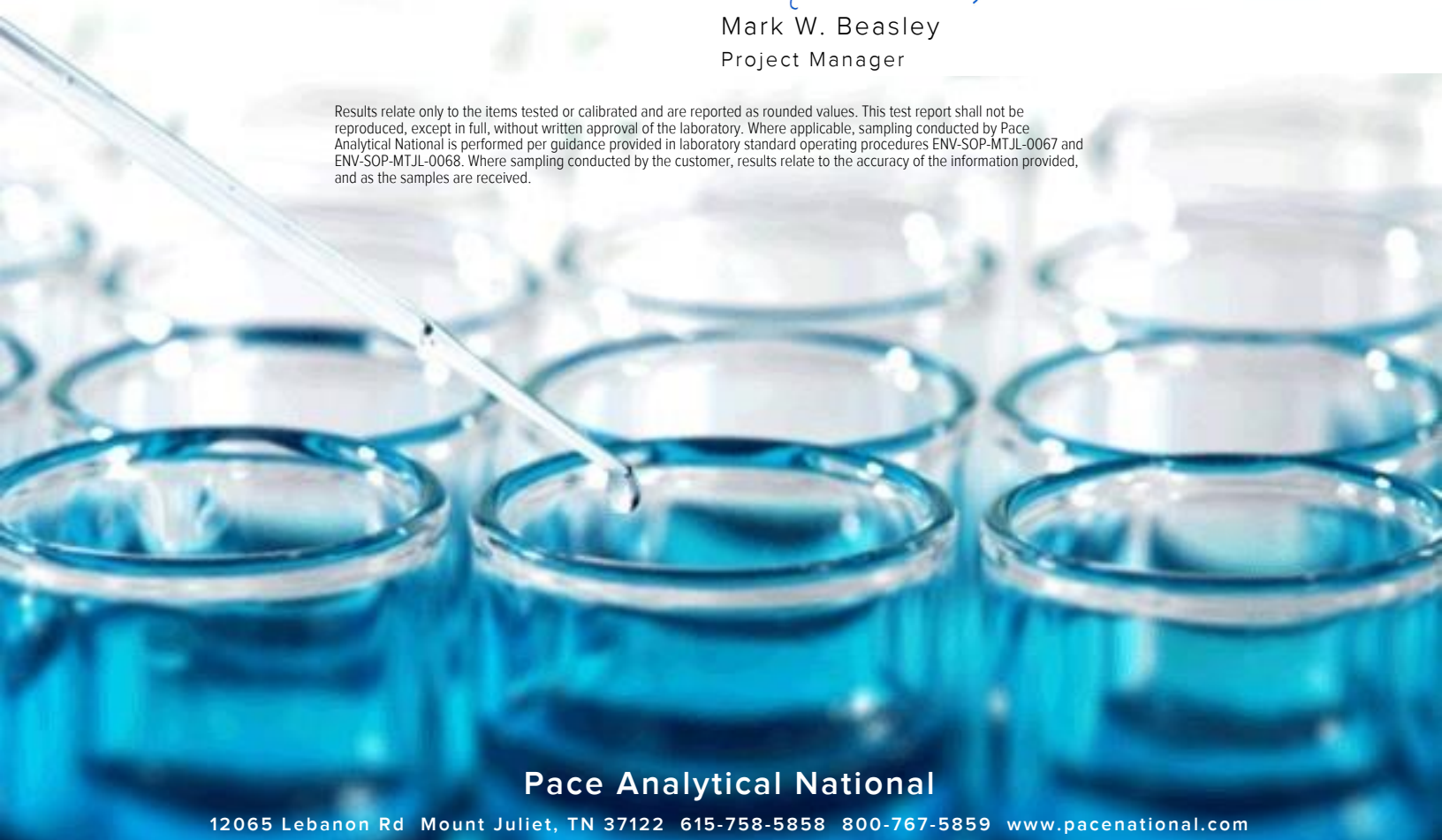
Report To: Dana Derrington
2739 SCR 623
Osceola, AR 72370

Entire Report Reviewed By:



Mark W. Beasley
Project Manager









Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

MW-116 L1373490-01 GW

Collected by Michael Clayton Collected date/time 06/29/21 15:55 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Metals (ICP) by Method 6010B | WG1706313 | 1 | 07/19/21 05:52 | 07/19/21 12:57 | EL | Mt. Juliet, TN |

MW-117 L1373490-02 GW

Collected by Michael Clayton Collected date/time 06/29/21 16:50 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1699630 | 1 | 07/03/21 02:27 | 07/03/21 05:11 | VRP | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1706313 | 1 | 07/19/21 05:52 | 07/19/21 13:46 | EL | Mt. Juliet, TN |

MW-117 DUP L1373490-03 GW

Collected by Michael Clayton Collected date/time 06/29/21 16:55 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1699630 | 1 | 07/03/21 02:27 | 07/03/21 05:11 | VRP | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1706313 | 1 | 07/19/21 05:52 | 07/19/21 13:48 | EL | Mt. Juliet, TN |

EPA EB-1 L1373490-04 GW

Collected by Michael Clayton Collected date/time 06/29/21 17:10 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1699630 | 1 | 07/03/21 02:27 | 07/03/21 05:11 | VRP | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1705405 | 1 | 07/15/21 17:58 | 07/15/21 17:58 | MCG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1706313 | 1 | 07/19/21 05:52 | 07/19/21 13:56 | EL | Mt. Juliet, TN |

MW-101 L1373490-05 GW

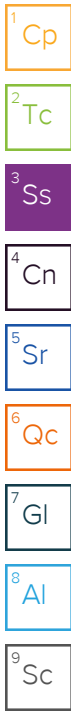
Collected by Michael Clayton Collected date/time 06/29/21 15:00 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 9056A | WG1705405 | 1 | 07/15/21 18:47 | 07/15/21 18:47 | MCG | Mt. Juliet, TN |

MW-113 L1373490-06 GW

Collected by Michael Clayton Collected date/time 06/29/21 12:25 Received date/time 07/01/21 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG1699630 | 1 | 07/03/21 02:27 | 07/03/21 05:11 | VRP | Mt. Juliet, TN |



CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|---------------------|------|------|----------|----------------------|---------------------------|
| Calcium | 169000 | O1V | 79.3 | 1000 | 1 | 07/19/2021 12:57 | WG1706313 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 314000 | | 10000 | 1 | 07/03/2021 05:11 | WG1699630 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | 83700 | | 79.3 | 1000 | 1 | 07/19/2021 13:46 | WG1706313 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 321000 | | 10000 | 1 | 07/03/2021 05:11 | WG1699630 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | 84400 | | 79.3 | 1000 | 1 | 07/19/2021 13:48 | WG1706313 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | ND | | 10000 | 1 | 07/03/2021 05:11 | WG1699630 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|-----|----------|----------------------|---------------------------|
| Fluoride | U | | 64.0 | 150 | 1 | 07/15/2021 17:58 | WG1705405 |

Metals (ICP) by Method 6010B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Calcium | U | | 79.3 | 1000 | 1 | 07/19/2021 13:56 | WG1706313 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|----------|--------|-----------|------|-----|----------|----------------------|---------------------------|
| Fluoride | 307 | | 64.0 | 150 | 1 | 07/15/2021 18:47 | WG1705405 |

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|-------|----------|----------------------|---------------------------|
| Dissolved Solids | 303000 | | 10000 | 1 | 07/03/2021 05:11 | WG1699630 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Method Blank (MB)

(MB) R3677111-1 07/03/21 05:11

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Dissolved Solids | U | | 10000 | 10000 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1372527-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1372527-14 07/03/21 05:11 • (DUP) R3677111-3 07/03/21 05:11

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 3690000 | 3680000 | 1 | 0.217 | | 5 |

L1372994-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1372994-01 07/03/21 05:11 • (DUP) R3677111-4 07/03/21 05:11

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Dissolved Solids | 129000 | 118000 | 1 | 8.91 | J3 | 5 |

Laboratory Control Sample (LCS)

(LCS) R3677111-2 07/03/21 05:11

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Dissolved Solids | 8800000 | 8950000 | 102 | 77.4-123 | |

Method Blank (MB)

(MB) R3680269-1 07/15/21 11:06

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Fluoride | U | | 64.0 | 150 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1373161-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1373161-02 07/15/21 13:03 • (DUP) R3680269-3 07/15/21 13:19

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Fluoride | 66.4 | 71.1 | 1 | 6.84 | U | 15 |

L1373490-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1373490-04 07/15/21 17:58 • (DUP) R3680269-6 07/15/21 18:14

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Fluoride | U | U | 1 | 0.000 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3680269-2 07/15/21 11:22

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Fluoride | 8000 | 8040 | 101 | 80.0-120 | |

L1373161-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373161-02 07/15/21 13:03 • (MS) R3680269-4 07/15/21 13:35 • (MSD) R3680269-5 07/15/21 13:52

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Fluoride | 5000 | 66.4 | 4880 | 4920 | 96.3 | 97.1 | 1 | 80.0-120 | | | 0.832 | 15 |

L1373490-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1373490-04 07/15/21 17:58 • (MS) R3680269-7 07/15/21 18:31

| Analyte | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|----------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| Fluoride | 5000 | U | 5000 | 100 | 1 | 80.0-120 | |

Method Blank (MB)

(MB) R3681167-1 07/19/21 12:52

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Calcium | U | | 79.3 | 1000 |

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3681167-2 07/19/21 12:54

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Calcium | 10000 | 9400 | 94.0 | 80.0-120 | |

4 Cn

5 Sr

6 Qc

L1373490-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1373490-01 07/19/21 12:57 • (MS) R3681167-4 07/19/21 13:02 • (MSD) R3681167-5 07/19/21 13:04

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Calcium | 10000 | 169000 | 175000 | 174000 | 55.7 | 47.6 | 1 | 75.0-125 | V | V | 0.462 | 20 |

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

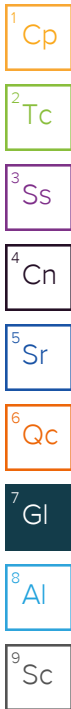
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| O1 | The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|-------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address: **Plum Point Services Co., LLC**
 2739 SCR 623
 Osceola, AR 72370

Billing Information:
 Accounts Payable
 P.O. Box 567
 Osceola, AR 72370

Report to: **Cynthia Medlin**
 Email To: **cynthia.medlin@ppenergy.net**

Project Description: **Plum Point Energy Station**
 City/State Collected: _____ Please Circle: PT MT CT ET

Client Project # **R14590-2275-001** Lab Project # **NAESOAR-PLUMPOINT**

Collected by (print): _____ Site/Facility ID # _____ P.O. # **2020-00128**

Collected by (signature): *[Signature]* **Rush?** (Lab MUST Be Notified)
 ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day

Immediately Packed on Ice N ___ Y ___

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | CAICP 250mIHDPE-HNO3 | FLUORIDE 125mIHDPE-NoPres | TDS 250mIHDPE-NoPres | Analysis / Container / Preservative | Chain of Custody |
|------------|-----------|----------|-------|---------|------|--------------|----------------------|---------------------------|----------------------|-------------------------------------|--|
| MW-116 | Grab | GW | | 6/29/21 | 1555 | 2 | X | | | | Pace Analytical® 12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubs/pas-standard-terms.pdf SDG # L1373490 Ta M195 Acctnum: NAESOAR Template: T190044 Prelogin: P856608 PM: 134- Mark W. Beasley PB: 6/23/21 MW Shipped Via: FedEX Ground Remarks Sample # (lab only) |
| MW-117 | | GW | | | 1650 | 2 | X | X | | | |
| MW-117 DUP | | GW | | | 1655 | 2 | X | X | | | |
| EPA EB-1 | | GW | | | 1710 | 2 | X | X | X | | |
| MW-101 | | GW | | | 1500 | 2 | | X | | | |
| MW-113 | | GW | | | 1225 | 2 | | X | | | |
| | | | | | | | | | | | |

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other

Remarks: _____ pH _____ Temp _____ Flow _____ Other _____

Samples returned via: ___ UPS ___ FedEx ___ Courier _____ Tracking # **516376984974**

Sample Receipt Checklist

COC Seal Present/Intact: ___ NP ___ Y ___ N

COC Signed/Accurate: ___ Y ___ N

Bottles arrive intact: ___ Y ___ N

Correct bottles used: ___ Y ___ N

Sufficient volume sent: ___ Y ___ N

If Applicable

VOA Zero Headspace: ___ Y ___ N

Preservation Correct/Checked: ___ Y ___ N

RAD Screen <0.5 mR/hr: ___ Y ___ N

Relinquished by: (Signature) *[Signature]* Date: **6/30/21** Time: **1400**

Relinquished by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Date: _____ Time: _____

Received by: (Signature) *[Signature]* Trip Blank Received: Yes/No
 HCL / MeOH
 TBR

Temp: **18.22°C** Bottles Received: **10** If preservation required by Login: Date/Time

Received for lab by: (Signature) *[Signature]* Date: **7/1/21** Time: **9:00** Hold: _____ Condition: **OK**